PEACEKEEPING DURING TIMES OF TERROR: TERRORISM AND UN PEACEKEEPING OPERATIONS IN AFRICAN CIVIL WARS

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ABSTRACT

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Since the end of the Cold War, the frequency of intrastate conflict increased dramatically. Unsurprisingly, the rise of intrastate conflict has been met with an increase in third-party interventions such as those carried out by the United Nations. United Nations (UN) peacekeeping operations have become a common tool the international community employs to manage the devastating consequences of civil war and as a means to facilitate conflict resolution in the midst of armed violence. Despite the substantial increase in UN deployments and the propensity to use peacekeeping as a tool for conflict resolution, evidence remains mixed as to whether or not the UN's is effective in reducing hostilities and ending active armed conflict.

Extant studies have found that peacekeeping reduces battlefield violence and civilian victimization during active civil war. These studies suggest that as the number of UN troops increases in size at the monthly level, there is an associated decrease in violence. However, peacekeepers are increasingly put on the frontlines against rebel groups that frequently use terrorism as a tactic. This dissertation provides the first empirical examination of UN peacekeeping and terrorism during civil war. I analyze how the number of UN peacekeeping personnel deployed to civil war influences the use of terrorism in all civil wars in Africa from 1992 to 2011. The results find an associated increase in terrorism when UN military peacekeepers deploy. This relationship is robust even when

[1] The views expressed in this manuscript are those of the author and do not reflect the official policies, views, or positions of the Department of the Army, the Department of Defense, or the United States Government.

examining across different units of analysis and under various modeling specifications and techniques.

Given this finding, this dissertation also examines in greater depth the target preferences of rebel groups and the tactical diversity in which rebel groups pursue given the presence of 'blue helmets.' I broadly find that attacks against hard and soft targets increase as the number of UN troops increase in African civil wars. However, I find that rebel groups are less likely to focus on these targets as the number of UN police increases during civil war – perhaps a silver lining to UN missions. Moreover, rebel groups respond to peacekeeping operations by diversifying their tactics in response to increase pressures incurred by UN military troop deployments. The more comprehensive array of tactics enables armed actors to undercut peacekeeping operations since UN peacekeeping operations are primarily defensive in nature, and thus limited in ways in which the mission can successfully defend areas and respond to increasing and diverse threats.

While the majority of this dissertation examines peacekeeping at the macro-level of analysis, the final chapter examines at the sub-national level the relationship between UN peacekeeping operations and terrorism. The results substantiate the main finding in the previous chapters that increases in UN peacekeeping forces leads to an increase in terror attacks. However, sheds greater light to the notion that rebel groups exhibit variation in their target preferences as the number of UN peacekeepers increase in size. Optimistically, when considering the consolidated effect of local peacekeeping, that is the number of neighboring troops in proximity to a given location, there is a reduction in the frequency of attacks against 'soft targets.' However, when examining the number of UN troops in a given space-time, non-state actors increase attacks against 'hard targets.' Collectively, these findings provide greater understanding to ways in which the UN can improve current and future missions and equally underscores an important policy implication that has been met with friction – is counterterrorism a bridge to far for UN peacekeeping operations.

To my wonderful family who supported me along this long journey…and to the men and women who serve in the name of peace: "The Soldier above all others prays for peace, for it is the Soldier who must suffer and bear the deepest wounds and scars of war."

- Douglas MacArthur
General, US Army

ACKNOWLEDGEMENTS

It was a warm, spring day (Iowa spring football game) in 2010 when my parents came to visit me at the University of Iowa. I was in my second semester of undergraduate studies, studying at the time pre-medicine and biology. It was on this particular day that my father, himself a retired army officer, encouraged me to think about joining the military. Beyond a sense of duty and moral obligation, he was a realist that understood that the military would provide a means to financing my education and positively shape me during my most transformative years - all things I really wasn't considering as I prepared to move into my sophomore year. However, he encouraged me to think about it. Hours later that day, after a short 15-minute conversation with a recruiter, I made the verbal commitment to join the military. Soon I was off to Basic Combat Training at hot, humid Fort Benning, Georgia less than a month later.

I transformed during those short few weeks at 'boot camp' - I trained, matured, and became more disciplined. I became enamored with the military, eager to understand the wars in Iraq and Afghanistan – especially after the recent surge in Iraq and then declared increase deployment to Afghanistan. Once I graduated and returned to Iowa, I immediately switched my major to political science and international relations and enrolled into Reserve Officer Training Corps (ROTC). I relentlessly studied international relations with a focus on intrastate conflict. Our country was (and still is) embroiled in complex, volatile conflicts across the Middle East and Southwest Asia. As a future officer, I wanted to understand the drivers of conflict and the dynamics that shape conflict outcomes. I felt an obligation to prepare as much as I can. I strived to be intellectually ready to lead and train soldiers for such scenarios, and, if deployed, to lead our young men and women in combat operations. Professors Sara Mitchell and Vicki Hesli Claypool provided much of the intellectual groundwork for me during this time. These two professors delivered rigorous courses on conflict,

where I was challenged to think critically and deeply about theories that underpin the onset and dynamics of political violence. It was these two professors that shaped my interest and guided me to graduate studies at Michigan State University – with Sara Mitchell being an alum of the program herself. I am grateful for their commitment and passion to immerse students into the discipline and willingness to mentor impressionable pupils, like myself.

Fast forward nearly 10 years since I enlisted in the military, I reflect on the long and fruitful journey thus far. I commissioned as an officer and have had the distinct privilege of leading some of our country's finest warriors. I have been able to travel the world as an officer and student. Some of my most memorable moments include being just miles away from the historic Inter-Korean summit where for the first time a North Korean leader, Kim Jung-Un, attended since the armistice was signed in 1953; and deploying to Ukraine, where our team had the opportunity to travel to Poland and visit Schindler's factory in Krakow, and, just outside the city, Auschwitz. It was these humbling moments and experiences that provided contextual meaning to me on why we must study and pursue a deeper, stronger understanding of politics. The nature of warfare is inherently and enduringly human of which is violent, interactive, and fundamentally political. The massive loss of human life, like that in Auschwitz, serve as an enduring reminder to prevent such human suffering again. It is with hope that this dissertation can provide, even the slightest, marginal understanding to the violent nature of politics so we can continue to learn, adapt, anticipate, and ultimately avoid our failures that unforgettably stain our past.

That being said, this dissertation would not be a success without the unrelenting support and love of so many incredible people and organizations. It goes without saying, but my parents, Tom and Diane, are the cornerstone to this adventure. Without my father's direction and my mother's enduring love, I would not have had some of strongest support through the toughest of times and the simple encouragement to "sign my name on the dotted line" – a thank you is simply not enough.

My sisters were there every step of the way; their support means so much. A special thanks to my younger sister, Hannah, for travels to Ireland and to my twin sister, Kelsey, with gifting me the awesome title of "Uncle Tom, Tom." A special thanks to Sarah Sacks for making the final stretch of this road so rewarding and fulfilling. My friends and colleagues, too exhaustive to list, were especially helpful for discussions, and most importantly, for opportunities to keep grounded through travel, sporting events, and outdoor adventures. A special thanks is due to Jimmy Larson, Bryce Meier, Kevin Strohmeier, and Mitch Jasper.

My time at Michigan State University was especially rich, both intellectually and professionally. The faculty across the discipline were always eager to provide mentorship and support, particularly the flexibility when my military duties overlapped with my academic training. My classmates were especially helpful for extensive discussions, constructive feedback of on-going projects, and an immense source for help and direction. Many thanks go to Kevin Greene, Caleb Lucas, Peter Penar, Kangwook Han, Zuhaib Mahmood, Nate Smith, Jessica Schoenherr, Lora Di Blasi, Alex Mardon, Stephen Anderson, Dan Hansen, and so many others. A special thanks to Carolyn Logan for her willingness to take me on with Afrobarometer (AB) team for so many years. Being a part of the AB team opened up an incredible amount of opportunities and enriched my experience more than I could ever ask for. Her flexibility and understanding when I was gone for extensive periods of time for military obligations is especially appreciated.

My dissertation committee was especially helpful with thoughtful and critically constructive feedback – particularly during the nascent stage of this project. Christian Houle provided a comparative lens that only strengthened the manuscript – especially through two courses of training. Shahryar Minhas provided not only the academic training to give me the analytical rigor, which many of the analysis and figures are solely attributed to the classes and the training from him, but also an opportunity to experience first-hand rigorous academic work on a few projects. He was

valuable in providing the breathing room to work on my dissertation as his research assistant. Ben Appel, who I first mistakenly emailed as Professor Apple, was instrumental in shaping this dissertation. His classes and passion for international relations, particularly international organizations, encouraged me - and many others - to ask interesting questions and to think deeper about the unique puzzle that importantly grounds our work. His class served as a nascent beginning of this project (chapter 2) and was, in hindsight, vital to the foundation of this manuscript. I want to thank Jakana Thomas for her willingness and eagerness to take on the unique challenge of being my chair and advisor. Her mentorship was crucial to my growth, both professionally and personally – a sheer force of example for others. Her class on political violence pressed me (and others) to consider judiciously the concepts, theories, and measures that underline intrastate conflict. She kept me accountable to progress despite me being away from campus for extended periods. Words alone are difficult to capture the magnitude of her contribution and a simple thanks is not enough.

Lastly, I want to extend a special thank you to everyone else that contributed to my academic, professional, and personal development these past five-plus years. I have been especially fortunate to have such great leaders and colleagues during my time in the military – too many to list, which is reflection and testament to the immense professionalism that characterizes our country's Armed Forces. However, a deserving shout out is in order when, on a warm summer day in 2016 during my battalion's training at Fort McCoy, Wisconsin, my former Battalion Commander, Colonel Eric Rant (then LTC), firmly advised me to not get distracted by shiny objects – meaning stay focused on what is important in front of you…finish your PhD!

Therefore, I can only hope that this dissertation serves as evidence to be measured by my ability to confront challenges; to overcome obstacles; to understand; and to reach a goal that may seem unobtainable; and through that inspire others – and in this case not be distracted by (too many) shiny objects. The road is indeed long, arduous, and exhausting, but also enriching and the

destination fulfilling. In an eager pursuit, I strive to live and surpass Plato's ideal Citizen; for I am not a man of only academics or one reliant solely on brute strength and athletic success, but a man who leads and guides others. I am a man of thought and a man of action.

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CHAPTER 1

INTRODUCTION

"The first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish the kind of war on which they are embarking."

- Carl von Clausewitz, *On War*

In 1961, 156 members of 'A' Company, 35th Irish Infantry Battalion (IN BN) deployed to Congo as part of the Irish Army's United Nations Operation in the Congo (ONUC) contingent (Figure 1). ONUC was one of the first United Nations peacekeeping missions with a significant military force. The mission was tasked to provide and ensure internal stability following the Congo's independence from Belgium. In order to fulfill its broad mandate, on Wednesday, 13 September 1961, ONUC launched a military offensive code-named Operation Morthor against mercenary forces operating in the southern state of Katanga (Bryne, 2016). As part of the operation, A Company, 35th IN BN, conducted a movement to the city of Jadotville to assist in the protection of civilians (Bryne, 2016). Between 13-17 September, the Company became besieged by irregular and mercenary forces. Despite inflicting heavy casualties against the superior sized enemy, the Irish peacekeepers were forced to surrender due to running out of vital supplies, no reinforcements, and no clear follow-on orders. The mandate was vague in the type of response warranted for the enemy action encountered. The commendable efforts of the Irish peacekeepers[2] highlight the visceral challenges UN peacekeeping faced during armed conflict against an elusive, non-uniformed enemy, one that often-employed irregular tactics against a UN force constrained to primarily defensive operations. Such settings, however, are not unique to the Irish peacekeepers' experience in 1961, and in fact, have

[2] The Battle of Jadotville is also made famous by the adapted Netflix film, *The Siege of Jadotville* (2016).

become increasingly complex, challenging, and irregular - a form of conflict that UN peacekeeping is largely unprepared in design and concept to combat.

Figure 1.1 Soldiers of A Company, 35th Infantry Battalion in Elisabethville, before the siege of Jadotville (Byrne, 2016).

With the end of the Cold War, the prevalence of internal armed conflicts[3] have not only become more frequent but also more persistent (Blattman and Miguel, 2010). With such an increase of civil war, the United Nations (UN) has responded with increasingly new peacekeeping missions to manage the consequences of conflict and facilitate peaceful resolution. For example, between 1989 and 1994, the UN authorized 20 new operations, increasing the number of personnel nearly seven-fold (11,000 to 75,000 troops) (Berman, Felter, and Shapiro, 2018). This number has only continued to rise, with over 100,000 peacekeepers deployed in 14 operations around the world.[4] These wars, however, exhibit stark differences in the manner in which they are fought and typically come down

[3] Also referred to as civil wars or intrastate conflicts.
[4] As of April 2019.

to a distinct dichotomy: symmetric wars (conventional) and asymmetric (irregular) wars (Berman, Felter, and Shapiro, 2018; Bueno de Mesquita, 2013). For instance, Kalyvas and Balcells (2010) find that since the end of World War II, roughly one-third of civil wars focused on rebel groups employing conventional warfighting, whereas about two-thirds involved rebels engaging irregular tactics. This is problematic given that UN peacekeeping operations are primarily designed for conventional style of warfare while the trend of the irregular character of subnational conflicts will likely continue in the future.

For example, the United Nations Emergency Force I, the first UN military force of its kind, was established in 1957 to secure and supervise the cessation of hostilities between the armed forces of France, Israel, and the United Kingdom from Egyptian territory and then serve as a buffer between Egyptian and Israeli forces. However, UN peacekeeping has often found itself on the frontline against non-state armed actors that espouse irregular tactics (such as the case in Angola, Somalia, the Democratic Republic of the Congo, Central African Republic, and Mali, among many others). The character of such conflicts poses a unique challenge for UN peacekeeping operations, as most of these missions deployed to contexts where no peace is to be kept and where combatants are not readily recognized like the uniformed armies during the Suez Crisis in 1956. Despite this challenge, recent research on peacekeeping interventions demonstrates that deploying larger peacekeeping forces during and after conflict reduces the number of fatalities attributed to battlefield violence and civilian victimization — vitally important insights to empirically assessing peacekeeping effectiveness and bettering our understanding of the mechanisms at play. However, our understanding of UN peacekeeping concerning the full spectrum of violence remains open to inquiry.

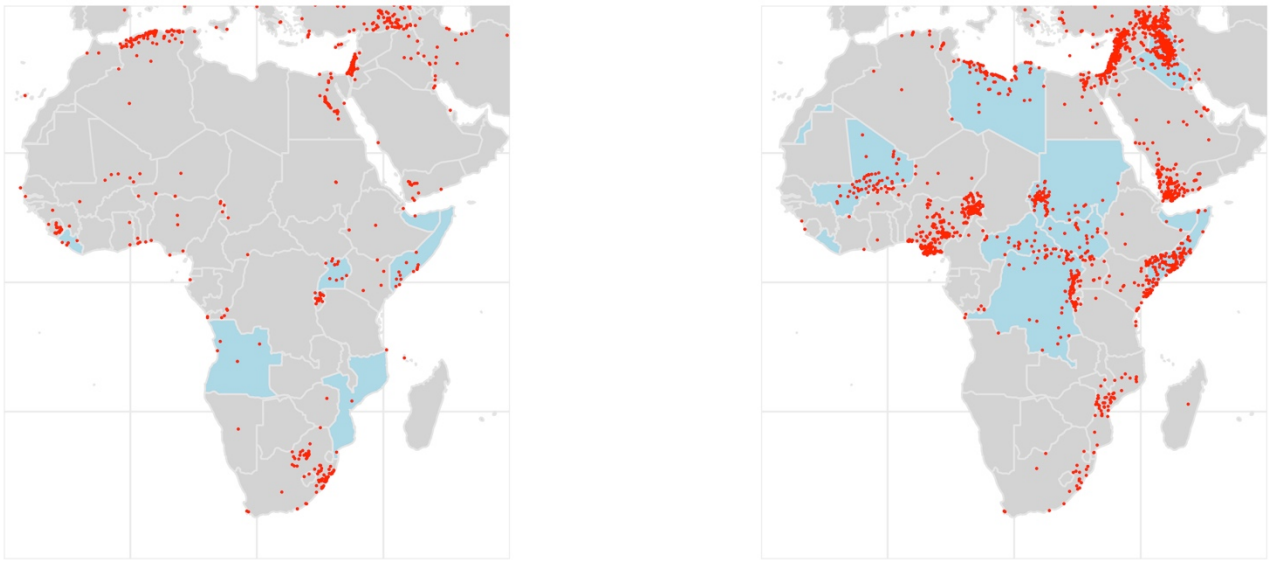
In many civil wars, peacekeepers are on the frontline against armed actors that employ terrorist tactics to supplement their broader strategy. Figure 1.2 highlights across two temporal snapshots this relationship: while the number of attacks in 1994 was much smaller in frequency than 2016 (denoted

in the red color single-event points), peacekeepers nevertheless deploy to contexts where terrorist attacks occur, and often is the *modus operandi* for belligerents. In several cases, peacekeepers are also often targeted by such attacks. For instance, ten peacekeepers, part of the United Nations Stabilization Mission in Mali (MINUSMA), were killed on 20 January 2019 in a sophisticated terrorist attack in northern Mali (UN News, 2019a). Nearly a month later, another three Guinean peacekeepers were killed just outside Mali's capital, Bamako (UN News, 2019b). The UN mission deployed to Mali suffered 72 fatalities between its inception in 2013 and March 2016 from direct attacks by violent extremists, terrorists, and rebel groups (Karlsrud, 2017).

This type of violence is especially concerning in light of the 16 June 2015 public information noted issued by the UN High-Level Panel on Peace Operations, convened by former Secretary-General Ban Ki-moon to undertake a thorough review of the current United Nations peace operations and the emerging needs of the future. The note emphasized that the UN will not undertake military operations against this type of violence, arguing that "that extreme caution must guide any call for a UN peacekeeping operation to undertake enforcement tasks. The UN should not engage in military counter-terrorism operations."[5] Given this sentiment, how might the UN best ensure the security and stability of war-torn counties if UN leaders are not fully committed to the character of war that defines the 21st century? Should UN forces be engaged in counterterrorism efforts? Peter Yao, a senior official at the UN Foundation, expresses concern of the situation stating, "It's time for us to realize that kind of frontline role is central to future of the United Nations…" and "…that without a counterterrorism capability, UN peacekeepers can't operate productively in many of the world's war zones" (Sieff, 2017). The UN, I argue, is caught in a dilemma in determining what kind of crisis it wants to engage. If the UN is to establish conditions suitable for

[5] For more information regarding the United Nation's High-Level Panel on Peace Operations see an information note produced by the UN, dated 16 June 2015, at the following: https://bit.ly/2nTPLTw

peaceful dialogue and conflict resolution yet unprepared to confront the violence that often plagues war-torn countries, then the efficacy of the UN is inherently called into question. Determining the type of conflict the UN wants to be involved in is vital to the outcome's success. This will inherently drive peacekeeping resourcing and mandate provisions that allow the mission to effectively reduce violence. If UN peacekeeping is to continue to underscore its role of keeping peace, writ large, then the United Nations need to accept the reality of conflict if they are to be prepared and effective. As Clausewitz importantly states, "the first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish the kind of war on which they are embarking."



(a) Peacekeeping Operations - 1994 (b) Peacekeeping Operations - 2016

Figure 1.2 UN peacekeeping operations (light blue) and terror attacks (red points) in the years 1994 and 2016.

Determining the kind of war remains a challenge. The sheer complexity and technology of war only continues to increase in scope and magnitude. UN Peacekeepers deployed into DRC in 1961 faced a technologically limited adversary. Cyberattacks and drone attacks did not exist then, but they do today. Rapid information has saturated the environment where social media has become a

common tool to mobilize potential recruits and express public sentiment. Attacks using vehicle-borne improvised explosive devices that are remotely driven raise essential questions about the character of war now and into the future. The character of war is pertinent to the ways and means to success if the United Nations is going to be a relevant mechanism of the international community to manage conflict and facilitate the resolution of armed hostilities. This is especially pertinent if the UN is expected to deploy peacekeepers to places such as Libya, Syria, and Ukraine – all war-torn countries underscored by the complexity of multiple state and non-state armed actors, asymmetric warfare, and grievances that are often leveraged by armed actors through a wide-spread, accessible digital environment. Nevertheless, if the UN's unwillingness to understand the often charged 'gray zone' then belligerents in armed conflict, despite the intervention of UN peacekeepers, will continue to exploit circumstances until the UN adjusts its thinking and its approach to managing conflict.

Encouragingly, recent studies do suggest a positive impact of UN peacekeeping during civil conflict. Ruggeri et al. (2013) find that the presence of UN troops increases trust and cooperation between armed actors, thus providing the conditions necessary for conflict resolution. Ruggeri et al. (2017) find at the subnational level that UN peacekeepers reduced the duration of conflict when peacekeepers deployed to conflict-prone locations. Hultman et al. (2013, 2014) find that when a greater number of UN military peacekeepers deployed to an active civil war, there is an associated decrease in fatalities attributed to battlefield violence and civilian victimization. Their empirical findings are grounded in the argument that UN peacekeeping operational activities decreases the use violence by serving as a mechanism for overcoming commitment problems between warring parties by increasing the costs of continued fighting and reducing information asymmetries (Hultman et al., 2013, 2014, 2015). These UN peacekeeping operational activities theoretically shape the preferences and incentives of continued armed fighting as a means of conflict settlement toward one that uses the political process to mediate, negotiate, and demobilize and reintegrate.

Despite these added benefits of UN peacekeeping operations, achieving durable peace in civil wars is difficult given the motives to continue using violence. Peacekeepers increasingly deploy to the frontlines against rebel groups that engage in violence using a menu of tactics such as terrorism and guerilla warfare, often in combination, to achieve their political aims. Yet such a pernicious dynamic, I argue, has been overlooked in most recent studies. British Army Officer Charles E. Callwell once stated that "theory cannot be accepted as conclusive when practice points the other way." One must accept the irrefutable nature of war that plagues the conflict landscape - one embroiled with a range of violent tendencies - not solely because practices points the other way but because practice illuminates its full range. It is apparent that peacekeepers face armed actors who engage in terror tactics, and practice demonstrates that UN peacekeepers must contend with these tactics when deployed to ongoing civil wars.

This observable implication is echoed by Jan Eliasson, former Deputy Secretary-General of the United Nations, who states, "It is a sad fact that our peacekeepers are now being specifically targeted by violent extremist and terrorists…" but concludes that "peacekeeping operations should not be mandated to militarily defeat violent extremists and terrorists groups" (United Nations Security Council Meeting, 07 November 2016). However, Karlsrud writes, "many member states expect that this [use of terrorism] is the beginning of a longer trend, where UN peacekeeping missions should expect to be confronted with violent extremists and terrorists' groups" (Karlsrud, 2017). However, peacekeeping has confronted terrorism during its interventions in the 1990s and has since then continued to experience such tactical confrontations.

Thus, this dissertation serves as a nascent attempt to illuminate the practice of previous UN peacekeeping missions against the backdrop of terrorism in an effort to inform present and future peacekeeping operations and to advance our understanding of the complex and dynamic nature of armed conflict.

As such, the puzzle at the core of this dissertation is what explains the substantial rise in terrorism by rebel groups, like of that in Mali and elsewhere, despite security guarantees afforded by UN peacekeepers deployed to the conflict? Is this relationship merely an unintended consequence of UN peacekeeping operations? Is the use of terrorism a characteristic of rebel groups and the conflict environment? Perhaps a behavior motived by rebels risky political bargaining? These questions are not necessarily mutually exclusive but serve as use of alternatives concerning the complex relationship this manuscript seeks to understand. Throughout the manuscript I compare several existing theoretical starting points from the UN peacekeeping intervention literature and how such interventions influence rebel group violent behavior. While this dissertation focuses on UN peacekeeping intervention, the goal is to understand violent rebel behavior in the context of peacekeeping operations, particularly concerning the tactical decision to employ terrorism during the civil war despite the presence of UN forces. The core arguments of the theory rest in the premise that UN peacekeeping operational activities 1) limit opportunity and 2) increase costs – both militarily and politically. These coercive mechanisms, in effect, shape the incentive structures and preferences of armed actors to employ different forms of violence, namely the proclivity to engage in terrorist tactics (Chapter 2). Moreover, I argue that such incentives further influence the target preferences and technology (means of delivery) used to carry out such attacks (Chapter 3). This dissertation posits that increases in UN troops intensify the frequency of terror attacks, yet such attacks predominantly aim at 'hard targets' such as government, police, transportation, and lines of communication. Increases of UN troops also results in diversification of tactics when engaging in terrorism.

To empirically assess this theory, this dissertation provides the first empirical cross-national examination of UN peacekeeping and terrorism during civil war. It then examines in greater depth this causal relationship by examining the tactical diversity and target preference of rebel groups given

peacekeeping intervention, finding that UN peacekeeping affects the target preferences of armed actors and results in tactical diversification, both relationships unexplored in the academy. Lastly, it triangulates the main argument and findings empirically from the previous chapters by examining the spatial-temporal relationship at the subnational level. The findings from this dissertation are quite topical as the UN increasingly deploys peacekeepers to manage the devasting consequences that often plague the conflict landscape, yet vitally important to the academy in bridging multiple strands of literature and empirical methods for more holistic understanding of conflict dynamics and resolution.

1.1 Contributions

As mentioned at the outset, the first and foremost contribution is the fact that this project examines terrorism with respect to UN peacekeeping interventions during civil war. At the time of this manuscript, no quantitative study is dedicated to understanding this dynamic. This is partly attributed to fact that during the Cold War, United Nations (UN) peacekeeping operations (PKOs) primarily focused on intervening in and after interstate conflicts with a narrow scope of maintaining ceasefires, and monitoring and observing warring belligerents during the post-conflict peace process (Hultman et al. 2014). As such, many studies focused on this setting, where most studies found considerable support. UN PKO increased the length of ceasefires (Fortna, 2004) and were successful in post-conflict democratization (Doyle and Sambanis, 2000). However, since the end of the Cold War era, there has been a considerable shift in the scope of UN PKOs from that of its earlier intentions.

The prevalence of UN peacekeeping since 1991 makes this dissertation relevant and needed. As emphasized early on, present PKOs now play a dynamic role that often includes intervening in both inter- and intrastate conflicts with a focus on the protection of civilians, interceding between warring combatants, facilitating and mediating the political processes, assisting in the disarmament,

demobilization, and reintegration of former combatants, and protecting and promoting human rights (Fortna and Howard, 2008; United Nations Department of Peacekeeping Operations, 2010). The demand of UN PKOs has also shifted dramatically before and after the Cold War. As of August 2016, there was nearly 120,000 personnel, of whom 100,019 are uniformed personnel[6], serving in 16 UN peacekeeping operations. This figure represents nearly a nine-fold increase of UN personnel serving on PKOs since 1999 (United Nations Department of Peacekeeping Operations, 2010, p. 1). Moreover, as highlighted by Hultman et al. (2014, p.1), "[s]ince the end of the Cold War, the United Nations has deployed 28 peacekeeping operations to Africa, 21 of which served during an active civil conflict." This marked increase in demand, prevalence of deployment, and expanded scope make understanding the relationship between UN peacekeeping and terrorism pertinent and quite topical.

This dissertation provides insight into the UN's effectiveness with regard to unconventional warfare – an underexplored relationship in existing studies. Despite the increased role and demand of UN PKOs, the reviews of its effectiveness as a tool of conflict resolution remain mixed (See Fortna and Howard, 2008). UN PKOs have disarmed more 400,000 ex-combatants within the past decade, protected thousands of civilians and secured vital population centers, and enabled political mediation between warring parties – highlighted in successful cases of peacekeeping in Namibia, El Salvador, and Mozambique (Fortna and Howard, 2008; United Nations Department of Peacekeeping Operations, 2010). However, its immediate ineffectiveness is typically rooted in the UN's failure to prevent genocide, mass killing, and ethnic cleansing in Angola, Bosnia, Rwanda, and Somalia – costing the lives of thousands of innocent civilians (Fortna and Howard, 2008). Despite these noted failures, policymakers suggest that UN PKOs are a cost-effective instrument of conflict resolution, which is noted by former United States Ambassador to the U.N. Susan Rice: "If the US

[6] United Nations uniformed peacekeeping personnel consists of military troops, police, and military observers.

was to act on its own – unilaterally – and deploy its own forces in many of these countries; for every dollar that the US would spend, the UN can accomplish the Mission for twelve cents (United Nations Department of Peacekeeping Operations, 2010, p. 2)." Given the increase in scope and demand of UN PKOs of stabilizing and preventing typically the most challenging, violent civil conflicts – where often there is no peace to be kept – coupled with the costliness of conflict in terms of human lives and monetary efforts, makes understanding the immediate effectiveness of UN PKO during conflict particularly crucial for policymakers and the international community. Therefore, *empirically* examining and tracing UN effectiveness during civil conflict is crucial to the development and progress of present and future peacekeeping missions. This study provides a theoretical pillar, grounded empirically, to advancing our understanding of peacekeeping relation to terrorism. It is through this increased knowledge that we can develop effective policies and refine doctrine to enable UN mission mandates in reaching the desired end state.

This study expands the fruitfulness of most recent advancements in the measurement of peacekeeping and robust in application to other forms of violence. Quantitatively measuring and analyzing UN PKO's effectiveness during civil conflict remains a challenge for scholars and a central topic for advancing the peacekeeping literature and making data-informed policy prescriptions. (Fortna and Howard, 2008; Clayton et al., 2016). Such challenges often stem from defining and creating measurements during the research process. Measurement can be viewed as the building blocks of social scientific research. It serves as the linkage between theory and empirics, and the medium through which ideas or concepts translate into countable, replicable, and testable phenomena. How researchers measure their concepts can have a significant impact on their results, which can potentially lead to divergent conclusions. As noted by King, Keohane, and Verba (1994, p. 153), "problems in measurement occur most often when we measure without explicit reference to

any theoretical structure." Such problems can lead to measurement errors and biased results. Such challenges are not foreign for researchers studying peacekeeping.

This dissertation employs a highly disaggregated form of UN peacekeeping data, both at the macro and micro-levels, across time and space – am advancement compared to previous studies. For example, previous quantitative studies that examined UN PKO and violence relied mainly on rudimentary measures of UN PKO at the country-year (or conflict) unit of analysis, often measuring dichotomously whether a UN PKO is merely present or absent, and if a particular mission mandate[7] was used during and after conflict (Gilligan and Sergenti, 2008; Greig and Diehl, 2005; Hultman, 2010; Jett, 1999; Murdie Davis, 2010). However, such measures were grounded in a concept that assumed presence equated to the capability to execute specific peacekeeping actions such as monitoring ceasefires or intervening between warring actors. However, as later discussed in the following chapters, peacekeeping varies considerably within and across missions in size and composition (Hultman et al. 2013; 2014). As such, if our underlying concept is that peacekeeping intervention influences actor behavior during conflict, yet the ability to alter belligerent's behavior is contingent on size and composition of PKOs then treating peacekeeping missions as homogeneous raises concern as to whether the operationalization and the scoring of cases accurately reflects the concept the researcher seeks to measure, which calls into question the measure's validity (Adcock and Collier, 2001). This problem is particularly acute if scholars wish to understand *how* and to *what extent* peacekeeping influences violence during civil war. Therefore, it is essential to include a measure more reflective of the concept we are theorizing – especially given peacekeeping's real-world implications.

[7] Mission mandates are typically coded binary as to whether the intervention mandate contained specific types of provisions or if there was peacekeeping presence during and after conflict. This type of measure is useful for understanding how different mandates might influence the operational reach and activity of PKO during civil conflicts, but it does not necessarily tease out the specifics of what is observably occurring on the ground during conflict.

1.2 Plan of the Dissertation

In the following chapters, I offer theory and empirical evidence to demonstrate how UN peacekeeping operations shape armed group's preferences of one type of violence over another. Chapter 2 explores the macro-level relationship. This chapter provides a baseline theory underpinned on the central premise that UN peacekeeping operations limit opportunity and increase costs for the employment of conventional means of violence. As a result of such conditions, armed actors prefer to engage in terrorism due to its tactical utility underlined by the incentive structure and costs imposed by the increased size and composition of UN peacekeepers. I examine this relationship using a large-N statistical analysis. To adequately capture the relationship between peacekeeping and terrorism, I use monthly data on the number and types of UN peacekeepers deployed and the number of incidents of terrorism committed by rebel groups in African civil conflicts from 1992 to 2011 (Kathman, 2013; START, 2013). While recent literature finds that as the number of peacekeeping troops deployed to a civil conflict increases, there is an associated decrease in battlefield and civilian casualties, this study finds an increased propensity and frequency for rebel groups to use terrorism as a tactic.

Given this finding, Chapter 3 examines in greater depth the target preferences of rebel groups when UN peacekeepers are present. It also examines the tactical diversity in which rebel groups pursue given the presence of 'blue helmets.' Examining all civil wars in Africa from 1992-2011, I find an associated increase in attacks against hard and soft targets as the number of UN troops increase during civil war. However, I find that rebel groups are less likely to focus on these targets as the number of UN police increases during civil war. When examining the conditional relationship between UN troops and battlefield violence, I find that low levels of battlefield violence moderate the effect of UN troops on attacks against soft targets, but not against hard targets. Lastly, I find

that rebel groups respond to peacekeeping operations by diversifying their tactics in response to increasing pressures associated with UN military troop deployments.

Chapter 4 triangulates the previous two chapters by examining UN peacekeeping at the micro-level. The previous two chapters make the broad assumption that UN PKO personnel size correlates to the UN PKO's capacity and ability to effectively reduce rebel violence equally across time and the conflict's space. Recent studies isolate the effect of peacekeeping on armed actor violence at the sub-national level. They find that the presence of 'blue helmets' reduces one-sided violence committed by rebels, but not regarding government forces. Building on these insights, this study examines at the sub-national level the relationship between UN peacekeeping operations and terrorism. The results suggest that increases in UN peacekeeping forces lead to an increase in terror attacks. However, rebel groups exhibit variation in their target preferences as the number of UN peacekeepers increases in size. Localized peacekeeping reduces the frequency of attacks against 'soft targets,' but not with attacks against 'hard targets.' Figure 1.3 serves as a visual representation of manuscript's main chapters and how the three chapters are interconnected and mutually supportive in constructing a robust theory buttressed with rigorous quantitative empirics.

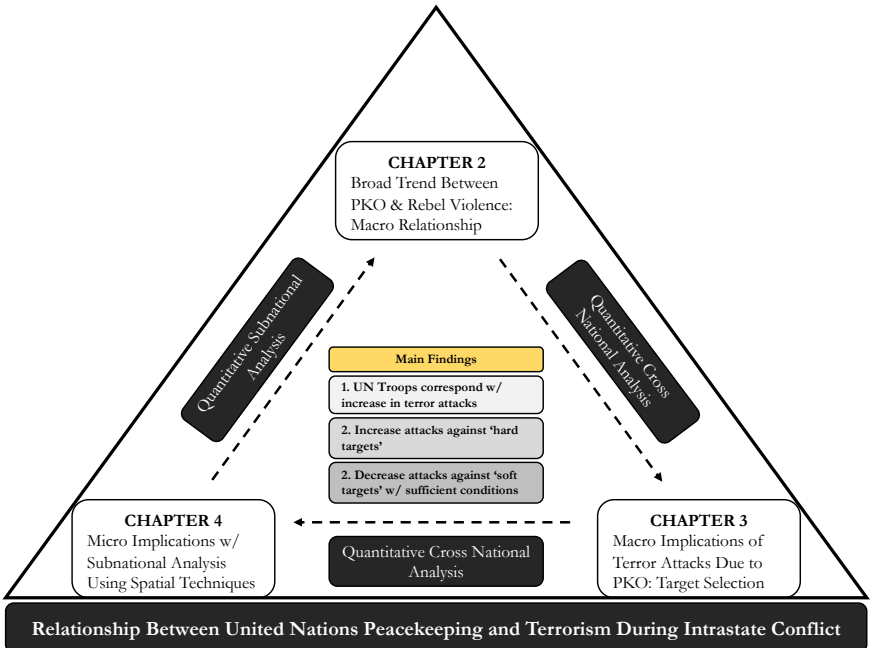


Figure 1.3 Visual Representation of Empirical Triangulation of the Three Main Chapters.

The last chapter concludes with a summary of the main findings and the implications that stem from the triangulation of results from the main empirical chapters. I provide a thorough discussion regarding future peacekeeping and conflict research – emphasizing the importance of examining the full spectrum of violence regarding crucial mechanisms underscoring UN peacekeeping operations. I also provide ways the United Nations peacekeeping can move forward with policy prescription and mandate development, concentrating on the moral hazard that present and future missions risk due to dilemma posited early on.

1.2.a Dissertation Structure

As Figure 1.4 shows, this dissertation consists of five substantive chapters covering:

- **Chapter 1:** An introduction to the dissertation objective and the context underpinning the motivation for the in-depth study.
- **Chapter 2:** A theory of how UN peacekeeping influences the use of terrorism, broadly, and an analysis of this relationship cross-nationally.

- **Chapter 3:** An analysis of how UN peacekeeping influences the target selection and tactical diversity.
- **Chapter 4:** A spatial analysis used to triangulate the empirical findings at a disaggregated level across time and space.
- **Chapter 5:** A summary of the key findings and recommendations for future research and policy prescriptions.

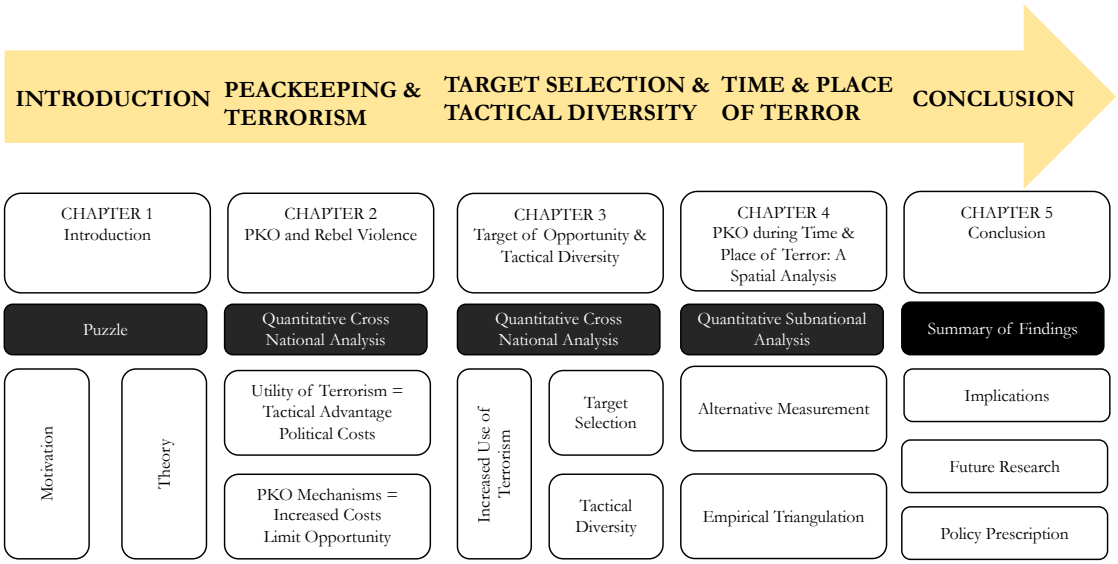


Figure 1.4 Structure of the Dissertation.

CHAPTER 2

PEACEKEEPING AND REBEL VIOLENCE DURING CIVIL WAR[8]

"Never believe any war will be smooth and easy, or that anyone who embarks on the strange voyage can measure the tides and hurricanes he will encounter."

- Sir Winston Churchill

Extant studies suggest that peacekeeping operations (PKOs), given sufficient capacity in troop size and composition, are effective at reducing battlefield hostilities and civilian victimization during and after civil conflict (Hultman et al., 2013, 2014, 2015; Kathman and Wood 2014). While these successes are undoubtedly noteworthy and reinforce the importance of PKOs in providing security guarantees, research has devoted little attention to other conflict dynamics associated with peacekeeping, particularly the use of terrorism.

The case of the ongoing United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) is illustrative. Following the political instability in Mali, the UN established the MINUSMA peacekeeping operation in April of 2013 with an authorized strength of up to 11,200 military personnel and 1,440 police. The mission's mandate encompasses several security-related stabilization tasks, focusing on securing major population centers, maintaining lines of communication, and protecting civilians. The mission's mandate also includes robust rules of

[8] Earlier versions of this paper were presented in December 2015 at the Workshop on Conflict at Michigan State University; November 2016 at International Studies Association-Midwest in St. Louis, MO; and International Studies Association Annual Conventions, February 2017 in Baltimore, MD and March 2019 in Toronto, ON. This chapter has benefited from the helpful comments of Jakana Thomas, Benjamin Appel, Caleb Lucas, Jessica Schoenherr, Kevin Greene, Kyle Obrecht, Alex Kozlowski, and panelists and audience members of the previously mentioned conferences.

engagement to protect civilians and UN personnel, as well as provisions that allow active patrolling among the population centers to intercede conflicting parties.[9]

While the mission proved effective in deterring conventional battlefield engagements between rebel opposition and government forces, it has mostly been unable to prevent the increasing incidents of terrorism. For example, between 1990 and 2014, Mali experienced 199 terrorist attacks, which killed a total of 725 people. However, the majority of these attacks (70%) occurred between 2012 and 2014, when peacekeepers deployed to the country.[10] This relationship is perplexing, given that research has found battlefield violence and civilian victimization to decrease as the level of UN military troops deployed increases (Hultman et al. 2013, 2014). What explains the rise in terrorism when peacekeepers deploy to a civil conflict? Are increases in the use of terrorism by the rebel opposition an unintended consequence of peacekeeping operations in civil conflicts?

In this chapter, I explore the relationship between UN peacekeeping and terrorism in civil conflicts[11]. I demonstrate that incidents of terrorism increase in civil conflicts when the PKO mission size increases and is primarily composed of military troops. As the PKO increases in this regard, the mission affects the conflict's dynamics in two distinct ways. First, as the number of military peacekeepers increases during a conflict, their ability to limit the opportunity of interaction between warring actors improves. PKOs do this by serving as a buffer between belligerents[12] on the battlefield, thereby reducing direct hostilities and the incentive to use conventional and guerrilla warfare as a primary means to achieving their goals (Hultman et al., 2013, 2014). As the opportunity

[9] For more information on MINUSMA visit the following website: http://www.un.org/en/peacekeeping/missions/minusma/

[10] Miller, Erin (2015) Fact sheet: Terrorism in Mali. National Consortium for the Study of Terrorism and Responses to Terrorism. Access at: https://bit.ly/2dtbQy0

[11] By "civil conflict" I employ a similar definition as Hultman et al. (2014) that civil conflicts are internal armed conflicts that include high-intensity civil wars and low-intensity armed conflicts. Throughout the paper, I use the terms "civil conflict" and "civil war" interchangeably.

[12] A belligerent is generally a sovereign state but can be a non-sovereign state if recognized by the international community and can provide essential "state-like" functions. I use this term interchangeably with insurgents and rebels.

to contest the government using conventional and guerrilla means diminishes, rebels resort to other unconventional means such as terrorism.

Second, by limiting the opportunities for direct engagements, peacekeeping operations also increase the costs incurred to rebels when they use conventional and guerrilla tactics. When peacekeepers deploy to conflict, their mission mandate often pursues strategies that limit the opportunity for battlefield engagements between belligerents and constrain combatants' ability to advance militarily against one another. This peacekeeping mechanism makes a rebel's decision to use conventional and guerrilla tactics more costly, given that any violent effort will risk military intervention by UN military peacekeepers. UN peacekeepers are, on average, better equipped to counter conventional battlefield engagements than violent-extremism. While rebels may prefer to impose high costs on the government through military confrontation, terrorism becomes a viable alternative strategy to impose political and military costs on the government due to several tactical benefits and the idea of "power to hurt" (Hultman, 2009; Schelling, 1966; Thomas, 2014). Therefore, I expect an increase in terrorism when military peacekeepers are present, particularly when UN troop levels increase in size - this is a cheaper strategy that enables the group to impose significant costs on the state and UN peacekeeping force.

Figure 2.1 provides some initial qualitative evidence to my theoretical expectations. As peacekeeping forces increase in size, on average, the number of terror attacks increase while battlefield violence either decreases or remains relatively modest at best. This brief example presents modest qualitative support for my theoretical argument: that as the peacekeeping operations increase in size, there is an increase in terror attacks. This is most apparent as the peacekeeping intervention increases from medium to large (10,000+ troops). However, to further comment on the trend: the small PKO results in higher levels of battlefield violence than terror attacks. I argue this is because

warring actors prefer to utilize more legitimate[13] means to contest one another, that is armed actors prefer to contest on the battlefield using conventional methods to seize and hold key terrain. By contesting the armed opponent using maneuver warfare provides a sense of legitimacy through the lens of the international community thereby potentially avoiding any political repercussions that might follow. However, rebel groups increase their propensity to engage in terrorism once the ability to contest using conventional means diminishes due to the decrease of opportunity and imposing costs of UN peacekeepers. This relationship is illustrated in the steady increase of terror attacks across the range of peacekeeping operations once UN troops increase from a small contingent to large.

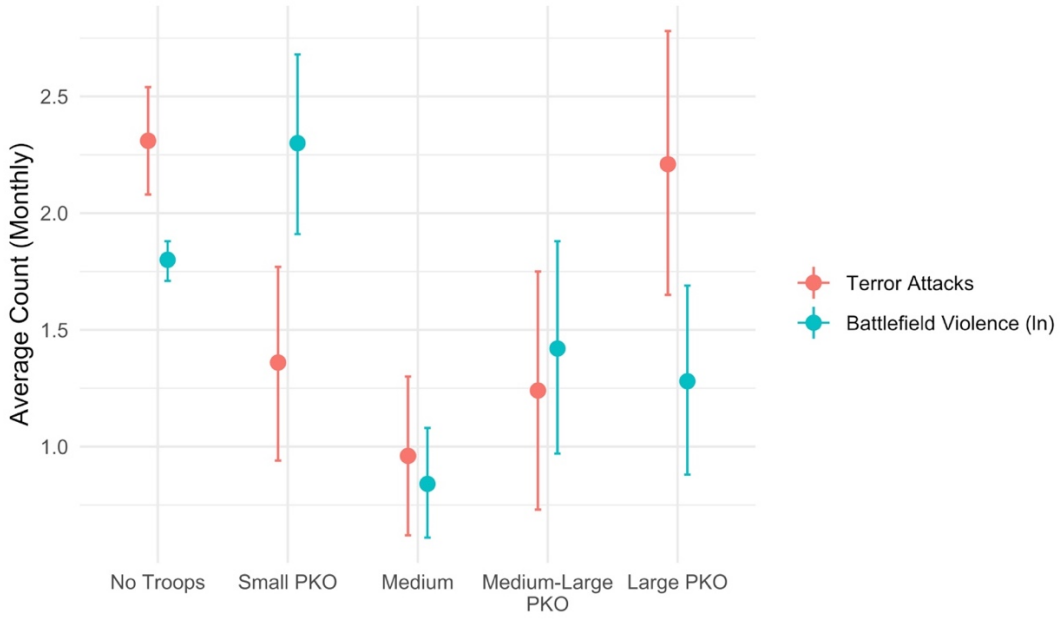


Figure 2.1 The average number of terror attacks and battlefield fatalities across the size of UN peacekeeping missions
Note: This only examines the size in relation to only UN military troops.[14]

[13] By legitimate, we can appeal to the notion of "just war theory." That armed conflict in this regard, or the actions of a combatant, are deemed legitimate when such violence is perpetrated against an enemy combatant against a military objective.

I examine this relationship more systematically using a large-N statistical analysis. To adequately capture the relationship between peacekeeping and terrorism, I use monthly data on the number and types of UN peacekeepers deployed and the number of incidents of terrorism committed by rebel groups in African civil conflicts from 1992 to 2011 (Kathman, 2013; START, 2013). I also examine the robustness of this relationship using multiple datasets and model specifications and techniques. While recent literature finds evidence that as the number of peacekeeping troops deployed to a civil conflict increases, there is an associated decrease in battlefield and civilian casualties, this study finds an increased propensity and frequency for rebel groups to use terrorism during conflict. These results suggest an overlooked reality when UN peacekeeping forces deploy to an active civil conflict.

2.1 UN Peacekeeping and Violence

Scholars have widely debated UN peacekeeping effectiveness in decreasing violence during active and post-conflict scenarios (Fortna and Howard, 2008). Some scholarly work has suggested the UN is ineffective at resolving ongoing conflict and maintaining post-conflict peace (Diehl et al., 1996; Gilligan and Sergenti, 2008; Greig and Diehl, 2005; Hultman, 2010; Jett, 1999; King and Zeng, 2007). For instance, Gilligan and Sergenti (2008) and Greig and Diehl (2005) find that peacekeepers have no effect on violence during active civil conflicts. Doyle and Sambanis (2000) argue that specific mission mandates influence on-going conflict dynamics, where, for example, they find traditional peacekeeping does not affect peace post-conflict. However, these quantitative studies evaluated the overall success using rudimentary assessments that measured the presence of peacekeeping in civil conflict. A consequence of using dichotomous measures of peacekeeping is that the features of the conflict or country explain the observed outcomes rather than the unique characteristics of the UN mission (Hultman et al., 2013, 2014, 2015; Ruggeri et al., 2012). Despite these empirical shortcomings, most of the recent literature has found robust peacekeeping to be quite effective at reducing violence during active civil conflict, improving cooperation among armed

actors, and maintaining peace during the post-conflict period (Doyle and Sambanis, 2008; Fortna, 2004a, 2004b, 2008; Gilligan and Sergenti, 2008; Hartzell et al., 2001; Hultman et al., 2013; Walter, 1997).

Several recent studies of peacekeeping effectiveness examined the immediate influence of UN PKOs on conflict dynamics during ongoing civil war. Kathman and Wood (2011, 2014) and Hultman et al. (2013, 2014, 2015) find that when UN PKOs intervene in a conflict, PKOs are effective at reducing battlefield hostilities and civilian targeting during and post-conflict. Hultman et al. (2013, 2014, 2015) disaggregate UN peacekeeping missions by the number and type of personnel, where they find that the mission composition does influence ongoing conflict-related violence and post-conflict peace. Their measure is crucial, as UN missions vary significantly across mandates, personnel size, and composition. Therefore, if we treat peacekeeping operations homogeneously, then researchers risk overlooking the actual effects across peacekeeping operations. Specifically, their findings suggest that an increase in UN military troops leads to a decrease in battlefield fatalities and civilian victimization in civil wars; while an increased level of UN police reduces civilian victimization, it does not reduce battlefield fatalities. Military observers, however, are found to be ineffective in reducing both battlefield fatalities and civilian victimization. Kathman and Wood (2014) and Kathman et al. (2015) find similar effects in the post-conflict setting. They find evidence that peacekeeping size and composition is also associated with a decline in the severity of post-conflict civilian victimization. Nevertheless, these findings suggest that peacekeeping operations influence rebels' strategic decisions in using various violent tactics during civil conflict.

Another largely overlooked aspect of conflict dynamics is the use of terrorism by rebels. Some studies have examined the unintended consequences of UN peacekeeping operations in civil conflicts—that is, the rebels' decision to shift strategies when peacekeepers intervene (See Luttwak, 1999; Werner and Yuen, 2005; Ao et al., 2007; Nilsson, 2008; and Hultman, 2010). For instance,

Hultman (2010) suggests that UN peacekeeping, when sent to ongoing conflicts, changes the nature of the conflict as actors change their tactics in order to improve their bargaining position in the event of a negotiated settlement. When peacekeepers deploy to a conflict, the intervention limits the ability of warring parties to contest on the battlefield. This peacekeeping intervention, therefore, shifts actors' strategies of conventional tactics to other methods such as civilian targeting. By targeting civilians, belligerents can increase their territorial control and impose costs on their respective opponents (Hultman, 2010).

Salverda (2013) also offers insight into rebel's strategic use of violence by demonstrating that rebels, in some cases, attack peacekeepers instead of other targets. Salverda (2013) argues that stronger rebel groups will attack peacekeepers in order to restrict peacekeeping behavior and/or withdraw from conflict. Fjelde et al. (2016) also find evidence that conflict dynamics influence rebel strategies during civil conflict. As the balance of power between rebels and the government shifts due to the presence of peacekeeping and setbacks on the battlefield, rebel groups increase targeting against peacekeepers to offset such losses. While these studies offer theoretical insight in rebels' violent strategies, their respective analyses problematically rely on a dichotomous measure of UN peacekeeping. This type of measure does not fully capture the characteristics of peacekeeping operations (see Hultman et al., 2013, 2014, 2015 and Kathman and Wood, 2014).

Previous studies also overlook terrorism as a tactic available to rebel groups during civil conflict and instead focus only on one form of terror – civilian victimization (Hultman et al., 2013; Kathman and Wood, 2014). As Jessica Stanton comments, " distinguishing between terrorism and civilian targeting has several important advantages…[that] it permits greater precision in the terminology we use to describe different types of political violence that occur in the context of civil war" (Chenoweth et al., 2019). Terrorism can target soft and hard targets, which moves beyond the narrow definition of only targeting civilians. My study looks to contribute to existing literature on

peacekeeping's effects on conflict dynamics by examining the influence of peacekeeping on the rebels' decision to use terrorism as a tactic.[15] PKOs with sufficient military capacity are designed to prevent conventional warfare and protect the civilian populace from civilian victimization. Much of these efforts concentrate around vital population centers and state institutions. This result leaves other areas outside this narrow purview vulnerable to terror attacks, making it difficult for peacekeepers to defend and protect. As peacekeepers shift resources and personnel to prevent civilian victimization and battlefield engagements, non-state actors become incentivized to employ other tactics against vulnerable targets not readily protected by peacekeepers. For instance, rebels may strike at the economic capacity of non-combatant region, which could increase the costs of doing business or visiting a part of the country where there is no military presence (Ash, 2017). Rebels could also kidnap diplomats or hold hostages; both figures not readily captured using civilian fatalities but equally consequential. For instance, in a UN report to the Secretary-General on the Security Situation in the Central African Republic, MINUSCA – the UN peacekeeping mission in the country – arrested a prominent anti-Balaka leader, which triggered a series of retaliatory attacks by the group to include: "the kidnapping Balaka groups: the kidnapping of a French humanitarian worker on 19 January…who was later released on 23 January; the kidnapping of an international MINUSCA staff member on 20 January… and the abduction of the Central African Minister of Youth and Sport, Armel Sayo, on 25 January" (S/2015/227, 1 April 2015, para. 5). In a later report, officials identified the Lord's Resistance Army in the Central African Republic carried out 12 attacks that resulted in 38 abductions during a four-month reporting period (S/2018/611, 18 June 2018). In

[15] It is important to note that several studies have examined the relationship between civilian victimization and peacekeeping. Civilian victimization can undoubtedly be interpreted as an act of terrorism, as the intentional killing of civilians fits the broad definition of terrorism typically employed. However, when only examining civilian victimization, and the associated number of civilian fatalities, studies risk overlooking other acts of terror that rebel groups commonly employ against targets in civil conflicts. These types of targets include diplomats, police, transportation and telecommunications infrastructure, and food and water supply, among others. Also, the UCDP One-side Violence Codebook v1.4 (2016, p. 2) defines one-sided violence as "…the use of armed force by the government of a state or by a formally organized group against civilians which results in at least 25 deaths."

that same reporting period, a deadly attack on a Catholic church by an armed, non-state actor group resulted in the killing of a prominent peace activist cleric, Abbé Albert Toungoumale Baba, and nine other civilians. The attack was mainly in retaliation for the arrest of the member of the group (S/2018/611, 18 June 2018). All three incidents, both substantial and consequential to the security situation, would not be readily observed using only one-sided violence.[16]

This type of violence is also apparent in the attack in the capital city of Bamako, Mali, where, in November of 2015, militants took 170 hostages and killed 20 people at Radisson Blu hotel (ABC News, 2015). This event questioned whether or not the UN PKO was sufficient enough to address acts of terrorism. Thus, focusing solely on civilian victimization overlooks a range of attacks beyond civilians. Rebels have a wide range of tactics available to achieve their objectives (along with available targets): they can use conventional warfare, guerrilla tactics, and indiscriminate violence against civilians, to name only a few. However, terrorism is an additional means that rebel groups may engage to achieve their political and military goals while not becoming decisively engaged on the battlefield (US Army Field Manual No. 3-24: p. 5-2). Terror attacks can include assassinations, armed assaults, the bombing of vital infrastructure, and hostage-taking (START, 2013). Thus, if studies focus on battlefield engagements and civilian victimization, then studies risk overlooking other forms of violence.

To improve on previous works and capture this relationship, I use a count of incidents of terrorism rather than the total number of fatalities attributed to such attacks. Levels of fatalities denoted in battlefield deaths or total civilian casualties may not fully capture the effects of peacekeeping on all types of conflict. For example, rebel forces during instances of peacekeeping operations during active civil conflict may use strategic attacks that impose severe costs on civilians, government, and the peacekeeping operation. Koren (2017) highlights that non-state actors target

[16] Reference previous footnote concerning distinction between civilian victimization and terrorism.

state capitals due to the political and economic value associated with the target. Instances of mass kidnappings of citizens and high-ranking officials or destruction to vital infrastructure are not captured when using the count of fatalities but are equally crucial to understanding conflict dynamics. A single attack in the capital can signal state weakness in fulfilling its fundamental role in security. While terror attacks and associated fatalities may be relatively few in frequency, the consequences of such attacks remain high. Therefore, using fatalities to capture conflict dynamics may overshadow other violent interactions between local armed actors and the effects of peacekeeping. While studying battle deaths and count of civilian deaths is useful, as is the frequency of terrorist incidents when examining the relationship between peacekeeping and conflict dynamics.

This research is not intended to discourage the use of UN peacekeeping in civil conflicts, but merely to highlight additional obstacles UN PKOs face in often complex and challenging contemporary environments, which ultimately helps policymakers adapt and improve. The nature of conflict evolves and adapts to the surrounding environment. While it is certainly noteworthy that the UN has proven remarkably effective at reducing battlefield violence and protecting civilians as noted in previous studies, it is imperative to address the additional challenges that plague the war-torn landscape, and of which typically encountered during the presence of peacekeeping. If rebels indeed adjust their tactics when peacekeepers intervene, then the international community should look to improve or redesign UN peacekeeping's efficacy to ensure any mission is prepared to confront the spectrum of violence available to belligerents. Moreover, peacekeeping is typically designed to facilitate the mediation process between warring actors, protect civilians, and ensure security. If, however, rebels continue to use violence to advance their political goals despite the presence of peacekeepers, then the effectiveness of peacekeeping during the mediation process is inherently called into question.

2.2 Terrorism and Peacekeeping Operations

All UN peacekeeping operations broadly focus on conflict prevention, peacemaking, peace enforcement, and peacebuilding. The ability of peacekeeping operations to execute these activities varies considerably across the mission capacity and constitution. The mission capacity of PKOs refers to the number of personnel deployed to a mission, while the constitution refers to the type of personnel deployed—military troops, police, and unarmed observers. As noted in previous studies, rarely are UN missions homogenous across these two dimensions (See Kathman, 2013; Hultman et al., 2013, 2014). UN Missions typically vary in the level of deployment of troops, police, and unarmed military observers.

Peace operations not only work to maintain peace and security, but also to facilitate the political process, protect civilians, and to assist in the disarmament, demobilization, and reintegration of armed actors (UN DPKO). In order to effectively do so, UN PKOs work through two main operational activities: separating combatants and disarmament, demobilization, and reintegration (DDR) (Hultman et al., 2013, 2014). As previous studies demonstrated empirically, these operational activities are effective at reducing battlefield fatalities and civilian victimization. However, a propensity towards terrorism as a tactic may be an overlooked consequence of such UN operational activities, particularly as the UN effectively enforces separation of combatants during active civil conflict. Focusing on the separation of combatants, I argue that such PKO activity influences the incentive structure for using other forms of violence, namely the use of terror tactics. This relationship becomes especially acute as the opportunity decreases, and the costs of engaging oppositional forces conventionally increase.

Preliminary evidence from Figure 2.2 highlights these theoretical expectations using the context of the Sudanese (a) and Sierra Leonean (b) civil conflicts. Qualitatively, we can observe that as the

number of UN troops increases, there is an associated decrease in battlefield violence, as suggested by previous literature. However, there is also an increase in the yearly count of terrorist attacks. While modest, this lends some initial support for my theoretical expectations that as UN troops increase in size, the ability to raise costs and limit opportunity for conventional warfare incentivizes armed actors to supplement their campaign using alternative means, such as terrorism. It is important to illustrate this relationship over time. UN deployments require months and years to fully materialize into the mandate's authorized size. The small number of troops first entering the country will have limited ability to enforce their respective mandate. However, as follow-on forces project into the area of operations, the UN increases its capacity to conduct operations that what I argue to deter conventional tactics, but as an unintended consequence lead to other forms of violence. Nevertheless, a more systematic analysis is required to empirically and rigorously examine this relationship.

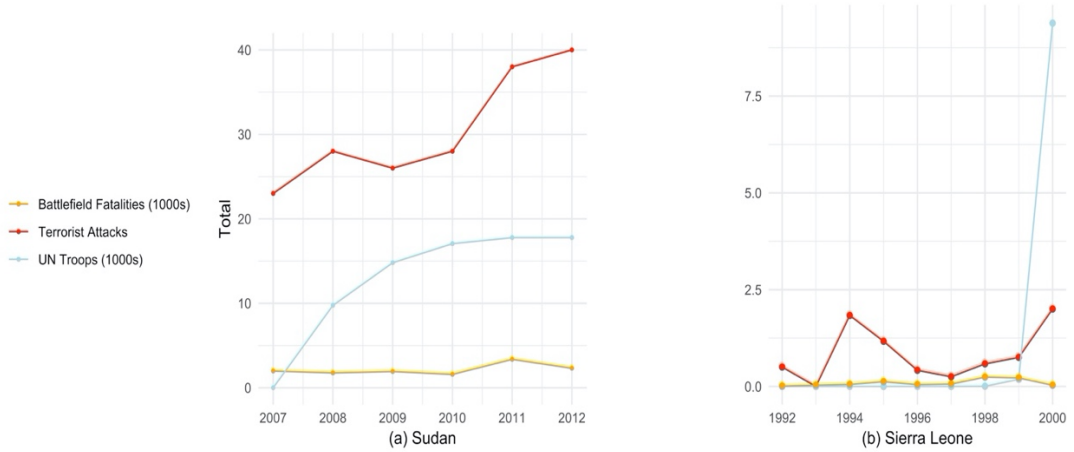


Figure 2.2 UN Peacekeeping, Terrorism (# of attacks), and Battlefield Violence (# of fatalities): Evidence from (a) Sudan and (b) Sierra Leone.

Below I first discuss terrorism as a tactic and then present two potential unintended consequences that may occur when military peacekeeping force increases in size. In particular, I argue that military peacekeeping limits the opportunity and raises the costs for rebels' use of conventional and guerrilla tactics. Rebels, therefore, will have a strategic incentive to employ terrorism when peacekeeping

operations are present, particularly as the total number of UN military troops increases in size. I discuss the implications that follow.

2.3 Terrorism as a Tactic

Through terrorism, rebels have the "power to hurt" the government and UN peacekeeping missions. Rebels can employ a wide range of violence (assassinations, bombings, and kidnappings) that impose significant costs on their opponent, and they can do so without concern of reciprocation (Hultman, 2007, 2009; Kydd and Walter, 2006; Thomas, 2014). Such terror attacks can be part of a broader strategy to achieve political goals. The general idea, however, is that rebels use terror attacks to signal the resolve of their organization and impose likely costs on the government (Polo and Gleditsch, 2016). Terrorism allows rebel groups to inflict pain in a cost-effective manner, which can lead governments to acquiesce to rebel demands (Thomas, 2014), spoil unfavorable peace processes (Findley and Young, 2015), extend conflict duration (Fortna, 2015; Findley and Young, 2015), deprive the legitimacy of the state (Hultman, 2007; Wood, 2010), intimidate other armed actors (Kydd and Walter, 2006) and use as a substitute for guerilla tactics conditional on counterterrorism efforts (Carter, 2015).

Broadly, to inflict such costs, insurgents, when using terrorism, often select targets for their most significant political and psychological impact on the local populace and government (US Army Field Manual No. 3-24, 2006). Rebel groups seek vulnerable targets that are typically more difficult to defend. This situation makes it challenging for the government (Fortna, 2015) and peacekeeping force to maintain comprehensive security. These attacks are generally unpredictable and covert, making it difficult for peacekeepers to detect and prevent. This difficulty is because peacekeeping forces are designed to maintain a defensive posture to protect government institutions and major population centers. This force posture leaves areas of vulnerability susceptible to attack. When rebels can strike these targets, these terror attacks delegitimize the government (Hultman, 2007;

Thomas, 2014; Wood, 2010). These attacks also delegitimize the UN peacekeeping operation, as both appear to fail in accomplishing their fundamental role of protecting civilians and maintaining security.

Moreover, the repeated use of terror attacks signals the insurgency's strength and resolve against the state and UN peacekeeping mission. The persistent use of terrorism and the peacekeepers' continued inability to deter such attacks could undermine the government and peacekeeping forces — any continued fighting results in an increase in costs incurred by government and PKOs to defend population centers. By mounting costly challenges to the government, the rebels are more likely to achieve their political goals (Kathman and Wood, 2014). As Hultman (2007) explains, "recurrent attacks against civilians in combination with an ongoing armed conflict could easily wear down the patience among the population and consequently be of great damage to the government (p.209)." Similarly, such attacks can attrite the patience of the international community that invests in peacekeeping operations, thereby leading to a lack of commitment of troop-contributing countries or withdrawal of forces.

Rebels undermine the government typically by employing terrorist attacks to increase the population's vulnerability. Increasing the population's vulnerability decreases their feeling of security, which consequently decreases their support for the government and peacekeepers - these terror attacks create the perception that rebels can attack anywhere, at any time, and the government and UN peacekeeping operation cannot prevent it. Such attacks undermine the government and UN peacekeeping operation's ability to provide security for the local populace, which potentially destabilizes the mission and its ability to facilitate peace (Hultman, 2007; Thomas, 2014). Therefore, citizens, out of fear for survival, either flee from the conflict or seek protection from the rebel opposition (Hultman, 2007; Thomas, 2014). As the population begins to shift their support from government to rebels for their protection, the state loses vital support, and the rebel opposition

increases in strength. Civilians that remain supportive of their government may pressure the government to give in to the rebel's demands to avoid such violent acts (Fortna, 2015; Thomas, 2014). These attacks weaken the bargaining power of the state and potentially the UN peacekeeping operation's legitimacy in mediating conflict. Because of this power imbalance, the state becomes more inclined to either alter current policies or offer concessions that benefit insurgent objectives in pursuit to mediate an end to additional attacks rather than continued use of violence (Hultman, 2009; Thomas 2014).

Moreover, violent terror attacks can derail the peace process (Kydd and Walter 2006) and curtail UN peacekeeping operations (Fjelde et al. 2016). This consequence may be particularly acute since the UN has explicitly stated that it will not mandate missions to conduct counter-terrorism operations militarily. Thus, rebel groups who conduct terror attacks will signal to the international community that the primary form of violence is terrorism. The increase in terrorism further implicates the peacekeeping intervention of conducting counter-terrorism operations. Such a signal could also lead the UN to revise its mandate or withdraw forces from the conflict altogether. Thus, I argue such mechanisms further incentivizes the increase of terrorism as a tactic during civil conflict.

2.4 Limiting Rebel Violent Behavior

2.4.a Limiting Opportunity

Separating the combatants is an essential method by which UN peacekeeping reduces combatant's security concerns and military engagements. When peacekeepers intervene in a conflict, the peace operation pursues strategies that limit the opportunities for combatants to directly engage with one another, which changes the "rules of the game" (Hultman, 2010). Peacekeepers prevent the resurgence of battlefield engagements by positioning armed personnel on the frontlines between armed actors, effectively serving as a buffer between combatants (Hultman et al., 2013, 2014). The main purpose of the buffer zone, as stated in the UN Infantry Battalion Manual (2012, p, 147)

"would be to maintain a visible presence and dominate the buffer zone with robust force projection to preserve the sanctity of the buffer zone…" This operation involves a number of basic tasks that shape armed actor behavior, such as interpose between opposing forces and ensuring no presence of military personnel, weapons, and activities occur in the zone. As the size of the peacekeeping deployment of troops increases, the ability to effectively position blue helmets between belligerents improves, hindering any direct fighting between combatants.

Recent research demonstrates that peacekeepers tend to deploy to areas where violence is most intense in severity and frequency. For example, Powers et al. (2015) find that peacekeeping forces in African civil wars deploy to locations experiencing the most intense violence, while Costalli (2013) finds that peacekeeping forces in Bosnia-Herzegovina deployed to the most violent areas during the conflict. This result is because military peacekeepers are typically better equipped than the warring parties, which allows them to monitor areas of conflict and intercede militarily should any actor attempt an offensive advancement on the battlefield. Active monitoring by peacekeeping forces reduces the opportunity for rebels to use conventional style attacks such as large-scale assaults and raids on hard targets. When rebels lose the capability to contest the government using conventional and guerrilla tactics, they gain incentive to shift their strategies to other violent tactics such as terrorism. Using terrorism provides opportunities for rebels to pursue their military and political objectives despite limited interaction on the battlefield. Terrorism does not require attacks against only the government but can also target civilians and public areas. Moreover, unlike even a small band of guerrillas, terrorism does not require as many personnel and requires less logistical support. This organizational advantage enables them, on average, to be stealthier and go unnoticed, which affords the group greater security as terror attacks put less of the organization at risk should the attack be foiled. This advantage makes it difficult for peacekeepers to detect and prevent, compared to more overt use of conventional tactics, and even other irregular tactics like guerrilla warfare.

Therefore, as the level of UN military troops increases and their capacity to reduce the opportunity for direct hostilities improves. This peacekeeping efficacy increases the potential for rebel groups to pursue terrorism as the tactic provides an opportunity to advance their political goals.

2.4.b Increasing Costs

Peacekeeping operations also increase the costs incurred by rebels should conventional, and guerrilla tactics be employed (Hultman et al., 2013, 2014). As the costs associated with conventional and guerrilla tactics increases, rebels become incentivized to use less costly means such as terrorism. Peacekeeping limits the opportunity for battlefield engagements between belligerents, which limits the ability for combatants to advance militarily against one another. In doing so, this peacekeeping mechanism increases the costs for rebels to conduct conventional operations against government forces and attacks against well-protect locations (Hultman et al., 2013, 2014). This unintended consequence influences the rebel group's decision to adopt tactics that are less costly relative to conventional and guerrilla tactics. As the UN improves its ability to effectively position blue helmets along the frontlines and around vital areas such as large population and government centers, rebel forces' ability to circumvent this barrier becomes increasingly more difficult. For example, following an attack that left nine civilians dead in the town of Niono in the Ségou region, MINUSMA immediately dispatched a patrol to the town as a show of strength and to deter further violence (UN, 2017). This decline in conventional tactics and increase adoption of terror attacks stems from UN peacekeeper's active patrolling, monitoring activities, and strategic positioning of peacekeepers. These operational activities detect overt rebel activity and signs of battlefield violence (Hultman et al., 2014). For example, Townsen and Reeder (2014) use data from the Democratic Republic of the Congo (DRC) (1999-2005) to find that UN peacekeepers were more likely to deploy to known locations of battlefield engagements between rebel and government forces. They also found that

peacekeepers tend to cluster around centers of activity such as transportation networks, densely populated areas, surface-based resources, and international borders (Townsen and Reeder, 2014).

Lastly, achieving any significant offensive gains on the battlefield requires extensive movement of rebel personnel and vital supplies. The PKO could potentially reveal any substantial conventional advancement made by rebels. For example, UN patrols carry out a number of support tasks that make such troop deployments challenge and movement of armed groups risky. UN troops can establish mobile observation posts and checks to observe isolated areas and conduct long range patrols to specific areas to ensure extended UN presence and to further deter potential spoliers (UN Infantry Battalion Manual, 2012, p. 28). This UN operational activity reduces the element of surprise, making any conventional and guerrilla operation inherently more costly relative to terrorism (Hultman et al., 2014). Should the rebel advancement be thwarted, the success of their movement becomes vulnerable to the possibility of being ultimately defeated. Rebels minimize losses by avoiding immediate confrontation and guerrilla-style attacks that could lead to prolonged battles to avoid such high costs. The inability to achieve their war aims as conventional tactics diminish incentivizes rebels to pursue alternative strategies such as terrorism to inflict severe costs on the government and peacekeeping mission. Rebel groups can aim their attacks directly at targets where peacekeepers are not present.

In Mali, targeted attacks against civilians in the central regions of Mopti and Ségou displaced civilians, inciting grievances among the population stemming from insecurity and the diminished State presence (UN, 2017). The use of terrorism allows rebels to impose significant costs on the government when the government or UN PKO cannot reciprocate. Such strikes on the government and UN PKO allow rebels to pursue their political objectives without the high costs associated with conventional engagements on the battlefield. Therefore, I expect rebel groups will be more inclined to engage in terrorism when there is an increase in UN military peacekeepers, as terrorism is a

cheaper strategy and imposes severe costs on the government and UN peacekeeping force. The theory about the relationship between UN peacekeeping operations and terrorism thus suggests the following hypothesis:

Hypothesis: On average, as UN peacekeeping troops increase in size (# of personnel), there is an associated increase in the frequency of terrorist attacks.

Briefly extending off the DRC case, Figure 2.3 highlights the general trend of my theoretical expectations. As the number of UN peacekeeping troops increased in size in the DRC, there was also a precipitous increase in terror attacks.[17] Such PKO activity there limited the rebel opposition's ability to make any significant attack without being detected and pursued by better-armed UN military peacekeepers. For the rebels, the lack of opportunity for military advancements incentivized alternative strategies that were less costly to the rebels using terrorism. For instance, the U.S. National Counterterrorism Center believes that the FDLR was responsible for a dozen terrorist attacks in 2009 alone (U.S. National Counterterrorism Center, 2010) (See footnote for more information regarding the DRC). While the general increase of attacks culminated in 2009 following the peace deal, the sheer reality is that UN peacekeepers are on the frontlines in contexts where terrorism occurs and often exacerbates due to unintended consequences.

[17] Following a peace deal in 2002 and the formation of a transitional government in 2003, ongoing violence perpetrated by armed groups, often in the form of terror attacks, occurred despite the steady increase of UN peacekeeping forces. During this time, the National Congress for the Defense of the People (CNDP) and the Democratic Forces for the Liberation of Rwanda (FDLR), both armed rebel groups, remained active armed actors in low-intensity conflict. It was not until 2009 when a signed peace deal was able to subside violence due to the splintering of the CNDP and significant offensive operations of government forces against FDLR. The increased levels of terrorism before and during negotiations for peace, as illustrated in Figure 3, is consistent with existing research (Thomas, 2015; and Findley and Young, 2015).

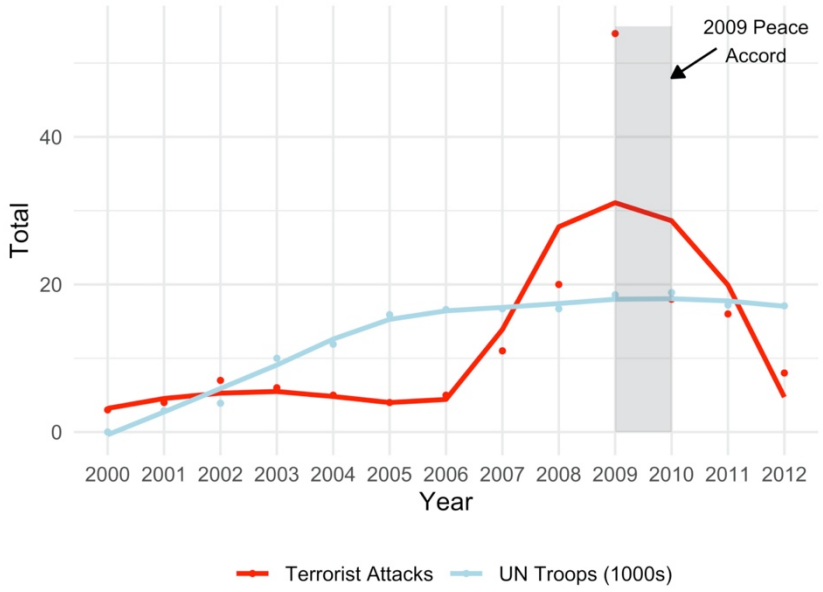


Figure 2.3 UN Peacekeeping and Terrorism (# of attacks): Evidence from the Democratic Republic of the Congo.
Note: Loess smoother applied, confidence intervals omitted for visual clarity.

2.4.c Evidence from Mali

The case of the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) highlights the shift in rebel tactics when peacekeeping forces intervene. The situation in Mali is complicated, to say the least, with the National Movement for the Liberation of Azawad (MNLA) fighting for autonomy in the North, and jihadists groups such as Al-Qaeda in the Islamic Maghreb (AQIM), the Movement for Unity and Jihad in West Africa (MUJAO) and Ansar al-Dine exploiting the political instability for their own gains (Karlsrug, 2015). The northern part of Mali fell under the control of Tuareg rebels, a group linked to al-Qaeda in the Maghreb (AQIM), in 2012.[18] Following a French military and African Union intervention that cleared much of the rebel opposition out of the country, UN peacekeeping forces deployed to the country in April 2013 to support the political process; provide security, stabilization, and protection of civilians; and assist the

[18] For more information on MINUSMA see the following website: http://www.un.org/en/peacekeeping/missions/minusma/

reestablishment of State authority. This UN mission has proven effective at reducing conventional and guerrilla-style battlefield engagements. Per a UN Security Council report dated 20 January 2015, MNLA rebels fired heavy machine guns and rockets into Tabankort in the vicinity of MINUSMA forces and civilians. In response, MINUSMA immediately deployed two attack helicopters to deter further rebel violence. Following the mandated rules of engagement, the two attack helicopters neutralized the threat.[19] Despite these successes with conventional and guerrilla-style engagements, MINUSMA, however, has been mostly ineffective at combating the non-conventional terrorist tactics posed by the violent extremists.

Figure 2.4 UN Peacekeepers with MINUSMA providing security of a local UN compound (Figure published Dhaka Tribune, 2017, provided by Reuters)[20]

While Mali has experienced 199 total terrorist attacks between 1990 and 2014, which killed a total of 725 people, most of these attacks (70%) occurred between 2012 and 2014, when the UN deployed peacekeepers to the country. It is important to note that the UN did not necessarily

[19] See UN Security Council Report: "Report of the Secretary-General on the situation in Mali: 17 Dec 2014 to 19 March 2015." p. 7 (27 March 2015). Available at the following: http://www.un.org/ga/search/view_doc.asp?symbol=S/2015/219

[20] Dhaka Tribune. 2017. "IED Kills 3 Bangladeshi UN Peacekeepers in Mali." (24 September 2017) Available at: https://www.dhakatribune.com/world/africa/2017/09/24/ied-kills-peacekeepers-mali/

intervene because of terrorism, but to support political processes in the country and carry out a number of security -related tasks (UN, 2013).[21] The frequency of terror attacks has further increased since 2014, with 77 attacks alone occurring within the first six months of 2015. As rebel factions lost the ability to contest the government on the battlefield (which can be partly attributed to French military forces and partly to the significant presence of armed UN military troops that are actively patrolling), they resorted to terrorism to achieve their political goals.[22] Consistent with previous trends, the number of attacks by violent extremist groups raised to 85 in 2016. An example of using terrorism as an alternative to traditional tactics occurred in May 2014, when MNLA rebels attacked the office of the regional governor in Kidal. The attack killed eight soldiers, eight civil servants, and twenty-eight rebels, and left another ninety-one people wounded. MNLA stated the attack was carried out due to the government's lack of commitment to peace negotiations.

These types of terrorist attacks have been common since 2013, the year of MINUSMA intervention. As Figure 2.5 highlights, the changing trend of different forms of violence appears closely intertwined – where decreases of battlefield violence are associated with spikes of terror attacks. Many of the terror attacks in Mali have included suicide bombings, kidnapping, and hostage-taking, despite active UN military patrolling and sizable increases in UN military capability. For example, in January of 2015, rebels detonated two suicide vehicles, one at a MINUSMA checkpoint and the other at the entrance of the MINUSMA base. The attacks resulted in the one death (a peacekeeper), four wounded, and significant infrastructure damage to the UN base. This type of terror attack persistently occurred throughout 2015, with the majority of these attacks occurring against MINUSMA personnel.

[21] The resolution does highlight the concerning threat of terrorism to the regional stability and security, but makes note that the peacekeeping force will not engage in offensive activities.
[22] It is important to note that while the use of terrorism may also stem from the presence of weak political institutions and widespread corruption with the Malian government, the frequency of terror attacks has increased dramatically since the intervention of MINUSMA forces in 2013.

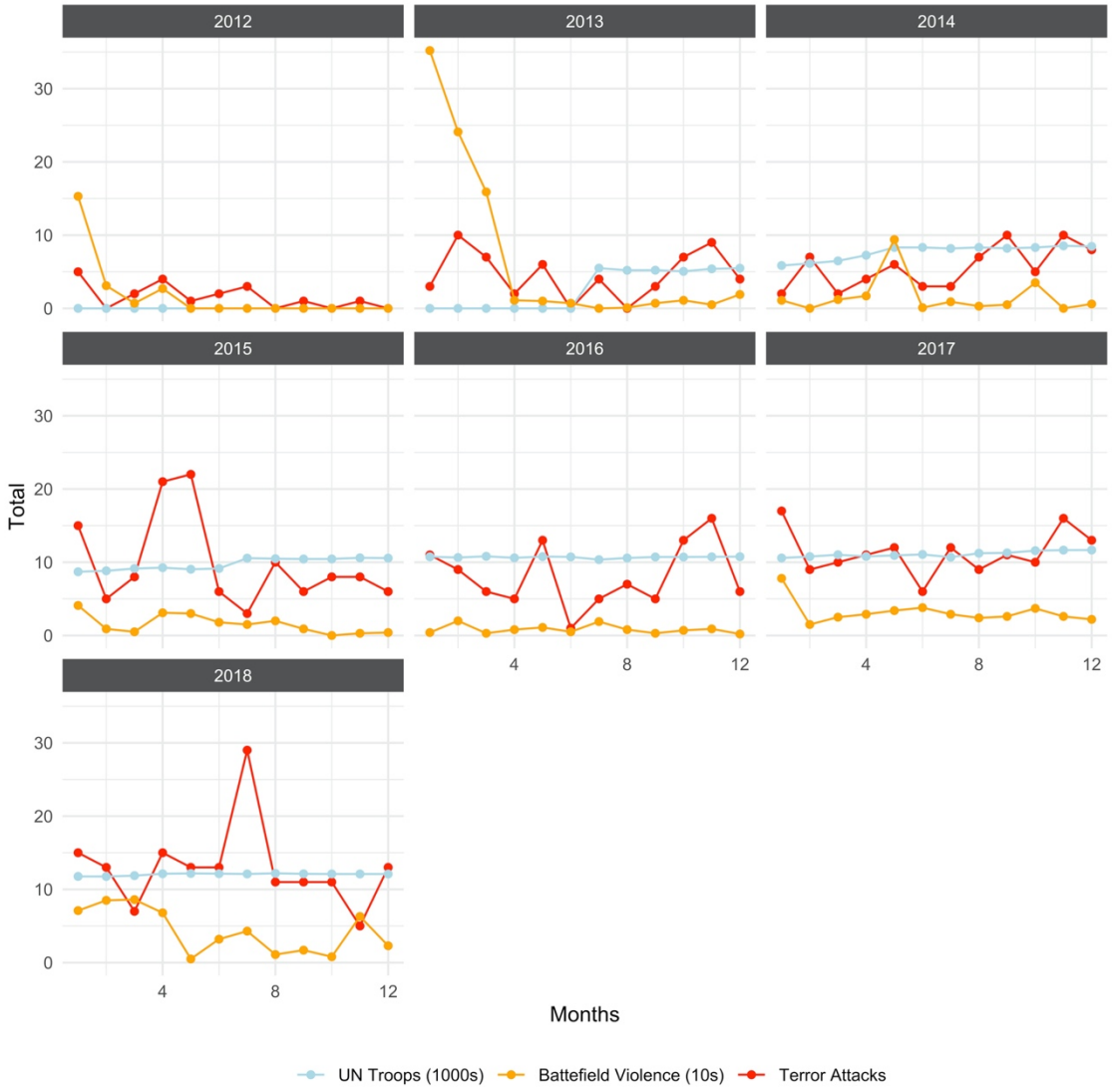


Figure 2.5 Total Number of UN Troops (1,000s), Terror Attacks, and Battlefield Violence (# of fatalities) by Months Across Years in Mali.
Source: Updated troop numbers sourced from International Peace Institute Peacekeeping Database.

Moreover, MINUSMA peacekeeping forces have been unable to deter and respond to such terror attacks effectively. The UN Security council even reminded the mission that any measures to combat terrorism must "…comply with all their obligations under international law, in particular, international human rights, refugee, and humanitarian law."[23] Meaning that the UN peacekeeping

[23] UN News Centre. (17 January 2015). "UN Strongly Condemns Deadly Terrorist Attack on Mali Peacekeepers."

force must prioritize non-military actions to grapple with root causes without using unnecessary military force that might in fact incite the continued use of such violence. Such close oversight and constraints in terms of mandate provisions, equipment, and personnel, however, limits the ability for peacekeeping forces to pursue offensive strategies that actively deter and degrade terrorism effectively. As commented by a former UN official:

> "Our most grievous blunder is in Mali. In early 2013, the United Nations decided to send 10,000 soldiers and police officers to Mali in response to a terrorist takeover of parts of the north. Inexplicably, we sent a force that was unprepared for counterterrorism and explicitly told not to engage in it… The United Nations in Mali is day by day marching deeper into its first quagmire (Banbury, 2016)."

A more recent example in November 2015 highlights the rise of terrorism in Mali as a response to peacekeeping. Two Al-Qaeda extremists held over 170 people hostage in the Radisson Blu Hotel in Bamako, Mali. The event left 27 fatalities after a joint-operation of Malian, French, US, and UN forces were able to clear the area of enemy combatants These few terror attacks conducted by the rebel opposition not only broadly signal the Malian government's deteriorating capacity to protect its citizens, but more importantly, the inability of UN peacekeepers to facilitate the political process between armed actors or address the security challenges posed by violent extremists. While UN peacekeepers have admirably reduced conventional means of violent conflict, the costs incurred to rebels when using conventional means has resulted in strategic, costly attacks through the use of terrorism.

The tactical utility of terrorism is also evident in a major attack on 18 January 2017 in Gao that left 54 people killed and more than 100 injured (UN, 2017). Despite the commitment of signatory parties to the 2015 Agreement for Peace and Reconciliation in Mali, a suicide vehicle-borne improvised explosive device exploded inside the compound of the Operational Coordination Mechanism camp – the home to elements of the Armed Forces of Mali and Azawad Movement. The attack, claimed by Al Mourabitoun – a group affiliated with AQIM, came just before the mixed

elements conduct of a patrol (UN, 2017). In the immediate aftermath, MINUSMA deployed a quick reaction force to reinforce security elements around the camp. The UN report (2017) further added, that the "…attack in Gao on 18 January against members of the mixed patrols is a manifestation of the increased influence of terrorist groups and spoilers and their determination to derail the peace process…" and that the mission is "…deeply concerned by the increasingly sophisticated modus operandi of these groups in their attacks against Malian, French, and MINUSMA forces and the signatory armed groups and civilians." Even if spoiling is the motive behind the terrorist attacks, it points to a concerning notion that non state actors still prefer to utilize terrorism to pursue political objectives despite the security guarantees that UN peacekeeping is intended to provide. The decision of non-state actors to utilize such forms of violence serves as an observable implication that I argue stems from UN peacekeeping operations. It is these seams and gaps that non-state actors are exploiting that allows groups to continue using such severe forms of violence.

2.5 Research Design

2.5.a Data

To explore the effect of UN peacekeeping operations on the rebel group's use of terrorism in civil conflicts, I analyze monthly all intrastate-armed conflicts in Africa from 1992 to 2011.[24] Studying cases of peacekeeping in this region is appropriate for several reasons. First, regarding peacekeeping, the sample includes a large portion of peacekeeping missions since the end of the Cold War. Since the formation of UN peacekeeping in 1948, 71 missions have been initiated, with 15 (21%) interventions during the Cold War. Between 1992 and 1996, the UN authorized 18 missions, representing 25% of all UN interventions. The missions reflected in the temporal and geographical range of my data include 20 UN peacekeeping missions, which represents 38% of all UN missions between the end of the Cold War and present day (56 total). Second, the frequency of

[24] There are 28 countries examined in the data.

terrorism in the African context closely fits the overall distribution across the globe.[25] Third, concerning policy relevance, terrorism has become increasingly prevalent in this region as several transnational terrorist groups use these war-torn environments as a safe-haven for their operations.[26] The continent as a whole is massive, with lots of ungoverned spaces that afford non-states actors the sanctuary to establish their network and expand uncontestably. Take, for example, the recent African branches of the Islamic State – establishing footholds in North, West, and Eastern parts of Africa. In many of these cases, peacekeepers increasingly deploy to the frontlines against violent extremists. Coupled together, inferences drawn from this sample can confidently apply to peacekeeping operations outside the African context. Altogether, this allows us to understand the relationship between peacekeeping operations and terrorism better.

The unit analysis is country-monthly-level in active conflict for all African countries that experienced intrastate conflict during the timeframe of this study. Countries experiencing intrastate conflict are drawn from the Uppsala Conflict Data Program (UCDP) Dyadic Dataset v.1-2012 (Harbom et al., 2008). For a country to be considered an intrastate conflict, at least 25 battle deaths must occur in a given year. It is important to note I aggregate rebel-government-dyads to the country-level to account for the large number of terror attacks not attributed to a particular organization, but that occur within context of the country during active civil conflict.[27][28] I argue this is reasonable due to the fact that UN peacekeeping operations do not specifically target any one

[25] Thomas (2014) highlights this claim and provides a series of descriptive statistics to illustrate the distribution of terrorism in Africa compared to the rest of the globe.
[26] Some of the terrorist groups currently based in Africa are Al-Shabaab in Somalia, Boko-Haram in Nigeria, the self-declared Islamic State (ISIS) in North Africa, and Al-Qaeda in the Islamic Maghreb (AQIM), also in North Africa.
[27] For example, since 1970 35% of all terror attacks were classified as "Unknown." (Conrad and Greene, 2015)
[28] Given the concern of the theoretical assumptions translating into the appropriate unit of analysis in empirical design, I leverage Thomas (2014) dataset to examine the relationship between UN Troops and the propensity to engage in terrorism using monthly, dyadic (rebel-government) data. UN Troops is positive and statistically significant, albeit at the $p<.10$ level. This allows me to examine the robustness using alternative unit of analysis, different dataset, and alternative confounders that might inherently explain the empirical trends. The results are presented in the supplemental documentation.

actor. However, I address any reservations of aggregating to the country-level by leveraging Thomas (2014) dataset. This allows me to examine my theory at the dyadic level and to account for additional confounding variables that might influence the results such as any spoiling behavior.

To measure the dependent variable, the number of terrorist attacks in a given month, I use the Global Terrorism Database (GTD) (START, 2013) to identify African groups that use terrorism within countries that experience active intrastate conflict. The GTD records attacks by sub-national actors intended to coerce a large audience and attain broader social, religious, political, or economic goals (START, 2013).[29] Types of terror attacks coded in the dataset include assassinations, armed assaults; bombings; attacks on infrastructure; hijackings; and kidnappings (START, 2013). Since I am interested in the shift from conventional and guerrilla tactics to terrorism, I include both successful and unsuccessful attacks as the mere intention to use terrorism is indicative of a shift in a rebel group's decision to use other forms of violence to attain their political and military goals. To capture this, I aggregate monthly all terror attacks in a country. Again, one of the persistent problems with terrorism data is the ability to attribute the attack to the specific rebel group (Conrad and Green, 2015). Therefore, I argue that aggregating at the country level is more appropriate.[30] However as robustness I leverage monthly, dyadic data from Thomas (2014) to directly to assess the notion that shifts in tactics occurs at the group level. The results from using dyadic data, despite covering a

[29] Terrorism is defined 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" (START, 2013). In addition, an attack must satisfy at least two of the three following criteria: 1. Incident must be intentional; 2. Incident must entail some level of violence or immediate threat of violence; and 3. Perpetrators of the incidents must be sub-national actors (START, 2013).

[30] The author recognizes the limited scope of using such a broad measure for terrorism, particularly without attributing perpetrator of the attack. However, the purpose of this dissertation is to address the emanating concern of terrorism, broadly, in the context of UN peacekeeping, regardless of specificity associated with the named perpetrator. UN peacekeeping forces do not specifically target single rebel groups but instead maintain impartiality. Therefore, we should not expect UN troops to concentrate against a specific actor, but in general, deter violence committed by all non-state actors.

different temporal range, are consistent with my findings at the country-level. This is discussed and presented in the robustness section.

Across the distribution of peacekeeping operations, the type and number of personnel commitments vary. In order to test the hypothesis that a greater number of UN military troops increase terrorist attacks, I use three independent variables that code the number and type of peacekeeping personnel committed to a mission during a given month, measured in thousands (Kathman, 2013). Information on these variables comes from the United Nations Peacekeeping Personnel Commitments dataset, 1990–2011 (Kathman, 2013). *UN Troops*$_{t-1}$ captures the number of armed troops, and *UN Police*$_{t-1}$ measures the number of police forces deployed in a country in a given month. I also include *UN Observers* for the number of unarmed observers sent to a country. The variables are lagged one month to ensure temporal order of the model. Lagging the independent variable is necessary for accounting whether terror attacks are in response to increasing levels of UN personnel commitments during a given month. UN troops vary from month to month, and lagging is consistent with existing literature (Hultman et al., 2013, 2014). Figure 2.6 provides a yearly average of my primary outcome variable, count of terror attacks, and the main independent variable, *UN Troops*.

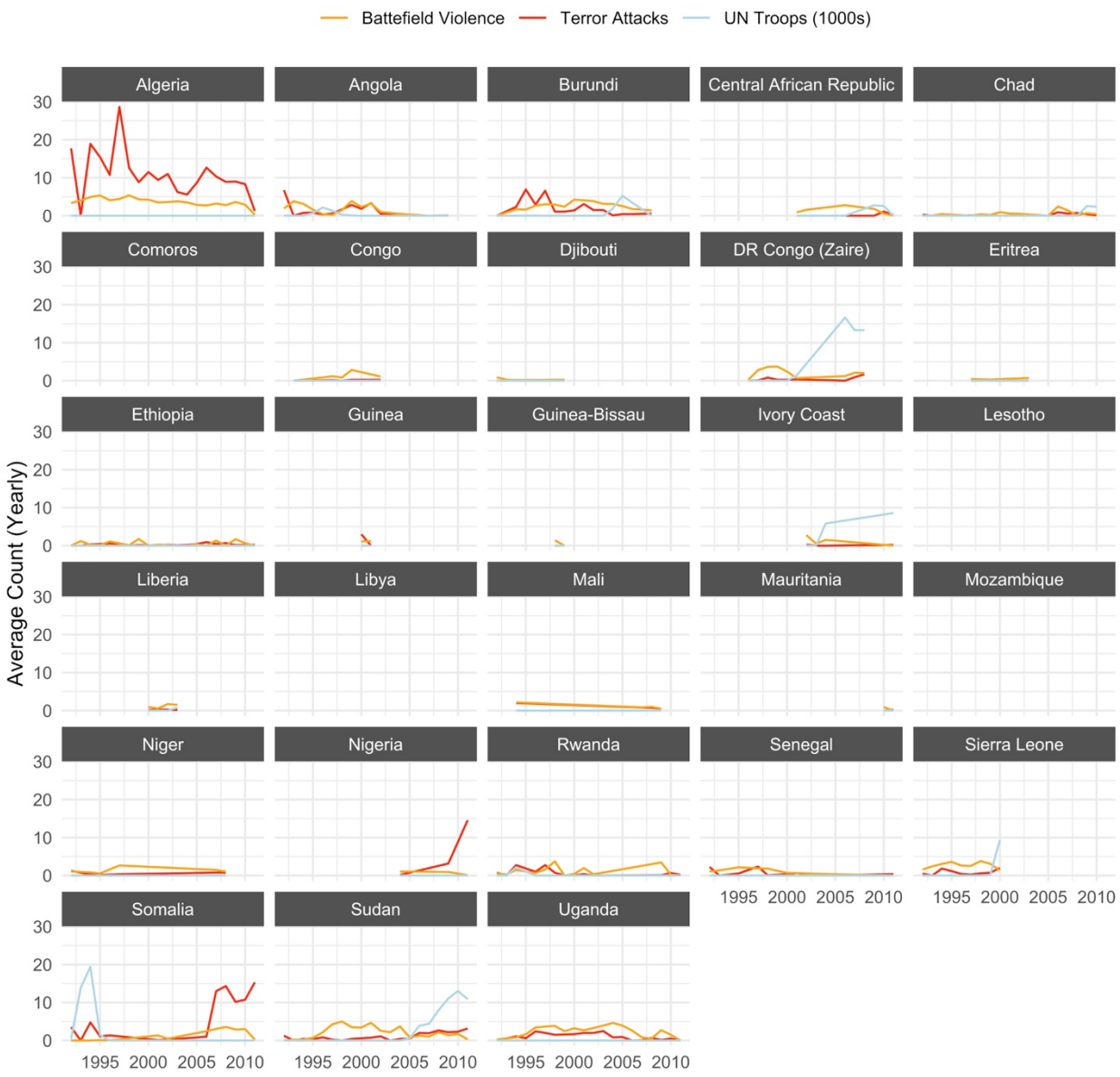


Figure 2.6 Average number of UN Troops (1,000s), Terror Attacks and ln(Battlefield Violence) (# of fatalities).

For control variables, I include several measures that are likely to influence terrorism during a civil conflict. First, I control for a *Ceasefire* agreement. There may exist a difference in the use of terrorism during conflicts when there is a ceasefire present. A ceasefire agreement may proxy negotiations and the potential for concessions, which may influence the use of terrorism by rebel

groups. I code a dichotomous indicator for the presence of a ceasefire agreement. The data for the variable *Ceasefire* comes from the UCDP Peace Agreement Dataset (Harbom et al., 2006).

To control for rebel characteristics, I use the *Rebel Strength* variable from Cunningham et al. (2009) Non-State Actor dataset (NSA). This variable examines the relative power between armed actors in a conflict. This variable is measured using a five-point ordinal scale capturing whether rebels are much weaker than, weaker than, at parity with, or stronger than the government. Because countries can have more than one rebel group at any given time, I record the highest value between all rebel groups present in the conflict. As previous studies have demonstrated, peacekeeping is more likely to intervene in civil conflicts where the rebel opposition is stronger than the government (Fortna, 2008). Moreover, Polo and Gleditsch (2016) highlight that stronger rebel groups are unlikely to use terrorist tactics intensively as rebel groups are concerned about counterproductive effects, and that stronger groups can fight the government conventionally. I also include the number of rebel groups to capture the effect of multiple armed actors has on conflict dynamics. The variable *Number of Rebel Groups* includes the total number of active rebel groups that exist in a country during a given month. When rebel groups experience an increase in domestic political competition, the groups may increase the use of terrorist attacks to "outbid" other groups in gathering vital civilian support (Bloom, 2005; Kydd and Walter, 2006). An increase in terror attacks may be associated with rebel groups competing for the same resource base, in which violence becomes a technique to gain credibility and win public support (Bloom 2005).

I include a variable for external intervention in civil conflict. Based on data from the UCDP Dyadic dataset v.1-2012 (Harbom et al., 2008), the variable *Biased intervention* is a dichotomous measure that captures whether a third party intervenes on behalf of either the rebels or government. Studies have shown that third party intervention can influence the conflict dynamics in a civil war; thus, it is critical to control for other forms of intervention to avoid spurious results in the model

(Regan, 2000, 2002). I also include the variable *Regional Peacekeeping* to control for the presence of regional peacekeeping forces in a civil conflict.

To account for the shift from conventional tactics to terrorism, I control for battlefield-related deaths. The variable *Battle Deaths* $_{t-1}$ is the logarithmic value of the total number of casualties related to fighting between the warring parties lagged by one month.[31] In cases where there is more than one rebel group that the government is fighting within a country, I take the sum of total battle-related deaths between concurrent rebel-government dyads in each given month. Studies have demonstrated that an increase in UN military peacekeepers decreases battlefield fatalities in civil war (Hultman et al., 2014).

Lastly, I control for several country-level effects: *Population*, *Adverse Terrain*, *Country-Size*, and *GDP per capita*. Fearon and Latin (2003) demonstrate in their study that a country's total population and adverse terrain influence the likelihood of civil war. Nemeth et al. (2014) also find evidence that several country-specific factors influence the location of terror attacks such as the proportion of country mountainous terrain and population. For *Population*, I take the natural log of each country's total population taken from the Composite Index of National Capabilities data (Singer et al., 1972). For *Adverse Terrain* and *Country-Size*, I use values from 2014 drawn from the CIA World Factbook. The variable *Adverse Terrain* is the proportion of the country that is forested, and *Country-Size* is the total square kilometers of land. *Country-size* is log-transformed. I expect more extensive and adverse terrain that characterizes a country, the more difficult it is for UN peacekeepers to monitor armed actors and effectively conduct peacekeeping operations. Moreover, large countries and adverse terrain afford rebels a safe-haven. These geographical characteristics allow rebel groups to establish a base of operations and conduct conventional attacks (and guerilla attacks). I also include a measure

[31] It is important to note that the model performs in the expected direction without taking the logarithmic value of *Battle Deaths* $_{t-1}$.

of gross domestic product per capita (*GDP*) to account for overall state capacity. This variable is log-transformed. Table 2.1 lists the descriptive statistics for all variables.

Table 2.1 Descriptive Statistics

Variable	Min	Max	Mean	Median	Observations
Terrorist Attacks (Count)	0	63	2.17	0	2311
Terrorist Attacks (Fatalities)	0	1401	12.61	0	2311
Terrorist Attacks (Binary)	0	1	0.415	0	2311
UN Troops (t -1)	0	29.21	0.83	0	2311
UN Police (t -1)	0	2.74	0.07	0	2311
UN Observers (t -1)	0	1.04	0.030	0	2311
Ceasefire	0	1	.407	0	2311
Rebel Strength	1	5	2.34	2	2311
No. of Rebel Groups	1	17	3.81	3	2311
Biased Intervention	0	1	0.18	0	2311
Battle Deaths (t -1)(ln)	0	7.81	1.75	0.69	2311
Population (ln)	6.32	11.87	9.56	9.42	2311
GDP per capita ($US)(ln)	5.32	8.49	7.04	7.04	2311
UNSC Agreement	0	1	0.03	0	2311
Regional PKO	0	1	0.16	0	2311
Country Size (ln) (sq km)	7.71	14.68	12.96	13.82	2311
Adverse Terrain (% Forest)	0	.68	0.19	0.12	2311

2.5.b Methodology

Given that the object of interest is a count, I employ a negative binomial regression to test my hypothesis.[32] The negative binomial is appropriate in order account for the possible unobserved heterogeneity and contagion across observations in the model (Long 1997). Moreover, when examining the relationship between monthly terrorism and levels of UN military troops, the variances within each level of UN military troops are higher than the means within each level. This difference in variance indicates that different civil wars with similar levels of UN peacekeeping forces have different error terms—suggesting possible unobserved contagion and heterogeneity. Across civil wars, there may exist unobserved heterogeneity, such as the level of resolve of the belligerents and peacekeeping forces. Since there exist differences among the conditional means and

[32] All statistical analyses were conducted using R.

variances, the data suggests over-dispersion is present. This dispersion makes the negative binomial preferable to a Poisson. In the following table, I present the coefficients and standard errors in parentheses. I also include a logistic regression to assess the probability of observing an attack in a given month.

2.5.c Potential Selection Bias

The 2015 report of the High-Level Independent Panel on Peace Operations (HIPPO)[33], the subsequent report of Secretary-General Ban Ki-moon on the future of UN peace operations[34], and the 2018 report of the Special Committee on Peace Operations[35] all underscore and emphasize that UN peacekeeping operations should not engage in counter-terrorism operations. Despite formal public statements clearly demarcating UN peacekeeping roles and operational construct away from intervening solely at the behest of countering terrorism and resolute rhetoric that the United Nations will not send UN peacekeepers to civil conflicts to specifically combat terrorism, UN peacekeepers continue to deploy to contexts where terrorism occurs.

Given this policy standpoint of the UN, theoretically we can confidently assert that the UN is *not selecting* interventions in civil conflicts due to higher incidents of terrorism. But problematic to the fact that the UN does not intervene due to terrorism, is that the UN could still be deploying UN troops to contexts where terrorism is already high or at least prone to increased amount of terror attacks relative to other civil conflicts. Even though the UN is not selecting on cases that it expects to experience higher volumes of terrorist attacks, the expected increase in terrorism that appears as if it stems from increases in UN troops might in fact be prior conditions of UN intervention that are influencing the observed increases.

[33] See the following link for the official report: https://www.un.org/en/ga/search/view_doc.asp?symbol=S/2015/446
[34] See the following link for the official report: https://www.un.org/en/ga/search/view_doc.asp?symbol=S/2015/682
[35] See the following link for the official report: https://peacekeeping.un.org/sites/default/files/improving_security_of_united_nations_peacekeepers_report.pdf

Thus, the analysis could inherently be subject to selection bias. This is because UN peacekeeping interventions are not random. The UN carefully and deliberately deploys UN blue helmets to conflicts based on a number of factors. Previous studies have demonstrated empirically that the UN tends to intervene in more severe conflicts (Gilligan and Stedman, 2003; Fortna 2004; 2008). Ostensibly, it could be the case that the UN is deploying blue helmets to contexts that already susceptible to high levels of terrorism due to contexts characterized with high levels of violence. It is possible that UN troops deploy to contexts where violence is most severe and its these austere conditions that might inherently result in increases of terrorism with or without a UN peacekeeping intervention.

A number of previous studies concerning PKO and violence have acknowledged this potential selection bias and have suggested a number of ways to reduce selection effects (Hultman et al., 2014; Bara and Hultman, 2020). One such way to mitigate concerns is to use coarsened exact score matching (Iacus, King, and Porro, 2012). Coarsen exact score matching (CEM) is similar to other approaches like propensity score matching but instead uses a number of different factors to divide a given sample into highly similar treatment and control groups (Iacus, King, and Porro, 2012). As Hultman et al. (2014) state, "matching analysis creates a data set of conflicts that are similar on a number of dimensions, which allows us to assess the effect of UN personnel on conflicts where it intervenes relative to comparable conflicts where it does not." As a researcher using observational data, I am unable to randomly assign which civil conflicts received UN intervention (treatment) and did not (control) as deliberate of a manner as a laboratory experiment. However, this technique of approximating a randomized experiment relaxes assumptions with the data generating process, which reduces concerns of bias in our results (Iacus, King, and Porro, 2012).

For this matching procedure, I match along several variables that are included in the analysis using the full sample: rebel strength, number of rebel groups, battlefield violence, (ln) population,

(ln) gdp per capita, (ln) country size, and adverse terrain (% forest) - all variables that potentially influence severe conflicts, which due to conflict severity attract UN intervention, but also confounders that might correspond to elevated levels of terrorism with or without peacekeepers. I then use one-to-one matching, which matches each peacekeeping observation (treatment) to one without (control). In a similar and accepted technique across the academy that reduces concerns of selection biases as previous influential studies like Hultman et al. (2014), I then examine only my main independent variables (UN personnel) using the matched sample.[36]

The results are presented in Table 2.2. Even after matching along a number of dimensions with observations that involved a peacekeeping operation (treatment) to similar observations without a peacekeeping intervention (control), UN troops is positive and statistically significant. This result gives further confidence that even in contexts where UN peacekeeping did not intervene, that observations similar across a number of variables that might correspond to increases in terrorist attacks yield a result that follows in line to the general expectations of my hypothesis. Importantly, this relationship is unlikely to be driven by selection or sampling biases. Even if the UN were to intervene in civil wars where terrorism is already high, by adding more troops to reduce terrorism only yields undesirable increases of terrorism. This in itself is problematic for any policy prescription that would suggest UN peacekeeping is sufficient in terms of capacity and capability to effectively respond and reduce the use of terrorism.

[36] Due to the matching algorithm, the total number of observations in the analysis will typically drop significantly. After using coarsen exact score matching, for example in Hultman et al. (2014), the total number of observations dropped by nearly 80% (5,725 to 1,113) and similarly in Bara and Hultman (2020) the number of observations from the full sample to the matched sample declined by roughly 82% (11,286 to 2,054). For this study the total number of observations from the full sample to the match sample declined by roughly 83% (2311 to 403), which is similar to amount of data loss to previous studies.

Table 2.2 Coarsened Exact Score Matching Sample Analysis (treatment = UN peacekeeping intervention)

Variable	Matched Sample
UN Troops (*t* -1)	**0.043***
	(0.017)
UN Police (*t* -1)	-0.702
	(2.320)
UN Observers (*t* -1)	**-6.004****
	(1.652)
Constant	0.142
	(0.099)
Observations	403
AIC	1126.7

* p<0.05, ** p<0.01, *** p<0.001

2.6 Results

Table 2.3 and 2.4 reports the main results of the statistical analysis. The first model in Table 2.3 uses a dependent variable that is the count of all incidents of terrorism in each month perpetrated by non-state actors in a country. In model 1, the positive and significant coefficient demonstrates there is an increase in terror attacks when there is an increase of *UN Troops*$_{t-1}$ during active intrastate conflict. The statistical findings reinforce the conceptual underpinnings of this study and main hypothesis. Given an increase in UN military troops, the capacity to enforce a buffer zone improves. Through increased active patrolling and monitoring for overt signs of rebel activity, UN troops effectively reduce the opportunity for battlefield engagements. This peacekeeping mechanism also increases the costs to a rebel group should a rebel group attack using conventional means. As the UN increases its capability to intercede between the warring parties, the rebel opposition increase their preference for terrorist tactics to avoid the high costs associated with conventional warfare.

The results are robust to several different model specifications, as well. In model 2, I control for GDP per capita, a dichotomous indicator for the presence of UN Security Council (UNSC) agreement, and the presence of a regional peacekeeping force. *UN Troops*$_{t-1}$ remains in the direction as expected and is statistically significant the .001 level. Interesting, *UN Police*$_{t-1}$ is statistically significant and found to decrease the number of terrorist attacks in a given month. This finding may

correspond with improvements in the rule of law and a decrease in corruption during the conflict, both known factors for influencing the use of terrorism by a rebel group and for driving individuals to violent extremism. Alternatively, the presence of UN police may also make guerrilla and conventional tactics less costly relative to other tactical options, therefore making rebels less likely to employ terrorism while the option to contest the government remains a viable option on the battlefield. *Battle Deaths* $_{t-1}$ is positive and statistically significant, suggesting that as the intensity of battlefield violence increases, rebel groups also increase their use of terrorism. This effect may be similar to Hultman's (2007) finding that battlefield setbacks lead to an increase of alternative means of violence, such as the use of civilian victimization. *GDP per capita* is also statistically significant and in the expected direction, as previous literature suggests. The presence of UNSC council agreement has no effect; however, the presence of a regional peacekeeping force such as the Africa Union (AU) is positively associated with an increase in the use of terrorism, and statistically significant – a relationship evident in the context of Somalia and AUs fight against al-Shabaab, where terrorism has become a modus operandi of armed actors.

In models 3 and 4, when controlling for geographic factors such as country total land size and adverse terrain (proportion of country forested), there is an associated decline in terrorist attacks. Both *Country Size* and *Adverse Terrain* are statistically significant and found to decrease the use of terrorism. *Country Size* is consistent with findings from recent studies (Marineau et al., 2018). One possible explanation for this finding is that rebels are less inclined to use terrorism since the expansive and challenging terrain affords rebels sanctuary from UN troop 's active patrolling and monitoring, thereby affording rebels a safe-haven to conduct guerrilla-style attacks in place of terrorism. Moreover, the significant terrain makes it difficult for UN troops to project influence which limits their ability to effectively counter any conventional attacks. The adverse terrain provides time and space with natural obstacles that hinders any sort of intervention from UN

peacekeepers. This allows for training of rank-and-file and for the time and space to properly plan more sophisticated attacks In lieu of terror attacks.

Regarding other personnel commitments, *UN Police*$_{t-1}$ and *UN Observers*, the effects of the covariates are negative and positive, respectively. *UN Police*$_{t-1}$ is statistically significant, while *UN Observers* is null (Models 1 and 2), but positive and statistically significant when including all controls (Models 3 and 4). Conceptually and empirically this relationship fits previous statistical findings. A higher number of UN police and observers, on average, do not decrease battlefield intensity between armed actors in an intrastate conflict (Hultman et al., 2014). Unlike their military counterparts, UN police and observers typically lack the enforcement capability to ensure credible security guarantees. As Hultman et al. (2014) demonstrate in their statistical analysis, on average, as the number of UN observers increase in an active civil conflict, there is an associated increase in the predicted number of battlefield casualties. Whereas when the number of UN troops increases, there is an associated decrease in battlefield causalities between the government and rebel groups. I replicate these models to demonstrate this similar finding from these previous studies. The results are located in the appendix. Therefore, consistent with my analysis, as the option for rebel groups to contest the government conventionally on the battlefield remains viable, there should be a minimal incentive for rebel opposition to using terrorism to pursue their political goals while more (politically) legitimate courses of action remain available.[37] The positive effect of UN observers in Models 3 and 4 might be indicative of rebels attempting to deter UN peacekeeping intervention into a conflict embroiled with terrorism - a form of violence, that as previously mentioned, the UN intends not to be entangled with. Thus, if rebels can signal a form of violence the UN intends not to

[37] This study acknowledges the importance of the contributions regarding UN Police and Observers. It is with optimism that these findings encourage future empirical analyses of these peacekeeping mechanisms concerning violence during active armed conflict. While this study highlights the correlation, it equally acknowledges the insufficient discussion of such vital mechanisms and leaves a lacuna for future studies to examine this relationship much closer.

become embroiled with, the more likely the UN may not intervene at all. It is also plausible that UN observers amplify the strategic value associated with terror attacks. UN observer reporting may in avertedly spur terrorism if groups are looking for publicity and recognition for their attacks.

Table 2.3 Effect of peacekeeping personnel on the number/count of terror attacks in civil conflict, 1992-2011

Variable	Model 1	Model 2	Model 3	Model 4
UN Troops (t -1)	**0.059*** **	**0.073*** **	**0.060*** **	**0.076*** **
	(0.018)	**(0.017)**	**(0.017)**	**(0.016)**
UN Police (t -1)	**-0.375***	**-0.923*** **	**-0.627*** **	**-1.165*** **
	(0.169)	**(0.167)**	**(0.159)**	**(0.160)**
UN Observers (t -1)	0.217	-0.633	**2.644*** **	**1.544** **
	(0.617)	(0.611)	**(0.597)**	**(0.599)**
Ceasefire	**-0.427*** **	**-0.436*** **	-0.116	-0.163
	(0.119)	**(0.114)**	(0.118)	(0.118)
Rebel Strength	**0.376*** **	**0.336*** **	**0.265*** **	**0.158***
	(0.076)	**(0.080)**	**(0.078)**	**(0.080)**
No. of Rebel	**0.085*** **	**0.069***	0.005	0.009
Groups	**(0.016)**	**(0.016)**	(0.019)	(0.019)
Biased Intervention	**0.345*** **	-0.137	**0.834*** **	**0.259***
	(0.102)	(0.101)	**(0.104)**	**(0.104)**
Battle Deaths	**0.283*** **	**0.280*** **	**0.246*** **	**0.242*** **
(t -1) (ln)	**(0.020)**	**(0.020)**	**(0.020)**	**(0.019)**
Population (ln)	**0.260*** **	**0.330*** **	**0.320*** **	**0.424*** **
	(0.046)	**(0.045)**	**(0.059)**	**(0.059)**
GDP per capita	**0.687*** **	**0.841*** **	**0.820*** **	**0.994*** **
($ US) (ln)	**(0.058)**	**(0.056)**	**(0.069)**	**(0.069)**
UNSC Agreement		-0.250		0.437
		(0.235)		(0.236)
Regional PKO		**1.483*** **		**1.378*** **
		(0.117)		**(0.115)**
Country Size (ln) (sq			**-0.167*** **	**-0.195*** **
km)			**(0.041)**	**(0.041)**
Adverse Terrain			**-3.034*** **	**-2.426*** **
(% Forested)			**(0.271)**	**(0.276)**
Constant	**-8.651*** **	**-10.296 *** **	**-7.183*** **	**-8.976*** **
	(0.713)	**(0.691)**	**(0.706)**	**(0.700)**
Observations	2311	2311	2311	2311
Countries	28	28	28	28
AIC	7343.7	7200.2	7210.3	7099

* p<0.05, ** p<0.01, *** p<0.001[38]

Note: Standard errors reported in the parentheses. Blue color added to emphasize UN peacekeeping variables.

To assess the substantive significance of *UN Troops*$_{t-1}$ on the number of terrorist attacks during a civil war, I turn to a simulation-based analysis. Using estimates from Model 4, I simulate a scenario

[38] This follows suit to recent articles published in several journals to include Horowitz et al., 2018. Other studies include differing values p-value levels, but nevertheless the p-values reported in this study are far more restrictive.

in which *UN Troops*$_{t-1}$ varies from its minimum to maximum while holding all of the other parameters at either mean or median values. Next, I conduct 1,000 random draws from a multivariate normal distribution, and then matrix multiply the draws from the multivariate normal with the transposed scenario matrix to obtain the predicted count of terrorist attacks across the range of *UN Troops*$_{t-1}$. As expected, the analysis shown in Figure 2.7 displays the substantive effect: as the number of UN military troops increases in a country embroiled with an intrastate conflict, there is an increase of monthly terror attacks in the country. It is important to note that there is a large amount of inferential uncertainty with significantly large UN peacekeeping missions. I argue this degree of uncertainty is due to the fact that there exist few missions in which there are more than 15,000 UN military troops.

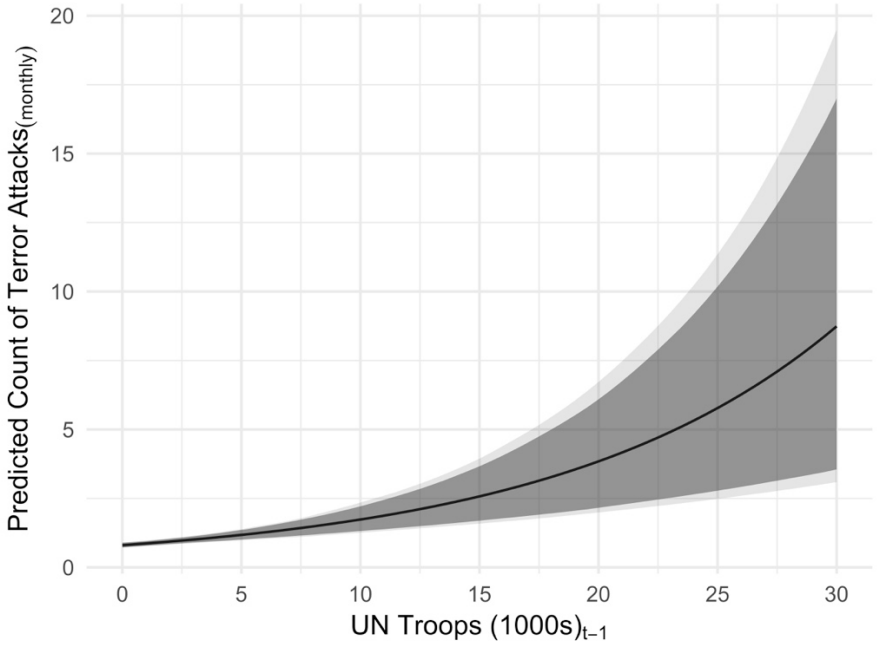


Figure 2.7 Predicted count of terrorist attacks as UN military troops increases in size (monthly) based on scenarios where all variables are held to either their mean or median values. The 90 percent interval of each distribution is shaded in dark gray and the 95 percent in a lighter gray color.

I also want to ensure that *UN Troops*$_{t-1}$ parameter estimates are robust to changes in the sample, as some countries may be influencing our point estimate. To test for heterogeneous effects across

subsets and assess the stability of my variable of interest, I run a six-fold cross-validation. This cross-validation technique allows us to determine whether or not the estimates are susceptible to subsets in the dataset rather than the pattern in the broader set of data (Minhas and Radford, 2017). In order to conduct k-fold cross-validation on the parameter, *UN Troops*$_{t-1}$, I randomly split the 28 different country observations into six approximately equal subsets, or *d* folds. As a result, each subset contains at minimum 135 observations and at most, 628 cases.[39] I then run Model 4 six times, where each time I estimate the model on *d*-1 folds. The results are displayed in Figure 2.8 and are generally favorable, as the parameter, *UN Troops*$_{t-1}$, remains relatively stable and consistent across any exclusion of a fold. However, some concern might be warranted with Fold F. The large uncertainty illustrated in Fold F (Figure 2.8) includes the following randomly assigned countries: Guinea-Bissau, Central African Republic, Ethiopia, Mali, and Senegal.

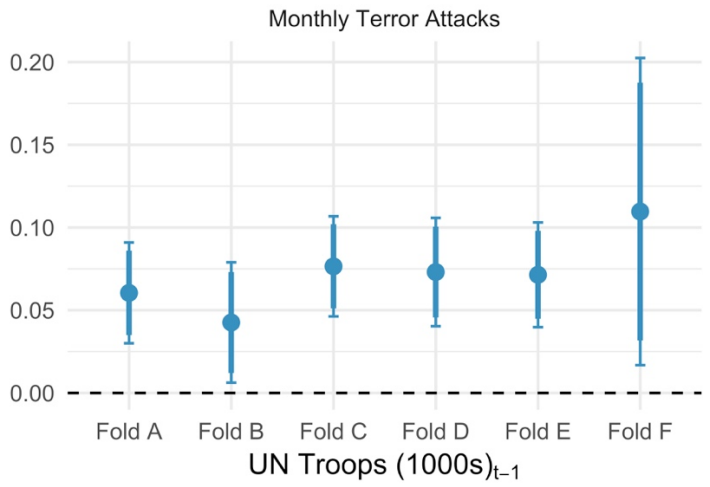


Figure 2.8 Each line here in the plot shows the coefficient estimate of *UN Troops*$_{t-1}$ from re-examining model 4 on six random subsamples (assigning each country a fold number) within the dataset.

In addition, I examine alternative measures of terrorism during active civil conflict. In Model 5 (Table 2.4), I examine the effects of peacekeeping on the total number of civilian fatalities attributed

[39] The number of cases per fold will vary due to the randomization process of assigning observations to a fold.

to terror attacks in each month. Interestingly in Model 5, *UN Troops*$_{t-1}$ does not affect the monthly count of civilian fatalities attributed to terror attacks. However, such findings, I argue, may ostensibly be explained in an increase of attacks against non-civilian targets such as infrastructure, kidnappings, assassinations, and attacks against peacekeepers. Therefore, civilian fatalities may not serve as an appropriate measure to gauge the severity or increase use of terrorism (See Conrad and Greene, 2015). Using solely civilian casualties as a measure thereby overlooks the influence of peacekeeping in deterring, preventing, and responding to bombings, assassinations of crucial individuals, mutilations, and kidnappings, among others. These aforementioned events would be overlooked using solely the definition employed in the one-sided violence literature, which UCDP One-side Violence Codebook v1.4 (2016, p. 2) defines one-sided violence as "…the use of armed force by the government of a state or by a formally organized group against civilians which results in at least 25 deaths." Therefore, model choice and dependent variable emphasize the appropriateness in using the count of terror events.

I also examine the probability of observing an attack in a given month. Model 6 (Table 2.4) is a logistic regression, where I employ the all the parameters from the full model, but use a dichotomous dependent variable, where $y_{i,t} = 1$ if a terror attack occurred, and $y_{i,t} = 0$ if it did not. The parameters in Model 6 are in the expected direction, with *UN Troops*$_{t-1}$ being positive and statistically significant. For Model 6, I also conduct in-sample and out-of-sample post estimation to examine the empirical strength of the model, where I firstly randomly draw 80% of the data to train the model (n = 1848 observations) then assess on the remaining 20%.

Table 2.4 Effect of peacekeeping personnel on terrorism in civil conflict using alternative dependent variables, 1992-2011

Variable	Model 5 (Count of Civilian Fatalities)	Model 6 (Binary of Terror Attack)	Model 7 (Count) Interaction
MUN Troops (*t* -1)	-0.006	**0.050***	**0.082*****
	(0.031)	**(0.023)**	**(0.017)**
UN Police (*t* -1)	**-1.248*****	-0.126	**-1.169*****
	(0.296)	(0.282)	**(0.160)**
UN Observers (*t* -1)	**5.229*****	1.326	**1.981****
	(1.068)	(0.907)	**(0.628)**
UN Troops (*t* -1)*Battle Deaths (*t* -1) (ln)			**-0.015***
			(0.008)
Ceasefire	**-1.003*****	-0.062	-0.160
	(0.192)	(0.153)	(0.118)
Rebel Strength	**0.439*****	-0.026	0.151
	(0.128)	(0.107)	(0.080)
No. of Rebel Groups	0.055	0.000	-0.008
	(0.030)	(0.024)	(0.019)
Biased Intervention	-0.263	0.260	**0.279****
	(0.183)	(0.149)	**(0.104)**
Battle Deaths (*t* -1) (ln)	**0.262*****	**0.248*****	**0.253*****
	(0.034)	**(0.028)**	**(0.020)**
Population (ln)	**0.217***	**0.358*****	**0.426*****
	(0.097)	**(0.078)**	**(0.059)**
GDP per capita ($ US) (ln)	**0.569*****	**0.654*****	**0.986*****
	(0.110)	**(0.093)**	**(0.069)**
UNSC Agreement	0.765	**1.397*****	0.426
	(0.392)	**(0.356)**	(0.237)
Regional PKO	**0.989*****	**0.789*****	**1.368*****
	(0.208)	**(0.169)**	**(0.115)**
Country Size (ln) (sq km)	**-0.146***	**-0.127***	**-0.197*****
	(0.067)	**(0.054)**	**(0.041)**
Adverse Terrain	**-1.503*****	**-2.210*****	**-2.422*****
(% Forested)	**(0.438)**	**(0.368)**	**(0.276)**
Constant	**-3.334****	**-6.957*****	**-8.93*****
	(1.166)	**(0.949)**	**(0.701)**
Observations	2311	1848	2311
Countries	28	-	28
AIC	9992.2	2190.1	7096.6

* p<0.05, ** p<0.01, *** p<0.001

Note: Standard errors reported in the parentheses. Blue color added to emphasize UN peacekeeping variables. Grey color added to emphasize interaction effect.

Figure 2.9 displays the substantive significance of *UN Troops*$_{t-1}$ on the probability of observing a terrorist attack in a given month during a civil war, where I again turn to a simulation-based analysis. Using estimates from Model 6 (Table 2.4), I simulate a scenario again, in which *UN Troops*$_{t-1}$ varies from its minimum to maximum while holding all of the other parameters at either mean or median

values. Next, I conduct 1,000 random draws from a multivariate normal distribution to obtain a distribution of point estimates for each regression coefficient and matrix multiply the draws from the multivariate normal with the transposed scenario matrix to obtain the predicted probability of observing a terrorist attack across the range of *UN Troops*$_{t-1}$. Lastly, I take the estimates derived from the training set and examine out-of-sample using the remaining 20% of the data in a test set (n = 463 observations).

The model performed modestly and was able to predict 63% of the data correctly. The predictive performance is reflected in the separation plot located at the bottom of Figure 2.9 and serves as a visual representation of the post-estimation using the training data. The separation plot helps visualize how the model sorts individual observations and provides an efficient look at how the model sorts data in continuous space (Greenhill, Ward, and Sacks, 2011). Models that fit well have a high concentration of dark panels on the right side of the graph. In this case, the separation plot matches high-probability predictions to actual occurrences of terrorist attacks and low-probability predictions to non-occurrences of terrorist attacks. The relative concentration of events denoted in the cluster on the right-hand side indicates a modest fit. I also provide a model criticism plot[40] to visualize which occurrences the model predicts and does not (Figure A.2) for my logistic model (Model 6, Table 2.3). The model criticism plot is located in the appendix.

[40] I encourage readers to reference Colaresi and Mahmood (2017) article, "Do the Robot: Lessons from Machine Learning to Improve Conflict Forecasting" *Journal of Peace Research* 54(2): 1-22. to learn more about how to implement machine learning and the cycle of model improvement into their research.

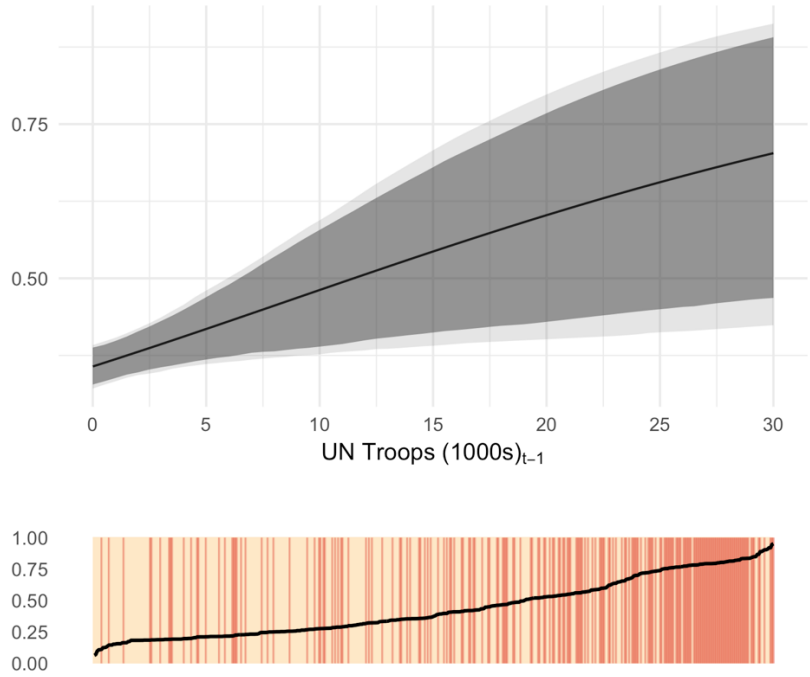


Figure 2.9 Predicted probability of a terrorist attack as UN military troops increases in size (monthly) based on scenarios where all variables are held to either their mean or median values and coefficients are derived from the randomly drawn training set. The 90 percent interval of each distribution is shaded in dark gray and the 95 percent in a lighter gray color. The separation plot represents the model's performance when predicting out-of-sample terror attacks in the test data using the estimates derived from the trained model.

2.6.a Robustness

For additional robustness checks, I examine an interaction effect between UN troops and battlefield violence, UN troops and a ceasefire agreement, and models using dyadic data. For the interaction, my theory ostensibly suggests a relationship where UN peacekeeping operations and the intensity of terrorist attacks is moderated by the ability to contest on the battlefield conventionally. As UN peacekeepers increase in size, their capability to employ coercive mechanisms improves. The improved positioning of troops across the war-torn landscape and effectively patrolling/interceding among warring combatants limits the ability (opportunity) and increases the costs for armed actors to contest using conventional means. If peacekeepers inherently affect battlefield violence by decreasing the frequency of such incursions, then we should empirically observe an increase in the

effect on groups employment of terror tactics as the conventional means diminish. To examine this relationship, I construct a model in which I include an interaction term between *UN Troops*$_{t-1}$ and *Battle Deaths* $_{t-1}$. The results are listed in Model 7, Table 2.4. Nearly all the parameters are in the expected direction as my primary model, Model 4. Both principal explanatory variables, *UN Troops*$_{t-1}$ and *Battle Deaths* $_{t-1}$, are positive and statistically significant. The interaction between the two, however, is negative and statistically significant, indicating a conditionality, as mentioned. First, in order to assess the substantive relationship of the interaction term, I conduct a post-estimation setting where my variables of interest, *UN Troops*$_{t-1}$, and *Battle Deaths* $_{t-1}$, varies from its minimum to maximum while holding all of the other parameters at either mean or median values. Figure 2.10 displays the point estimate for my outcome variable across the ranges of my interaction.

Immediately we can gather in Figure 2.10 that as UN troops increase in size and subsequent battlefield violence decreases, there is an increase in terror attacks (denoted in the gradual contrast from light blue to the concentrated dark red in the lower corner of the figure). This result lends initial support to my theory: that as the number of UN troops increases, the ability to limit opportunity and impose costs of using conventional warfare incentivizes armed actors to employ asymmetric means.

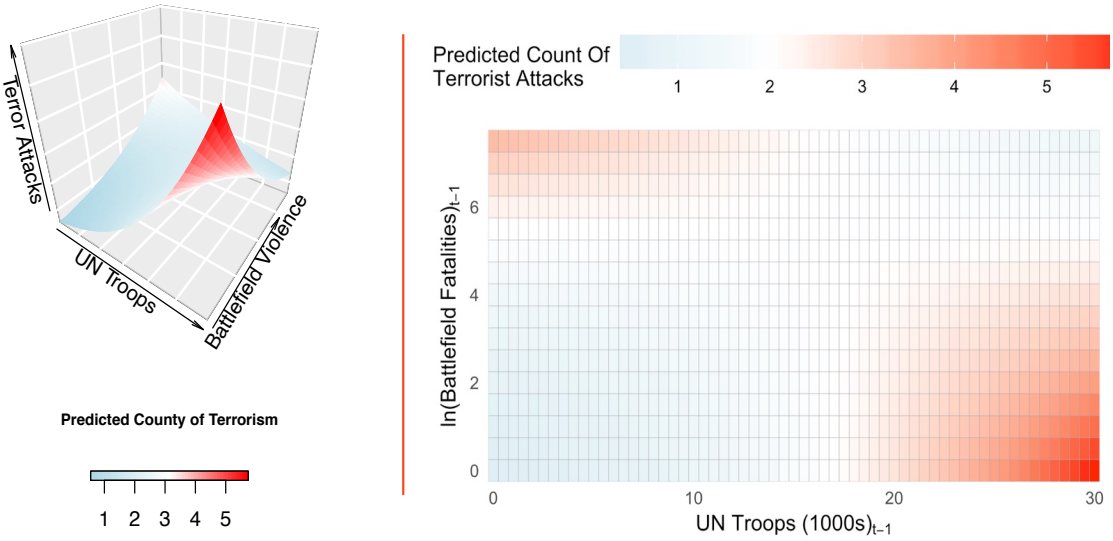


Figure 2.10 3d and 2d Predicted count of terrorist attacks as UN military troops increases in size (monthly), and battlefield violence increases in intensity (monthly).

In order to gauge the uncertainty associated with the effect of UN troops on terror attacks as a function of battlefield violence, I also examine the marginal effect of *UN Troops*$_{t-1}$ across the range of my moderator, *Battle Deaths* $_{t-1}$ (Figure 2.11). We can observe that at low levels of battlefield violence, even as it increases from 0 to the logarithmic value of 2, there exists a positive effect of β*UN Troops*$_{t-1}$ on the dependent variable, $y_{\text{Terror Attacks}}$. This result indicates that increases in UN troops and low-level battlefield violence positively affect the count of terror attacks in a given month, consistent with our post-estimation plot (Figure 2.10). However, areas in which the confidence interval cross zero indicates that there is no statistically significant change in $y_{\text{Terror Attacks}}$ as β*UN Troops*$_{t-1}$ changes for the value of *Battle Deaths* $_{t-1}$ (i.e., β β*UN Troops*$_{t-1}$ is not itself changing). Therefore, our interaction effect only manifests when there are low levels of battlefield violence. This finding, while negligible to a degree, illustrates an essential point for UN peacekeeping operations when examining the effectiveness of the current mission – levels of battlefield violence might manifest in different means, thereby requiring important considerations in stabilizing armed conflict and ensuring the security of civilians.

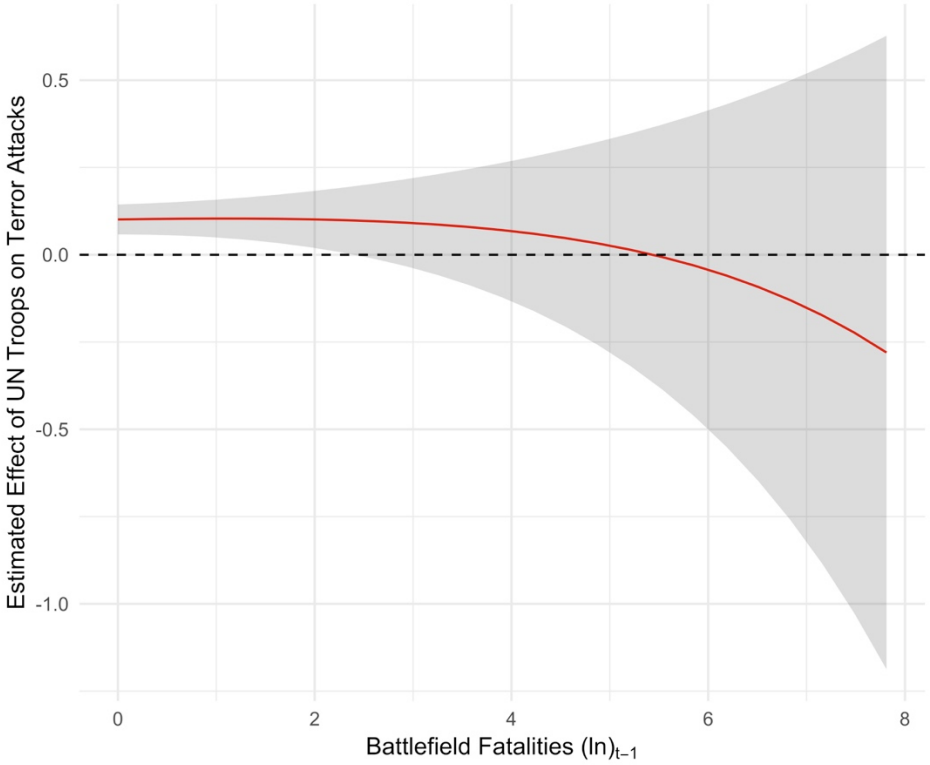


Figure 2.11 Marginal effect of *UN Troops*$_{t-1}$ (X) on *Terror Attacks* (Y) as a function of *Battle Deaths* $_{t-1}$(M).

I also examine the marginal effect between UN peacekeeping and presence of a ceasefire agreement. I expect to observe a positive effect of a UN troops and a ceasefire agreement for an increase in terror attacks. This is because a ceasefire agreement legally limits the ability for armed actors to use overt conventional tactics. When UN troops and a ceasefire agreement are both present, it increases the military and political costs for battlefield violence. If armed actors are to contest using violent means, we would expect an increase in covert forms of violence like terrorism. Using a similar modeling technique to the previous interaction, I construct a model in which I include an interaction term between *UN Troops*$_{t-1}$ and *Ceasefire*, where ceasefire is a binary variable indicating if an agreement is in place (1) or not (0). The results are presented in Figure 2.12. The result indicates that increases in UN troops and a cease-fire agreement positively affect the count of terror attacks in a given month as expected. However, no ceasefire agreement has a negative effect

between UN troops and terror attacks. This could potentially point to the notion that without both political and military costs, groups will continue to use the battlefield, so long it remains a viable option.

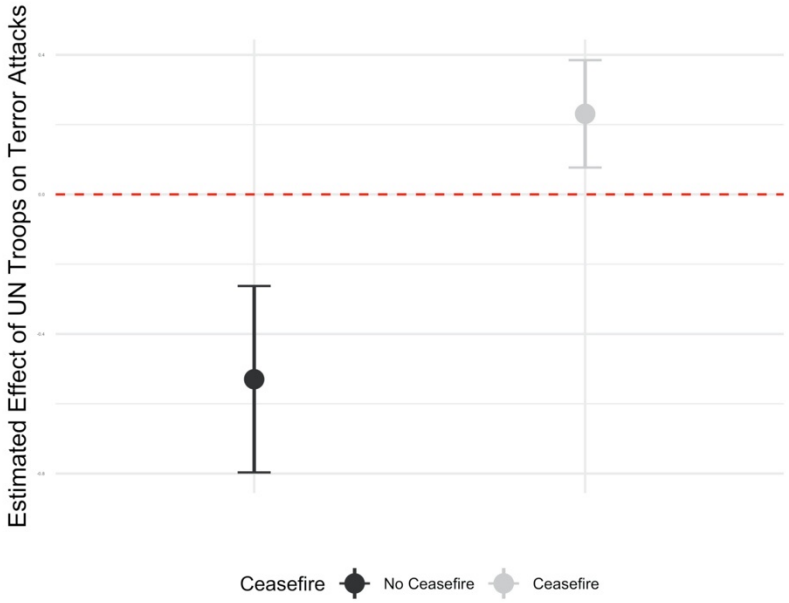


Figure 2.12 Marginal effect of *UN Troops*$_{t-1}$ (X) on *Terror Attacks* (Y) as a function of *Ceasefire* (M).

I next examine the relationship using Thomas (2014) dataset. This dataset corresponds to a similar temporal and geographical range while covering all UCDP rebel groups in Africa. The data set also employs multiple measures of terrorism using GTD. Thus, the dataset, with a high degree of confidence, serves as a useful means to examine whether or not my expectations are robust to results found in my main empirics, but at the dyadic level instead of the country level. I focus the main results of this study at the monthly, country level since UN peacekeeping forces do not specific target individual non-state actors during armed conflict due to impartiality. However, given the concern that UN peacekeeping forces may affect non-state actor behavior uniquely relative to other groups during conflict, dyadic analysis allows us to assess the robustness at a finer detail. This is important as terrorism is often used to demonstrate resolve when unable to do so on the battlefield. Thus, if groups are unable to contest on the battlefield, but to signal their resolve using political

violence, then such attacks must be claimed in order to gain any political benefits. Peacekeeping may also affect different groups based on unique characteristics such as group size, number of groups, if the group is the main belligerent, and if it is participating in negotiations. The dyadic analysis affords us an opportunity to account for these possibilities.

To briefly describe Thomas (2014) data, the author uses a similar definition of terrorism as employed in the main empirics of this study, citing Lake's (2002) classic and widely accepted definition, "terrorism is the irregular use of violence by nonstate groups against nonmilitary targets and personnel for political ends." For the dependent variable the author employs a more restrictive measure of terrorism using Global Terrorism Database (GTD) (START 2012), where actors from the Armed Conflict Database are limited to the number of successful terror attacks domestically to that armed actor (Thomas 2014: 811). The dependent variable also takes on several modifications to include attacks against state targets, successful attacks against state targets, and the logarithmic value of terror attacks.

Thomas (2014) also includes several control variables to account for possible confounding factors. These include several group level indicators such as relative rebel strength, explicit rebel support and whether rebel groups are the main party involved in the intrastate conflict. These variables come from the Non-State Actor data set (NSA) (Cunningham et al. 2009). The data also includes several structural variables such as the logarithmic value battle deaths, number of rebel groups, length conflict episode in months, number of conflict episode cumulatively, polity of incumbent regime, gross domestic product, war type (territorial or ethnic), and third-party mediation. Lastly, while Thomas (2014) examines the effect of terrorism on negotiations and attaining concessions, I employ such political measures as potential confounders where I suggest negotiations might indicate spoiling behavior of the armed actor – as plausibly indicated with the Mali case.

Given the outcome variable is a count and experiences a similar level of dispersion as in the main study, I employ a negative binomial regression to examine the empirical relationship. I present the estimates generated from the negative binomial regression in Figure 2.13. Across the four models, UN Troops is positive and statistically significant, therefore suggesting the findings in the main results are robust across a different dataset and at the dyadic level. While discussion regarding the control variables might be warranted, I instead omit discussion to focus on the robustness of my main variable of interest, UN Troops.

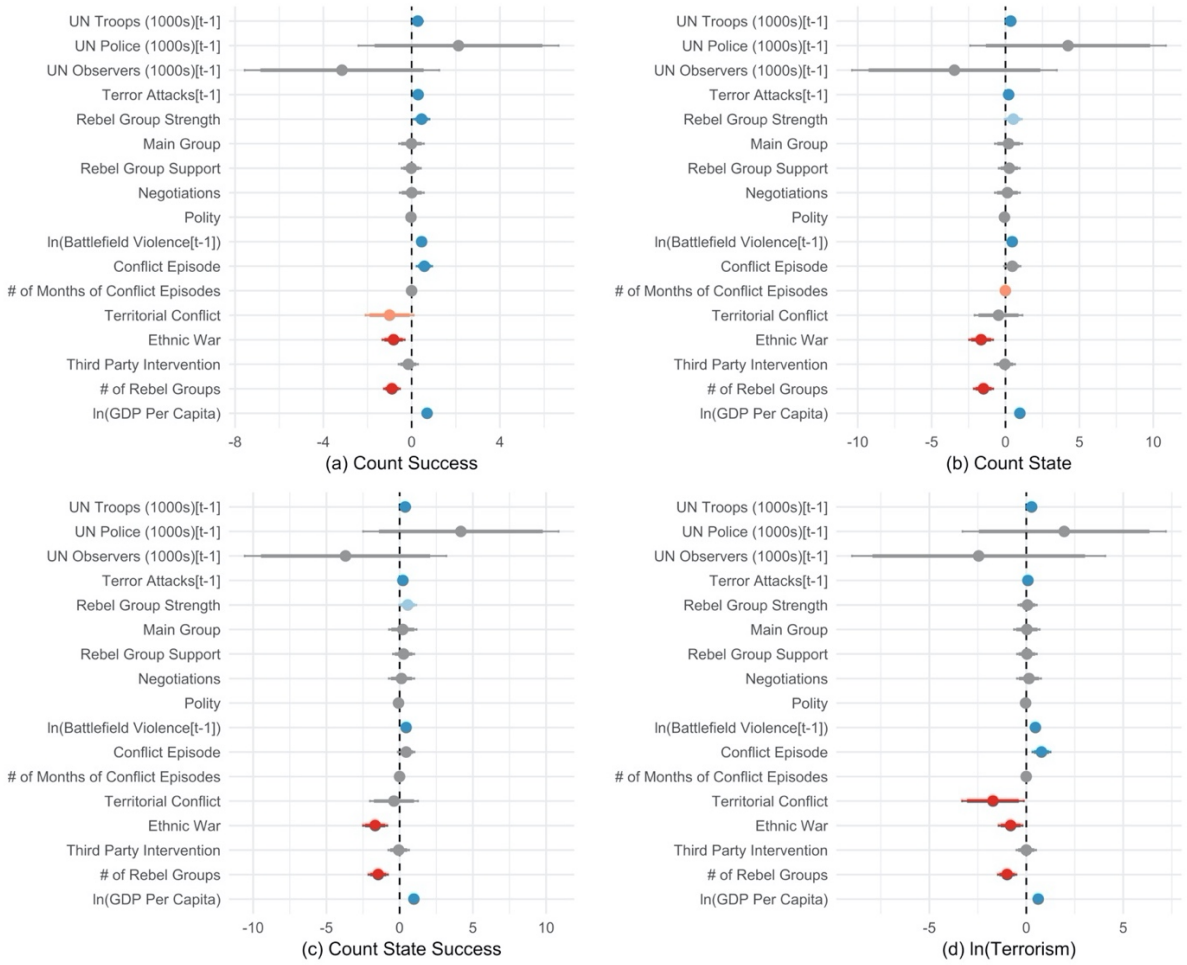


Figure 2.13 Regression results using (a) Count Success (top left); (b) Count Terror Attacks State Only (top right); (c) Count Terror Attacks State Success (bottom left); and (d) Logarithmic Value of Figure 2.13 Terrorism (bottom right) for the dependent variable. Blue indicates positive, while red represents negative. Darker colors indicate that the coefficient estimate is significantly different from zero at a 95% CI, while lighter shade the color indicates a 90% CI. Grey indicates that the estimate is not significantly different from zero at either of those intervals.

Since Thomas's (2014) data is not normally distributed, and there exists a large proportion of zeros and considerable over-dispersion, I also examine the model using a zero-inflated negative binomial regression (ZINB). The simultaneous estimation allows the model to holistically account for the strategy of engaging in terror tactics while accounting for the excessive zeros in such contexts that groups do not engage in terror tactics. For readers unfamiliar with this type of modeling technique, ZINB estimates the model in two distinct steps. First, the technique employs a logistic inflation model that estimates the likelihood that a particular observation belongs to a population with a probability of 1 of having a zero count. This technique allows us to separate cases at risk and not at risk - or in the context of this study, the observed instances when nonstate actors essentially have zero probability of utilizing terror attacks and groups that might be at risk of engaging in terrorism but might result in a zero count. The second stage uses the negative binomial function to estimate the magnitude of the count (frequency of terror attacks). For the post-estimation of the ZINB, I focus on the second stage (count). The results are presented in Table 2.5

Table 2.5 Effect of peacekeeping personnel on terrorism in civil conflict, dyadic, 1989-2010

Variable	Model – Count Success	
	Count Stage	*Inflation Stage*
# UN Troops$_{t-1}$	**0.164***	-0.163
	(-0.09)	(-0.267)
# UN Police $_{t-1}$	2.604	1.734
	(-2.081)	(-5.804)
# UN Observers $_{t-1}$	-1.785	8.023
	(0.423)	(-10.308)
Terror Attacks $_{t-1}$	0.040	-21.566
	(-0.025)	(-1,466.00)
Rebel Strength	**-1.353*** **	**-8.162*** **
	(-0.325)	**(-1.594)**
Main Group	0.466	-1.105
	(-0.329)	(-1.296)
Explicit Rebel Group Support	**0.498***	**-4.911*** **
	(-0.281)	**(-1.436)**
Negotiations	**0.612** **	**1.734** **
	(-0.309)	**(-0.820)**
Polity	**-0.154*** **	-0.186
	(-0.05)	(-0.142)
Battle Death$_{t-1}$ (ln)	**0.399*** **	0.434
	(-0.112)	(-0.470)
Conflict Episode	**0.516***	**1.230***
	(-0.265)	**(-0.693)**
# of Months Conflict Episode	**0.010** **	0.015
	(-0.005)	(-0.01)
Territorial Conflict	0.355	1.684
	(-0.688)	(-1.483)
Ethnic Conflict	**1.000*** **	**9.217*** **
	(-0.316)	**(-2.186)**
Third Party Mediation	**0.719*** **	**2.940*** **
	(-0.281)	**(-1.039)**
# of Rebel Groups	**-0.821*** **	-0.816
	(0.230)	(-0.615)
GDP per capita ($ US) (ln)	**0.454*** **	**-1.736*** **
	(-0.166)	**(-0.539)**
Constant	**-13.150*** **	**38.870*** **
	(-4.575)	**(-14.143)**
Observations	2,098	
Log Likelihood	-756.015	
AIC	1586.03	

* p<0.1, ** p<0.05, *** p<0.01
Note: Standard errors reported in the parentheses.

As expected, UN Troops is positive and statistically significant in the count stage, lending support to my hypothesis that increases in UN Troops corresponds to a positive increase in count of terror attacks. Similar to the negative binomial regressions, I focus my discussion only on the

main variable of interest. To better understand the substantive effect of UN Troops on the frequency of terrorism employed by a rebel group, I examine the effect of this change by examining the percent change when the independent variable increases from its min to mean or median value (Figure 2.14). Therefore, to gain a better sense of the relative effect of the number of UN Troops on the count of terror incidents, I calculate the value from the count stage estimates using 1,000 Monte Carlo Simulations, where each estimate corresponds to the effects of the covariate on the outcome variable. Changing the # of the UN Troops from 0 troops ⇒ 1.06 troops (mean), or roughly a brigade size element, in a given country equates to an increase of terror attacks by roughly 20%. I also provide substantive effects of additional covariates for the reader's convenience and interest. It appears stronger groups decrease attacks, as do the number of groups. However, months where negotiations occur result in an increase in terror attacks, as does an increase in battlefield violence.

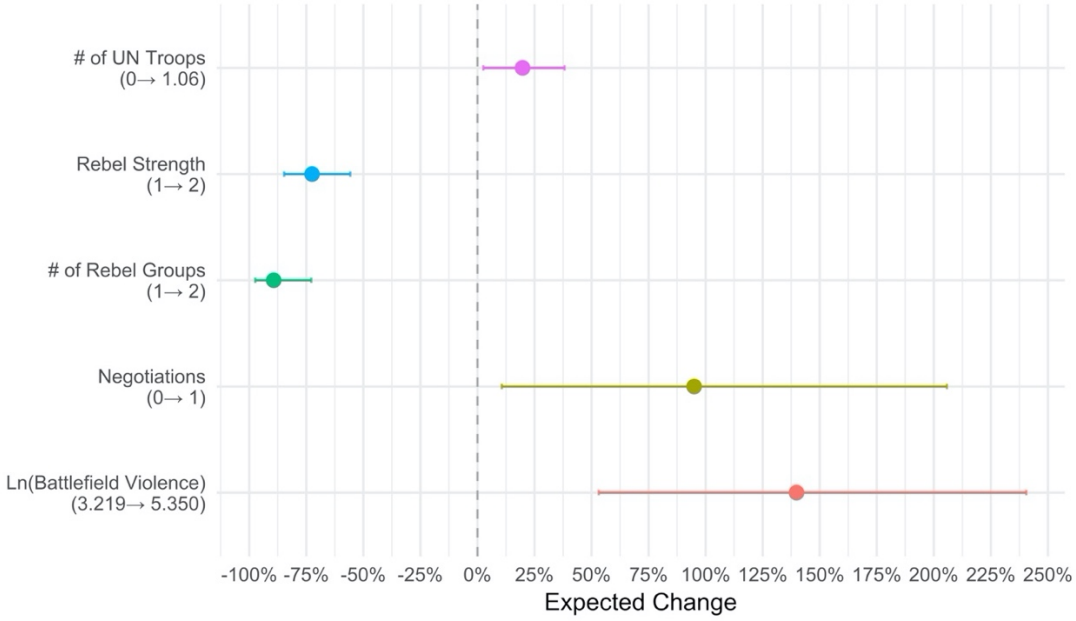


Figure 2.14 First difference change in percent in the expected count of successful terror attacks in month-year *t*, using the count stage of the ZINB, respectively.
Note: Percentage changes based on increasing the covariate from either its min to its mean/median value (value change denoted in parentheses under the variable) while holding all other variables at their median or means, respectively. Error bars represent 95% confidence intervals.

Lastly, outlined in Table 2.6, I summarize the number of modeling techniques and specifications, measurement choices, and data selection used to gauge the robustness of this chapter.

Table 2.6 Robustness Checks

	Modification	Robustness
1	Qualitative Trend: Averages Across PKO Mission Size	Strong
2	Previous Literature Results: Battlefield Deaths DV	Strong
3	Matching Sample for Selection Bias	Moderate
4	DV: Dichotomous Measure of Terror Attacks	Moderate
5	Interaction between UN Troops and Battlefield Violence	Moderate
6	Interaction between UN Troops and Ceasefire	Strong
7	DV: Count Success – Alternative Model Specification Negative Binomial – Thomas (2014) Data	Weak
8	DV: Count State – Alternative Model Specification Negative Binomial – Thomas (2014) Data	Moderate
9	DV: Count State Success – Alternative Model Specification Negative Binomial – Thomas (2014) Data	Moderate
10	DV: Ln(Terrorism) – Alternative Model Specification Negative Binomial – Thomas (2014) Data	Moderate
11	DV: Count Success – Multilevel Model Negative Binomial – Thomas (2014) Data	Fail to Converge
12	DV: Count Success – Zero Inflated Negative Binomial – Thomas (2014) Data	Moderate
13	Include Lagged Dependent Variable – Thomas (2014) Data	Weak
14	Add Control for Ethnic Conflict – Thomas (2014) Data	Weak
15	Add Control for Territorial Conflict – Thomas (2014) Data	Weak

2.7 Discussion and Conclusion

UN peace operations have a commendable record of ensuring and facilitating peace in cases like Namibia, Mozambique, Sierra Leone, and Liberia (Fortna, 2008; Howard, 2008). Peacekeeping has proven effective in reducing conventional battlefield violence and civilian victimization during civil war (Hultman et al., 2013, 2014). However, the evolving nature of conflict continues to challenge traditional peacekeeping efforts. The results of this paper highlighted an unintended consequence and overlooked conflict dynamic that challenges UN peacekeeping operations – the increased use of terrorism by rebel groups. This study finds that as the number of UN military troops involved in a civil conflict increases, there is an associated increase in the number of terror attacks. This increase in terrorism stems in part from two unintended consequences of peacekeeping operations. The first

is associated with limited opportunity for warring actors to contest on the battlefield due to UN military troops operational activities. The second results from increased costs incurred by rebel groups when using conventional battlefield tactics amid peacekeeping operations. These results are consistent at different levels of aggregation and hold under scrutiny across varying modeling specifications and techniques.

This result is problematic considering the mounting pressure from the international community for peace operations to undertake a variety of critical missions such as stabilizing countries during intense violence, protecting civilians, securing humanitarian assistance, securing elections, providing public security, and countering violent extremism. The effects of terrorism not only influence the political and military context of the civil conflict but also have lingering effects on the UN organization. With the increased use of robust UN military troops, the UN mission itself has become a target of rebel forces (Fjelde et al. 2016). Beyond affecting conflict dynamics, such terror attacks against non-military UN personnel limit UN staff to fortified compounds, restrict their movement to heavily armored vehicles, and affect the ability of the UN to recruit vital staff and interact with the local populace (Perito, 2015). The attacks against UN troops and police have impacted the willingness of troop-contributing countries to provide personnel for UN missions. This effect has resulted in an increased reliance on regional organizations such as the African Union. Moreover, such attacks affect the inability of UN personnel to interact with local leaders and civil society. This inability to foster political relations inherently limits the UN's capacity in building and establishing development programs – an equally notable line of effort in facilitating the peace process (Perito, 2015). This implication begs the question, is UN peacekeeping capable of countering violent extremism?

CHAPTER 3

TARGET PREFERENCE AND TACTICAL DIVERSITY DURING TIMES OF TERROR

"The Panel argues that extreme caution must guide any call for a UN peacekeeping operation to undertake enforcement tasks. The UN should not engage in military counter-terrorism operations."

- United Nations High-Level Independent Panel on Peace Operations, 2016

As chapter 2 emphasized, recent studies suggest a positive impact of UN peacekeeping during civil conflict. For instance, Hultman et al. (2013 and 2014) find that when a higher number of UN military peacekeepers deployed to an active civil war, there is an associated decrease in fatalities attributed from battlefield violence and civilian victimization. Grounded in their empirical finding is the argument that UN peacekeeping decreases the use of violence by serving as a mechanism for overcoming the commitment problem between warring parties by increasing the costs of continued fighting and reducing information asymmetries (Hultman et al., 2013, 2014 and 2015). These mechanisms byway of UN peacekeeping operational activities theoretically shift the preferences and incentives of continued armed fighting as a means of conflict settlement towards one that embodies the political process using mediation, negotiations, and demobilization and reintegration.

Despite these added benefits of UN peacekeeping operations, achieving durable peace in civil wars is difficult given the motives (and incentives) to continue armed conflict. This result is most apparent in chapter 2, where we find an associated increase in total terrorist attacks as the number of UN troops increases during intrastate conflict. This increase of terrorism stems in part from the UN PKO's ability to limit opportunity and impose costs when armed actors contest on the battlefield using conventional means. By way of these mechanisms, rebel groups become incentivized to use

alternative means to achieve their group's respective objectives and goals – terrorist tactics become one such method.

However, terrorism can be further disaggregated beyond the frequency of attacks and number of casualties. We can understand more about rebel strategy and effects of UN peacekeeping by examining closer at the target of terror attacks and the type of tactics employed. In this context, insurgent groups can also consider the type of target – that is whether or not the target is considered "soft" or "hard" (See Table 3.1 for a general description of target typology). UN peacekeeping operations are often charged with the responsibility of protecting civilians, what I suggest are soft targets. This responsibility is often codified within the mission's respective mandate to protect civilians within the peacekeeping operation's capabilities and areas of deployment (Holt and Taylor, 2009). This allows us to better understand the shortcomings of UN PKO and which targets they protect, and which ones are left vulnerable.

Table 3.1 Typology of Hard Targets and Soft Targets

Hard Targets	Soft Targets
Government (general and diplomatic)	Business
Police	Educational institutions
Transportation	Journalists and media
Telecommunications	NGOs
Utilities	Private citizens and property
Food and water supply	Religious figures/institutions
Maritime	Tourists
Airport/aircraft (includes hijacking)	Other (ambulances, refugee camps)
Military	

Therefore, when UN PKOs deploy to an intrastate conflict, UN peacekeepers often concentrate their forces in a position relative to the vicinity of vulnerable population centers – religious institutions, refugee camps, education institutions – or establish protection of civilian sites, as recently implemented in South Sudan (Briggs, 2017). By positioning UN peacekeepers in the vicinity of such "soft" targets, the local presence of blue helmets raises the military and political costs of targeting civilians (Fjelde et al., 2019). Therefore, as the number of personnel in the respective UN

peacekeeping operation increases, the more likely the mission is able to better position and array its forces in such a manner that armed actors decrease attacks against such targets. However, this creates targets of opportunity against "hard targets." Rebel groups become incentivized to attack infrastructure, telecommunication, utilities, police, and other state-like facilities or personnel to avoid military costs and political repercussions imposed by UN peacekeeper presence that are often tied to attacks against "soft targets."

As a brief extension, I also examine the relationship between the number of personnel increases – particularly concerning military troops – and diversification of respective terror tactics employed. Tactical diversity allows rebel groups to reduce the predictability of their operations, which in turn causes the UN peacekeeping mission to either spread their defenses in such a manner that reduces their element's combat effectiveness or concentrate forces along centers of gravity to protect vulnerable key points, cities, and towns (Horowitz et al., 2018). The inflexibilities and weakness in the peacekeeping's inability to cover all areas where civilians are at risk incite armed actors to pursue a spectrum of tactics to exploit such gaps as a means to achieving their goals. As commented in the Irish Republican Army's *Green Book*, "Tactics are dictated by existing conditions" (Jones, 2017, p. 57). Thus, when UN peacekeeping operations intervene during civil war, rebel groups will diversify their tactics and targets, particularly when the mission personnel and composition increase in size.

To test these conjectures, this study mirrors the analysis conducted in the previous chapter. It uses monthly data on the number and types of peacekeepers deployed and terrorist attacks committed by rebel groups in African civil conflicts from 1992 to 2011 (Kathman, 2013; START, 2013). The results of this chapter find mixed evidence with terrorism when further disaggregating to soft and hard targets. My theory suggests that UN military troops should reduce the number of attacks against soft targets but increase the number of attacks against hard ones. However, I find UN military troops consequently yield an increase in attacks against both soft and hard targets.

Interestingly and encouragingly, UN police have a significant effect in reducing attacks against both soft and hard targets. With respect to tactical diversity, the results demonstrate that rebel groups indeed increase their menu of tactics when UN peacekeepers intervene, particularly as the mission increases in size and composition of its personnel.

The results thus add more nuance to our understanding of the complicated relationship between violent behavior of armed actors and UN peacekeeping operations amid active civil conflict. When UN peacekeepers intervene during armed conflict, peacekeepers will inherently encounter armed actors willing (and able) to continue the fight using a menu of tactics against a range of targets. These results are important for several reasons. First, the findings contribute to the growing literature on UN peacekeeping operations, broadly, while also lending more specific insight to rebel group behavior in the context of UN peacekeeping operations during active civil war. Second, the demand (and supply) for UN peacekeeping operations has increased considerably in the last two decades. Given such an increase, it is appropriate to examine the relationship between UN peacekeeping operations and the gamut of likely tactics to be waged by armed actors during the conflict.

Lastly, these findings imply that peacekeeping missions should better prepare for the range of violence expected to occur during civil conflict. In countries like the Central African Republic, Democratic Republic of the Congo, Mali, Somalia, and Sudan's Darfur (all countries with current and sizeable UN peacekeeping operations), wars have many facets and often feature combatants where there are no clearly recognizable "good guys" or "bad guys." Given the defensive nature of a majority of peacekeeping operations, the ability to deter, prevent, and respond to the diversity of such tactics – often unconventional –will continue to challenge current and future UN peacekeeping operations. UN peacekeeping operations must equip missions with the necessary tools and flexibility to overcome challenges stemming from the multi-faceted face of warfare. The UN should strive to

revise and develop guidelines on the nature and application of force to ensure the mission achieves and fulfills its ability to – at a minimum – prevent the unnecessary loss of civilian life and ultimately set the conditions for political compromise and conflict resolution.

3.1 Revisiting UN Peacekeeping and Violence: A Closer Examination

As established in Chapter 2, several studies of peacekeeping operations examine the immediate influence of UN PKOs in relation to conflict dynamics during intrastate conflict. Increases in UN military troops leads to a decrease in battlefield fatalities and civilian victimization in civil wars, while an increased level of UN police reduces civilian victimization, but not battlefield fatalities. Military observers, however, are found to be ineffective in reducing both battlefield fatalities and civilian victimization. Other studies examine the effect of UN peacekeeping on violence at a more granulated level.[41] Ruggeri et al. (2017) find that at the subnational level, UN peacekeepers reduce the duration of conflict. Fjelde et al. (2019) find that peacekeepers, through sizeable local presence, can increase the political and military costs for warring actors to engage in civilian targeting, particularly those committed by rebel groups, but not for government forces. These findings suggest that variation in violence is, in part, due to conditions influenced by the presence of a peacekeeping deployment – which was grounded in theory underpinning chapter 2.

However, previous studies have also found variation in the targets of such violence. For instance, Salverda (2013) examines the rebel actor's strategic use of violence by demonstrating that rebels, in some cases, attack peacekeepers in place of other targets. Salverda (2013) argues that stronger rebels will attack peacekeepers in order to restrict peacekeeping behavior or incite withdrawal from conflict. Fjelde et al. (2016) also find evidence that conflict dynamics influence rebel strategies during civil conflict. They suggest that rebel groups increase their targeting against

[41] The discussion of micro-analysis is expanded in the following chapter, as the next chapter focuses on empirically triangulating the cross-national analyses at the sub-national level.

peacekeepers to offset setbacks experienced on the battlefield, particularly when the balance of power between rebels and the government shifts due to the intervention of peacekeepers.

Similar to this logic, Wood et al. (2012) find that external armed intervention influences government and insurgent organization decisions to target civilians during civil war. They suggest that as a conflict actor weakens relative to its adversary, it employs increasingly violent tactics toward the civilian population as a means of reshaping the strategic landscape to its benefit (Wood et al., 2012). More recently, Di Salvatore (2018) extends this logic concerning UN peacekeeping and posits that peacekeepers are less effective against one-sided violence where power asymmetries are significant. This effect occurs because UN peacekeepers create incentives for escalation against civilians and, in this context, are typically less effective at separating and monitoring combatants. The arrival of peacekeepers has the potential to change the balance of power between groups. The presence of blue helmets alters the opportunity structure for armed actors to perpetrate violence strategically (Di Salvatore, 2018). For instance, Hultman (2010) suggests that UN peacekeeping, when sent to ongoing conflicts, changes the nature of the conflict. Armed actors change their tactics in order to improve their bargaining position in the event of a negotiated settlement. Hultman (2010) theorizes that this behavior is due to the UN PKO's ability to reduce contestation on the battlefield. This effect alters the conditions on the ground, which results in armed actors shifting strategies of conventional tactics to other methods such as civilian targeting (Hultman, 2010).

Thus, as much of the literature has found, UN peacekeeping affects the decision calculus of armed actors. As Chapter 2 demonstrated, rebel groups also employ terrorism as a tactic when UN peacekeepers deploy. UN peacekeeping operations increases the costs and limit the opportunity to contest on the battlefield and systematically target civilians, as previous literature supports and suggests. For example, from 1988 to 1993 in Somalia, in place of direct hostilities between warring actors, armed groups laid mines around towns, destroyed water points, killed or looted livestock,

burned villages, and arbitrarily detained and killed civilians (World Peace Foundation, 2015). While the previous chapter brought to attention the general increase in terrorism, it overlooked the variation of target selection and tactical choice when carrying out such attacks. As Jenkin's (1975: 15) stated, which is quoted in Polo and Gleditsch (2016), 'terrorists want a lot of people watching, not a lot of people dead' highlights the fact that attacks that do not lead to high number of civilian casualties can be just as devastating as those with few casualties.

As such, the nature of terror attacks carried out by rebel groups varies considerably across conflicts. Some groups like the Lord's Resistance Army (LRA) in the African Great Lakes region, as briefly mentioned, Revolutionary United Front in Sierra Leone, and Al Qaeda in the Islamic Maghreb in Mali often employ a mix of terror attacks against a range of targets such as murdering, raping, and kidnapping civilians and destroying homes and property. Other groups, like Liberians United for Reconciliation and Democracy, frequently employed hit-and-run attacks against government targets, rarely committing human rights abuses. Existing research suggests several reasons why insurgent groups may use terrorist attacks as a supplement to conventional tactics during civil war, but few empirical studies have examined this relationship in the context of UN peacekeeping. To understand UN peacekeeping effectiveness in preventing the full spectrum of political violence, we need to understand in what ways peacekeeping influences insurgent attacks against various targets and how groups carry out the attack. In what follows, the theory suggests that UN peacekeeping interventions amid armed conflict result in an increase in frequency in terror attacks carried out by insurgent groups. These attacks, however, vary with respect to the dynamic factors attributed to the number and composition of peacekeepers on the ground. When there is a sizeable peacekeeping operation, one with a sufficient number of military troops, police, and observers, rebel groups will be inclined to attack against hard targets in comparison to soft targets.

3.2 Target of Opportunity

As much of the literature suggests, rebel groups are assumed to be rational actors that prefer strategies and tactics offering them the highest expected utility to achieving their goals (Kydd and Walter, 2006; Lake, 2002). Under this assumption, target preference and tactical variation are not random: an increase in terrorism despite the presence of a UN peacekeeping force potentially reflects an insurgent group's preference to supplement their broader strategy in order to achieve their political objectives.[42] Insurgents in this respect are responding to the external UN intervention by leveraging the instrumental value of other tactics to help achieve their group's aims. Di Salvatore (2018: 5) lends theoretical insight to this logic: "Intervention by external actors enters this calculation and alters the group's expectations regarding the outcome of the conflict and the 'attractiveness' of violence as a tool to achieve their goals. It is the local conditions that shape the incentives and opportunity costs…". She further adds that when UN peacekeeping attempts to address one type of violence, such as systematic civilian targeting, the mission may be neglecting other forms of violence committed by armed actors. In a similar vein, this chapter questions how UN peacekeeping operations might influence rebel groups' decisions to use terrorist tactics, but specifically the targets that follow?

Returning to the cost logic broadly outlined in Chapter 2, there exist two types of costs that armed actors risk when UN peacekeepers intervene during civil war. As emphasized in the previous chapter, UN peacekeepers can impose *military costs* (Fjelde et al., 2019). When warring actors contest on the battlefield or attack civilians, they risk direct armed intervention from UN peacekeepers

[42] For instance, consider that in 2009 in the Democratic Republic of the Congo, the Lord's Resistance Army (LRA) targeted the local population using murder, kidnapping, and sexual abuse, while to the South hostilities by the Congolese army and Rwandan troops against the Rwandan Hutu military Democratic Liberation Forces of Rwanda resulted in over 1,000 civilians killed, more than 7,000 women and girls raped, and over 6,000 homes burned down leaving over 900,000 internally displaced persons (CNN, 2009). Two different insurgent groups employed different tactics and targeted differently, which led to a situation where UN peacekeepers were mostly unprepared to either respond, prevent, or deter.

(Hultman, Kathman, and Shannon, 2013, 2014; Fjelde et al., 2019). Such military costs decrease the instrumental value for using particular forms of violence. Second, peacekeepers can also impose *political costs* on armed actors in the form of condemnations and legal repercussions. These are attributed to information attained and reported by monitoring and patrolling of UN peacekeeping forces. These costs imposed by peacekeepers decrease the propensity for groups to contest on the battlefield (Hultman, Kathman, and Shannon, 2014) and to systematically target civilians (Hultman, Kathman, and Shannon, 2013; Fjelde et al., 2019), however, the UN peacekeeping operation's ability to effectively impose such costs incentivizes rebel groups to increase terror attacks against particular targets. In what follows, I suggest that these costs influence the target selection of terror attacks, where military and political costs imposed by increases of UN troops affect the decision to direct attacks against hard targets in lieu of soft targets – where armed actors prefer higher pay-off targets such state-like infrastructure, telecommunications, police stations, and government institutions.

When UN peacekeepers deploy to civil war, the UN PKO is typically mandated to protect civilians, deter armed hostilities between warring actors, and intervene when such violence occurs (Hultman, Kathman, and Shannon, 2014). Peacekeeping operations often fulfill these tasks using various operational activities such as separating armed combatants by positioning peacekeepers in conflict-prone areas, in effect creating "buffer zones," and by actively patrolling and monitoring across the conflict landscape (Hultman, Kathman, and Shannon, 2013, 2014; Fjelde et al., 2019). The presence of blue helmets thereby increases the costs of violence as armed actors risk direct, kinetic military confrontation with the peacekeepers.

Since peacekeepers are often mandated to take necessary action to protect civilians under imminent threat of physical violence (as institutionalized by recommendations made by the Brahimi Report, High-level Panel on Peace Operations Report, and Kigali Principles (Howard, 2019)), UN peacekeepers are often co-located in areas proximate to populations at risk or in vicinity of "soft

targets." Fjelde et al. (2019: 108) state, "peacekeepers are often stationed in locations where civilians seek protection and safety from violence, such as religious compounds, refugee camps, schools or UN bases, and thus enforce a physical barrier between civilians and warring actors that significantly raise the cost any attacks." Thus, if rebel groups decide to direct attacks against civilians, and in this case objectives defined as soft targets, such actions could potentially entail fighting costly battles with UN peacekeepers (Fjelde et al., 2019). Ruggeri et al. (2016) corroborate this mechanism, where they find UN peacekeepers deployed to or near the frontline, an area proximate to the conflict or urban areas at extreme risk. Moreover, Powers et al. (2015) find that UN peacekeeping forces in African civil wars typically deploy to locations experiencing the most violent activity, and Costalli (2013) finds that peacekeeping forces in Bosnia-Herzegovina deployed to locations experiencing the most intense violence.[43] Ruggeri et al. (2017) further empirically demonstrate that when UN peacekeepers deploy to conflict-prone locations, the conflict episodes last for shorter periods.

The viability to effectively impose these costs improves when UN peacekeeping missions increase in size and respective composition (Hultman, Kathman, and Shannon, 2013, 2014). As the size of the peacekeeping deployment increases, the ability to effectively position blue helmets between armed actors and in population centers at risk improves. Their operational activities inherently raise the military costs for insurgents to pursue conventional tactics or target civilians, as such action would most likely result in armed intervention from better-equipped peacekeepers. In essence, soft targets become not so 'soft.' To avoid such consequences, rebels minimize military costs by avoiding direct confrontation that could lead into prolonged engagements.

Moreover, UN peacekeeping operations can also impose political costs. When peacekeepers deploy to conflict, UN peacekeepers patrol among population centers, conduct human rights investigations,

[43] It is important to comment that Costalli (2013) does not find any empirical evidence that UN peacekeeping forces reduce the overall intensity of civilian victimization in areas deployed. However, this could be specific to the Bosnian case.

and establish observation posts where personnel monitor and report activities of the local population and armed actors. If armed actors commit atrocities, engage on the battlefield, or commit both, such activities are often reported and consolidated through the UN peacekeeping mission's monthly or quarterly reports to the UN Secretary-General or through the Secretary-General's press releases. For instance, when the rebel group Allied Democratic Forces (ADF) in the DRC's North Kivu attacked UN forces, in which at least 14 Tanzanian peacekeepers and five Congolese soldiers died along with 44 people injured, UN Secretary-General Antonio Guterres immediately condemned the attack, stating, "These deliberate attacks against UN peacekeepers are unacceptable and constitute a war crime" (Besheer, 2017). Some studies demonstrate the effectiveness of such condemnation. For instance, DeMeritt (2012) finds that naming-and-shaming reduces atrocities committed by states actors, and Burgoon et al. (2015) find that in the presence of peacekeepers, the effect is even stronger. I suggest that such political consequences affect non-state actor rationale as well. For example, Jo (2015) argues that secessionist rebel groups rely on a toolkit of both military and non-military strategies to legitimate their form of rule and their claim of territorial sovereignty to both a domestic constituency and an international audience. Stewart (2018) echoes this notion highlighting, secessionist insurgents, for example, must be recognized as the legitimate sovereign of a territorial space by both the domestic and international community. Even center-seeking insurgents that want to overthrow government in capital, she argues, desire legitimacy in the face of the domestic and international audience.

Condemnations and reporting of atrocities can lead to sanctions imposed against rebel groups, legal repercussions byway of prosecution in the International Criminal Court (ICC), and political repercussions in the form of declined international support. For instance, a former commander of the Lord's Resistance Army is standing trial at the ICC for 70 counts of war crimes and murder (Webb, 2018) and a former rebel commander during Sierra Leone's decade-long civil war is facing

legal repercussions for attacks against UN peacekeepers. These political costs, in turn, can further shape the incentives and opportunity costs associated with various forms of violence.

Given these costs imposed by UN peacekeeping operations, rebel groups instead leverage terrorist tactics to inflict severe costs on the government and UN peacekeeping operations. Terrorist tactics in this respect are a function of the UN peacekeeping mission's size and mandate since these particular characteristics correspond to the mission's overall ability to impose military and political costs. As the ability to contest other armed actors using the battlefield violence or carry out systematic civilian targeting diminishes, rebel groups increase their use of terror attacks as an alternative means. This development is because terrorist tactics, relative to other available tactics, increase in instrumental value, and provides several tactical advantages (Crenshaw, 1981). Terrorism allows rebel groups to inflict pain in a cost-effective manner, which can lead governments to acquiesce to rebel demands (Thomas, 2014), spoil unfavorable peace processes (Findley and Young, 2015), extend conflict duration (Fortna, 2015; Findley and Young, 2015), deprive the legitimacy of the state (Hultman, 2007; Wood, 2010), intimidate other armed actors (Kydd and Walter, 2006) and use as a substitute for guerilla tactics conditional on counterterrorism efforts (Carter, 2016).

Focusing on the latter, terrorist tactics require fewer personnel and are less costly in terms of logistical requirements compared to conventional means or even guerilla warfare (Carter, 2016; Fortna, 2015; Kydd and Walter, 2006). The covert nature affords the tactical advantage to circumvent blue helmets positioned along the frontlines or in population centers at risk. This advantage inherently puts less of the group at risk of being killed or wounded due to UN peacekeeping armed intervention. Rebel groups can employ a single individual to carry out a terrorist attack using minimal resources and aim their attacks directly at targets where peacekeepers are not present. Thus, when UN peacekeepers impose severe costs (military and political), rebel groups

become incentivized to leverage terrorism due to the tactic's instrumental value relative to other forms of warfare.

Given the incentive to use terrorist tactics, I argue insurgent groups also consider the target preferences when conducting terror attacks. Polo (*Forthcoming*) posits that although hard and soft targets allow a group to inflict damage on the government, the two categories of targets differ significantly in their political costs. She explains that target preferences are based on how a group's ties to its constituency and specific government repressive strategies constrain or incentivize target preferences. Concerning the presence of UN peacekeeping operations, I suggest rebel groups are more likely to increase terror attacks against hard targets relative to soft targets due to the military and political costs associated with UN forces. This is because UN peacekeepers are likely to protect these susceptible locations (soft targets) – especially given civilian protection mandates - while also maintaining a positive posture to intervene when overt signs of battlefield violence occur. Soft targets in this context are classified as all organizations and individuals with no official role in the state apparatus, while hard targets are those in which the target is associated with the government and state control to include government, police, and infrastructure (See Table 3.1).

With sufficient UN troops, UN peacekeepers are more likely to be projected along the frontline and in urban areas, thereby creating increased risk for military engagements (Ruggeri et al. 2016). UN military troops actively patrol where civilians are vulnerable, which creates a number of tactical effects. UN military patrols serves as a means and method to promote visible presence of UN forces for the purpose of maintaining a safe and secure environment and acting as a costly deterrence for violence. UN military patrols concentrate their efforts to minimize attacks against soft targets, which in turn disincentivizes attacks against these types of targets. Patrolling is the most common and most important task military forces perform in order to support protection of civilians and dissuade potential adversaries from using violence against vulnerable populations (PKSOI, 2012 p. 94). UN

police will also typically concentrate their efforts in urban environments, often behind the front lines, which further raises the costs for attacks against "soft targets." Thus, I argue that if armed actors are to attack a target, armed actors prefer to attack ones with greater value of return – particularly attacks that undermine the state legitimacy.

Furthermore, when rebel groups attack undefended civilians, they risk losing valuable popular support, both domestic and international. Given the UN has intervened into the civil conflict, there is increased international attention to conflict itself. This serves as an opportunity for rebel groups to signal legitimacy to a wider audience. Therefore, to maintain popular support groups will increase attacks against hard targets to derive more comprehensive benefits. The increase of attacks against hard targets will impose the most significant pressure on the government without incurring costs associated with the UN peacekeeping mission while concurrently minimizing the loss of local and international popular support. Figure 3.1, which examines the average number of attacks against soft and hard targets with respect to the overall size of the UN peacekeeping operation, briefly illustrates this logic. On the aggregate, UN peacekeeping modestly reduces the number of attacks against soft targets. However, the number of attacks against hard targets (government facilities and personnel, transportation hubs, telecommunication infrastructure, and water/food supply) increases as the size of the mission expands. In both instances where there are no peacekeepers deployed in the conflict, there are greater levels of attacks, on average, against both soft and hard targets. This might suggest a double-edge sword in that peacekeepers reduce the average number of terror attacks once peacekeepers are deployed. However, as the number of troops increase, the number of attacks against hard targets increase.

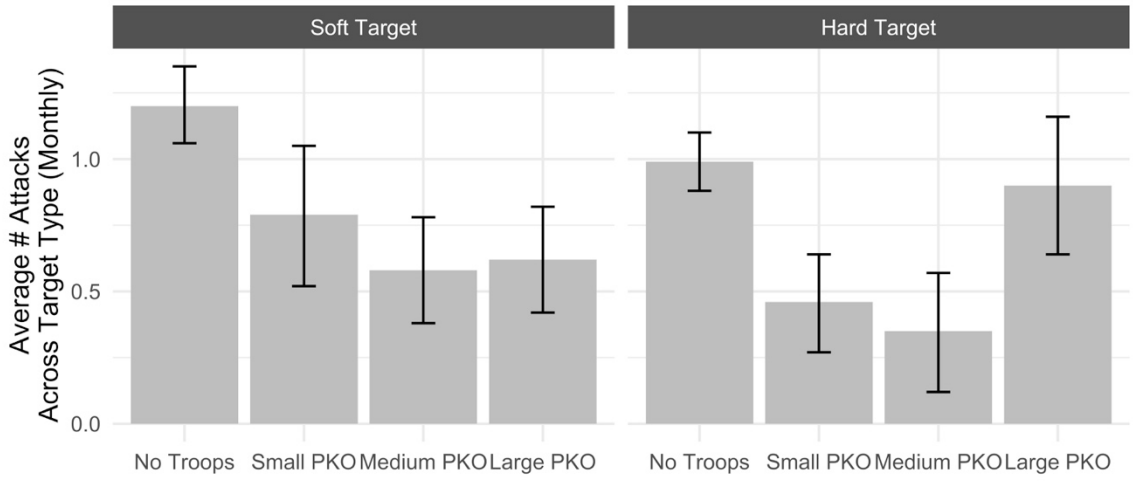


Figure 3.1 The average number of attacks by target type and size of UN peacekeeping mission.
Note: This only examines the size of UN military troops.

In making a more specific distinction in target preference concerning the type and size of UN peacekeeping forces, as the number of UN military peacekeepers increase in size in a given month during an intrastate conflict that groups will increase the number of attacks against hard targets, but not soft targets. This causal theory leads to the following testable hypotheses:

Hypothesis 1: As the number of UN peacekeeping troops increases in size, there is an increase in the count of attacks against hard targets.

Hypothesis 2: As the number of UN peacekeeping troops increases in size, there is a decrease in the count of attacks against soft targets.

3.3 Research Design

3.3.a Data

In order to examine the relationship between UN peacekeeping and the propensity for rebel groups to use terrorism against soft and hard targets during intrastate conflict, I utilize the same data as employed in the previous chapter, which includes all intrastate conflicts in Africa from 1992 to 2011. The unit of analysis is the country-monthly level in active armed conflict for all countries that

experienced intrastate conflict.[44] [45] Countries experiencing intrastate conflict are drawn from the Uppsala Conflict Data Program (UCDP) Dyadic Dataset v.1-2012 (Harbom et al., 2008).

3.3.a.1 Dependent Variables

To measure the dependent variable, the study uses the Global Terrorism Database (GTD) (START, 2013) to identify African rebel groups that use terrorism within countries that experience active intrastate conflict. The GTD records attacks by sub-national actors intended to coerce a large audience and attain broader social, religious, political, or economic goals (START, 2013). However, to distinguish attacks against soft and hard targets, the outcome variable takes the aggregate of incidents based on the coding criteria listed in Table 3.1.[46] I use two different measures to capture the typology of the target robustly. First, I aggregate all terror attacks against soft targets in a given month. Soft targets classify as all organizations and individuals with no official role in the state apparatus. Second, I aggregate all terror attacks against hard targets in a given month. Hard attacks are those in which the target is associated with the government and state control to include government, police, and critical infrastructure.

3.3.a.2 Independent Variables

This study uses the same three independent variables as chapter 2 that captures the number and type of UN personnel commitments in a given month, measured in thousands, (Kathman, 2013) to examine the impact of peacekeepers and the relationship with attacks against soft and hard targets. To restate, these variables are operationalized from the United Nations Peacekeeping Personnel Commitments dataset, 1990–2011 (Kathman, 2013). *UN Troops* captures the number of armed

[44] For a country to be considered an intrastate conflict, at least 25 battle deaths must occur in a given year.
[45] I aggregate all government-rebel group dyads to the country level. To reiterate, Conrad and Greene (2015) state that since 1970, 35% of all terror attacks were classified as "Unknown." While the unit of analysis may sacrifice granularity, that is losing actor specific data; it nevertheless allows us to capture the holistic relationship that UN peacekeeping has with all violence occurring within the territorial confines it has been charged to protect.
[46] The dependent variable follows similar measurement criteria as Polo and Gledistch (2016). This measurement derives from the explicit operational definition based on GTD target categories.

troops, and *UN Police* measures the number of police forces deployed in a country in a given month. *UN Observers* records the number of unarmed observers sent to a country. The variables are lagged one month to ensure temporal order, that is to account whether terror attacks are in response to increased levels of UN personnel commitments during a given month.

3.3.a.3 Control Variables

This study includes several control measures employed in chapter 2's empirical analysis. Again, the model controls for a *ceasefire* agreement (Harbom et al., 2006). A ceasefire agreement may influence the frequency of terrorism to avoid costs associated with conventional engagements and an increase in attacks against hard targets to influence political processes. The model controls for several rebel group characteristics that are drawn from the Non-State Actor dataset (NSA) (Cunningham et al., 2009). *Rebel Strength*, which is a variable that examines the relative power between armed actors in civil conflict. I expect intrastate conflicts with stronger rebel groups to result in a higher number of attacks against hard targets and a decrease in the proportion of attacks against soft targets. This expectation is because stronger groups are more likely to have the ability to contest the opposition using conventional means, thus avoiding any counterproductive effects that might be associated with terrorist tactics (Polo and Gleditsch, 2016; Polo, *Forthcoming*). I also include the variable *Number of Rebel Groups*. I expect the *Number of Rebel Groups* to be associated with a decrease in attacks against hard targets, but an increase in attacks against soft targets as more groups will seek to "outbid" other groups and target other organization's constituency (Bloom, 2005; Conrad and Greene, 2015; Kydd and Walter, 2006; Nemeth et al., 2014).

To account for the shift from conventional tactics to terrorism, I control for battlefield-related deaths, $Battle\ Deaths_{t-1}$. This is the logarithmic value of the total number of casualties related to

fighting between the warring parties lagged by one month.[47] Studies have demonstrated that an increase in UN military peacekeepers decreases battlefield fatalities in civil war (Hultman et al., 2014). Thus, if UN peacekeeping reduces the ability for actors to contest using conventional means, then rebel groups should be inclined to use terrorist tactics to offset losses on the battlefield or supplement their existing tactics. I expect increases of battlefield violence to correlate with increase in attacks against soft targets to offset losses, abut a decrease with hard targets. I include the variable *Biased Intervention*. I also include the variable *Regional Peacekeeping* to control for the presence of regional peacekeeping forces in a civil conflict.

Lastly, I control for several country-level factors that might influence the target preferences of terrorist attacks, *Population*, *Adverse Terrain* and *Country-Size*. I expect that the more extensive the country is in size and the more adverse the terrain, the more likely rebel groups are to target hard targets. I expect these variables to be associated with a decrease in the proportion of attacks against soft targets since UN peacekeepers will be inclined to concentrate their efforts in urban areas due to the challenges associated with restricted terrain and difficulty in projecting forces. Attacking hard targets increases cost benefits since the terrain favors the insurgent's ability to stage attacks and establish a base of operations using natural obstacles. I also include a measure of gross domestic product per capita (*GDP*) to account for overall state capacity. I expect this to be associated with higher attacks against soft targets since the state will emphasize its counterterrorism efforts to protect vital hard targets, especially given UN peacekeepers will concentrate their efforts around soft targets to protect and prevent civilians from attacks. Listed in Table 3.2 are the descriptive statistics associated with each variable used in the empirical analysis that follows.

[47] It is important to note that the model performs in the expected direction without taking the logarithmic value of *Battle Deaths* $_{t-1}$. In cases where there is more than one rebel group that the government is fighting within a country, I take the sum of total battle-related deaths between concurrent rebel-government dyads in each given month.

Table 3.2 Descriptive Statistics

Variable	Min	Max	Mean	Median	Observations
Terror Attacks Soft Targets (Count)	0	56	1.29	0	2311
Terror Attacks Hard Targets (Count)	0	48	1.27	0	2311
Terror Attacks (Count)	0	63	2.17	0	2311
Terrorist Attacks (Fatalities)	0	1401	12.61	0	2311
Terrorist Attacks (Binary)	0	1	0.42	0	2311
Terror Tactics (Count)	0	6	0.90	1	2311
UN Troops (*t* -1)	0	29.21	0.83	0	2311
UN Police (*t* -1)	0	2.74	0.07	0	2311
UN Observers (*t* -1)	0	1.04	0.030	0	2311
Ceasefire	0	1	0.41	0	2311
Rebel Strength	1	5	2.34	2	2311
No. of Rebel Groups	1	17	3.81	3	2311
Biased Intervention	0	1	0.18	0	2311
Battle Deaths (*t* -1)(ln)	0	7.81	1.75	0.69	2311
Population (ln)	6.32	11.87	9.56	9.42	2311
GDP per capita ($US)(ln)	5.32	8.49	7.04	7.04	2311
UNSC Agreement	0	1	0.03	0	2311
Regional PKO	0	1	0.16	0	2311
Country Size (ln) (sq km)	7.71	14.68	12.96	13.82	2311
Adverse Terrain (% Forest)	0	.68	0.19	0.12	2311

3.4 Results

To examine my conjectures regarding the relationship between UN peacekeeping operations and insurgent attacks against soft and hard targets, I employ a negative binomial regression to my hypotheses. Figure 3.2 illustrates the results from each model regarding attacks against soft targets (a) and hard targets (b).[48] The results lend mix support to my hypotheses. The positive and statistically significant coefficient for *UN Troops* suggests increases in UN troops during intrastate conflict results in increased attacks against both soft and hard targets. *UN Police* coefficient is negative and statistically significant, which suggests that increases in UN police during active

[48] It is important to note that the code used to illustrate the majority of figures in this manuscript was adapted and derived from Minhas and Radford (2017). I further owe an immense amount of gratitude to Dr. Minhas for his training in quantitative analysis at Michigan State University. His transparency of code and willingness to share contributed significantly to my ability to convey results and conduct rigorous empirical work. His class provided an in-depth understanding of programming and how to display results in meaningful, transparent ways.

intrastate conflict results in a lower frequency of attacks against soft and hard targets, which does not fully support my main hypotheses. The increase of UN troops implies that UN troops incentivize groups to employ irregular tactics, particularly as armed actors lose the ability to contest on the battlefield, consistent with chapter 2. However, the target preferences do not necessarily vary once an insurgent group engages in such attacks

All other variables are generally in the expected direction. In Figure 3.2a, we see *UN Military Observers* leads to a decrease in attacks against soft targets. This result may suggest political costs as a mechanism in dissuading insurgent groups' target preferences as such attacks would lead to negative perceptions from international actors. Such negative perceptions would risk deteriorating international support or even limiting opportunities to be invited to the negotiating table. *Rebel Strength* and *Number of Rebel Groups* are null. Increases in *Battlefield Violence* result in increases in attacks against soft targets, but not hard targets. This result is in line with existing research that armed actors who experience setbacks on the battlefield, turn to alternative means of warfare (Hultman, 2007).

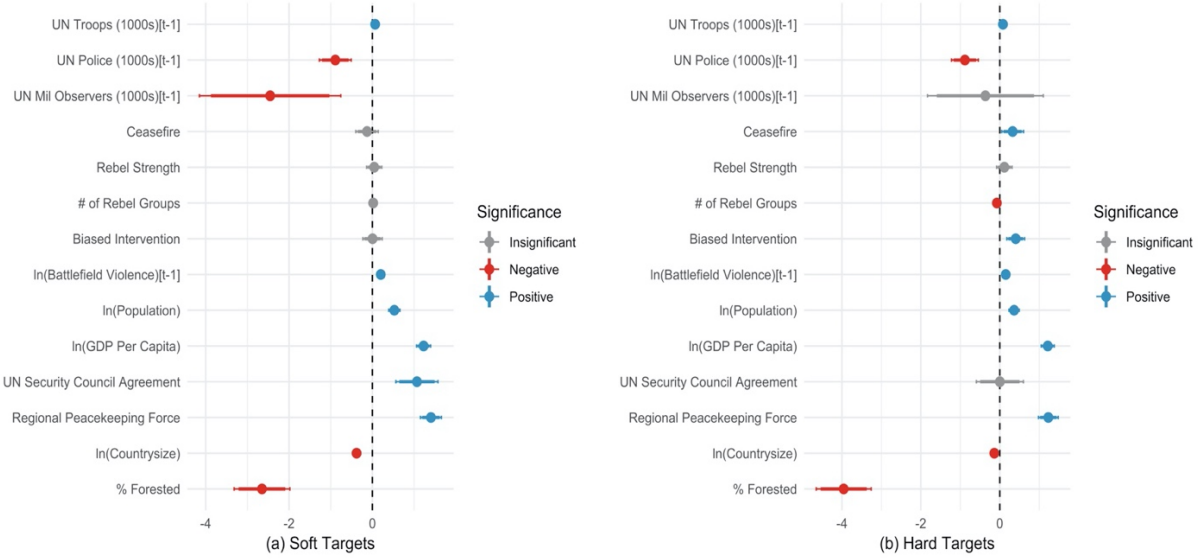


Figure 3.2 Regression results using (a) soft targets (left) and (b) hard targets (right) for dependent variable. Darker colors indicate that the coefficient estimate is significantly different from zero at a 95% CI, while lighter the same for a 90% CI. Grey indicates that the estimate is not significantly different from zero at either of those intervals.

To ensure that *UN Troops* parameter estimates are robust to changes in the sample, I again run a six-fold cross-validation (Figure 3.3). In order to conduct cross-validation on the parameters, *UN Troops*, I randomly split the 28 country observations into six approximately equal subsets. As a result, each subset contains at minimum 230 observations and at most 465 cases. I then run each model (displayed in Figure 3.3a and 3.3b) six times, where I estimate the model on *d*-1 folds. The results are generally favorable, as the parameter remains relatively stable and consistent across any exclusion of a fold. This parameter stability suggests that structures in the data are not resulting in any significant concerns to parameter estimates. The higher average value of Fold C might be stem from the randomly assigned countries, which might include instances of greater variance in attacks.

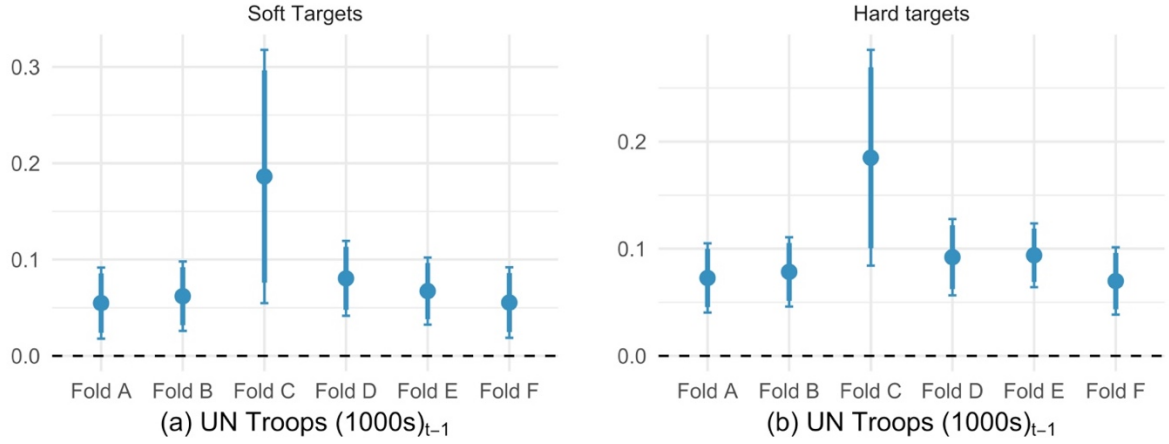


Figure 3.3 Each line here in the left panel (a) shows the coefficient estimate of *UN Troops* from re-examining Model 1 on six random subsamples within the dataset. Panel (b), displayed on the right, shows the same for *UN Troops*, but with attacks against hard targets.

While the statistical results provide evidence about the relationship between peacekeeping and target preference of armed actors, the estimates do not necessarily tell us whether effects are substantively meaningful in the broader context. What is the magnitude of UN peacekeeping forces as it increases in size on the frequency of terror attacks across targets? To evaluate this substantive effect, I turn to a simulation-based analysis to assess the substantive significance of *UN Troops* on

the number of terrorist attacks against soft targets and hard targets during an intrastate conflict (Figure 3.4).

Using estimates from Model 1 (Figure 3.2a) and Model 2 (Figure 3.2b), I simulate a scenario in which *UN Troops* varies from its minimum to maximum while holding all of the other parameters at either mean or median values. I then conduct 1,000 random draws from a multivariate normal distribution to obtain a distribution of point estimates for each regression coefficient. Lastly, I matrix multiply the draws from the multivariate normal with the transposed scenario matrix to obtain the predicted count of terrorist attacks across the range of *UN Troops, UN Police*, and *UN Observers*, simulating across all possible values.

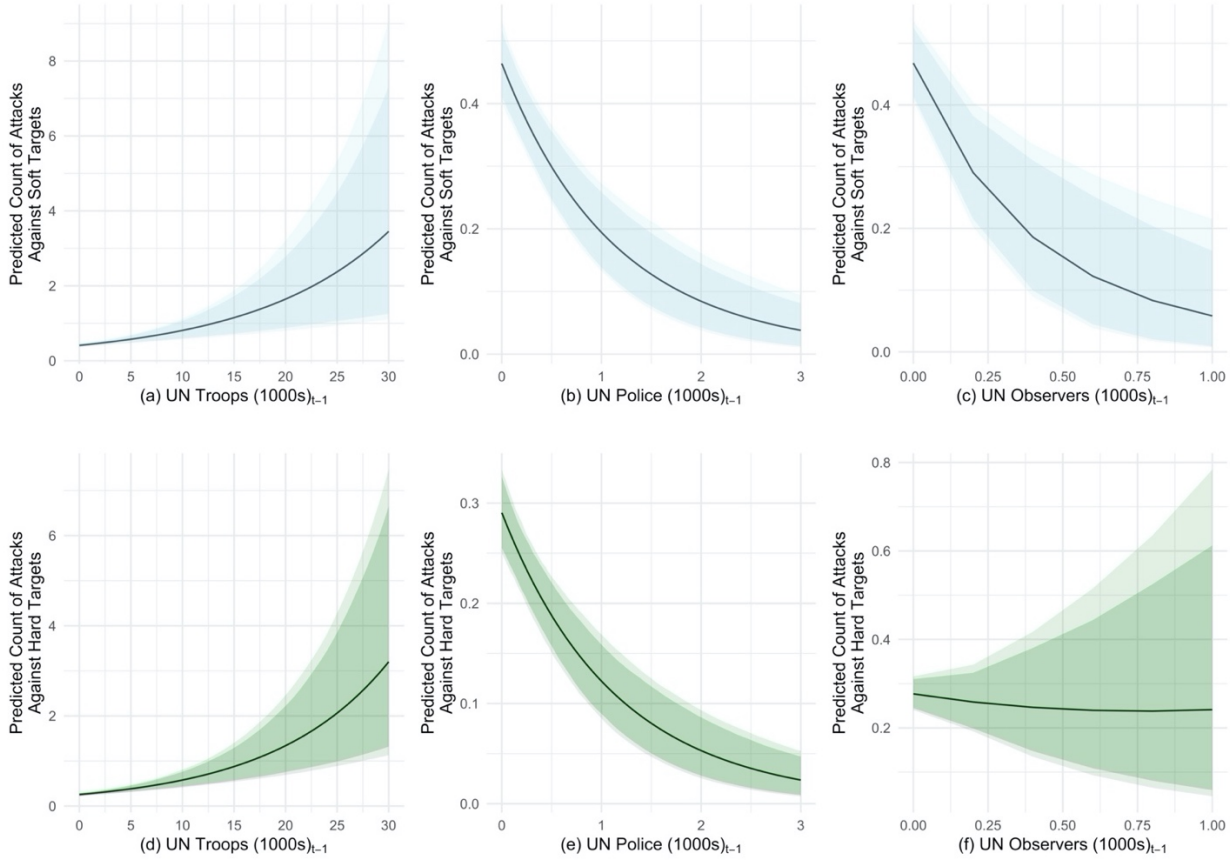


Figure 3.4 Predicted count of terrorist attacks against soft targets (light blue) and hard targets (forest green) as UN military troops, UN police, and UN observers increases in size (monthly) based on scenarios where all variables are at either their mean or median values. The 90 percent interval of each distribution is shaded in dark color and 95 percent in a lighter color.

As expected, the analysis shown in Figure 3.4 displays the substantive effects: as the number of UN military troops increases in a country embroiled with an intrastate conflict, there is an increase of terror attacks against both soft and hard targets in the country. This is inconsistent with my hypothesis in that UN troops should decrease attacks against soft targets, but consistent with my hypothesis that attacks will increase against hard targets. Increases in UN police reduce the predicted number of attacks against both soft and hard targets, which may speak to the effectiveness of UN police in protecting civilians and mitigating conditions favorable for terrorism behind the front lines. UN Observers leads to a decrease in attacks against soft targets, but is null with respect to hard targets. This could potentially highlight that notion that armed actors care about their international legitimacy and thus will limit number of attacks against soft targets in favor of more 'legitmate' hard targets. There appears to be a large amount of inferential uncertainty with UN peacekeeping missions containing a considerable amount of military and police personnel, which may stem from the fact that there are few observations with such large personnel commitments.

3.4.a Robustness

As a form of robustness, I examine the models using a zero-inflated negative binomial (ZINB). The ZINB allows us to address excess zeroes that are not at risk and overdispersion of our outcome variable.[49] This technique allows us to separate cases at risk and not at risk - or in the context of terrorism, observations that essentially has zero probability of experiencing terror attacks and locations at risk of experiencing an attack but might result in a zero count, thereby allowing us to better account for unique structures in the data. I provide the results in Table 3.3. Since I am

[49] I discuss the benefits in greater detail in the following chapter.

interested in the count of attacks against a specific type of target, I focus my interpretation of the results in the count stage – the portion of the equation using the negative binomial.[50]

Table 3.3 Effect of peacekeeping personnel on terrorism in civil conflict, using ZINB 1992-2011

Variable	Model 3 – Soft Target		Model 4 – Hard Target	
	Count Stage	*Inflation Stage*	*Count Stage*	*Inflation Stage*
UN Troops (*t* -1)	**0.056****	**0.121***	**0.032†**	-0.027
	(0.021)	**(0.060)**	**(0.017)**	(0.042)
UN Police (*t* -1)	**-0.671*****	**-108.005†**	-0.255	-1.788
	(0.193)	**(63.848)**	(0.156)	(8.405)
UN Observers (*t* -1)	**-4.663*****	-7.490	**-3.101*****	**-11.284****
	(0.867)	(7.639)	**(0.714)**	**(3.946)**
Ceasefire	0.051	**2.069†**	**1.118*****	**2.968*****
	(0.170)	**(0.770)**	**(0.201)**	**(0.585)**
Rebel Strength	**0.264***	-0.284 (0.337)	**0.383***	-0.277
	(0.133)		**(0.174)**	(0.336)
No. of Rebel Groups	-0.022	0.036	**-0.207*****	**-0.679*****
	(0.024)	(0.356)	**(0.026)**	**(0.134)**
Biased Intervention	**-0.358***	-1.137 (0.880)	0.241	**0.914†**
	(0.145)		(0.173)	**(0.494)**
Battle Deaths (*t* -1) (ln)	**0.147*****	**-0.241****	**0.051***	**-0.284*****
	(0.022)	**(0.087)**	**(0.024)**	**(0.067)**
Population (ln)	**0.452*****	-0.431 (0.411)	**0.210***	**-0.522***
	(0.085)		**(0.097)**	**(0.238)**
GDP per capita ($ US) (ln)	**1.770*****	**3.159*****	**1.843*****	**1.242****
	(1.022)	**(0.953)**	**(0.098)**	**(0.379)**
UNSC Agreement	**0.793†**	0.344	-0.486	-0.321
	(0.286)	(0.932)	(0.355)	(0.899)
Regional PKO	**1.736*****	**1.700****	**1.344*****	**0.869†**
	(0.160)	**(0.570)**	**(0.152)**	**(0.454)**
Country Size (ln) (sq km)	**-0.618*****	**9.145*****	**-0.389*****	**-0.533****
	(0.057)	**(2.290)**	**(0.066)**	**(0.179)**
Adverse Terrain (% Forested)	**-1.463*****	**20.621*****	**-3.192*****	**1.859†**
	(0.436)	**(3.901)**	**(0.517)**	**(1.122)**
Observations	2311		2311	
AIC	5110.12		4358.49	

† p <0.10, * p<0.05, ** p<0.01, *** p<0.001

Note: Standard errors reported in the parentheses. Blue color added to emphasize UN peacekeeping variables.

Interestingly, the ZINB models yield similar results to the negative binomial. In the count stages of both Models 3 and 4, there is a statistically significant increase in attacks against soft and hard targets with an increase in UN peacekeeping troops. This suggests statistical evidence in support of

[50] The author acknowledges that examining a binary measure of the both soft and hard targets would be of interest to readers. However, I instead focus attention broadly on the count of attacks as I proceed with increased detail in the following chapter. I also extend the analysis in this chapter by examining the number of tactics employed.

my first hypothesis, but not the second. The remaining controls yield similar expected directions. Given the similarity of these results, the findings could possibly influenced by country-level indicators, where local mechanisms are not adequately captured at this level of aggregation. In the following chapter, I examine more closely the causal mechanisms that this chapter posits, however, empirically test them at much more granulated level using spatial analysis.

3.5 Does Tactical Diversity Matter?

While target preference may matter for rebel groups, how attacks are delivered may also be important to understanding rebel behavior and effects of UN peacekeeping. As an extension, I briefly examine whether or not UN peacekeeping operations influences the tactical choices during armed conflict. Recent literature demonstrates that militant organizations diversify tactical choice when operating in an environment of increased risk and exposure to high costs (Horowitz et al., 2018). There exist several tactical advantages to using multiple tactics to deliver attacks against a desired target. By using multiple tactics to carry out attacks, insurgent groups can create confusion and make it increasingly difficult for the opposition (or in this case UN PKO) to predict (Horowitz et al., 2018). Increased tactical options also provide the organization with the flexibility to pursue multiple options that might be less costly to carry out given conditions on the ground. This improved flexibility increases the likelihood of an attack's success and creates new vulnerabilities that armed actors either adapt in response, acquiesce, or fall in defeat.

I expect rebel groups to also increase the diversification of their tactics in response to the evolving operational environment influenced by a UN PKO. As the number of UN peacekeepers increases, the ability of UN PKOs to defend population centers also improves. This location centric hypothesis is examined more closely in the following chapter. However, such an increase in blue helmets requires groups to adapt and expand their arsenal. Horowitz et al. (2018, p.139) suggest, "Violent nonstate actors rely on tactical diversity to reduce the predictability of their actions, forcing

states to spread their defensive capabilities thin. It is therefore a key component of asymmetric conflict because it helps militants overcome disadvantages in terms of resources and personnel." I argue that the diversification of tactics is vital to mitigating organizational risk from an often superior in numbers and equipment peacekeeping force. Thus, if rebels can diversify their tactics that results in the UN stretching the deployment of personnel to combat such threats, then rebels are able to overcome this relative disadvantage imposed by peacekeepers. Doctrinally, the UN considers this where in the UN Infantry Battalion Manual (2012, p, 94) emphasizes this consideration in the deployment of operational bases, "A balance should be kept between an excessive dispersal of peacekeeping forces and operation bases and a concentration of troops on larges bases in order to ensure the security of all battalion assets." This creates gaps and new vulnerabilities that rebel groups can subsequently seek to exploit if tactical diversification helps level the playing field.

The more comprehensive array of tactics also undercuts peacekeeping operations. UN peacekeeping operations are primarily defensive in nature, and thus limited in ways in which the mission can successfully defend areas and respond to threats. This defensive posture is inherently problematic since the UN has emphasized that it will *not* undertake military counter-terrorism operations, as noted by the High-Level Panel on Peace Operations.[51] This effect may also be particularly acute since a UN mission is typically diverse in terms of Troop Committing Countries (TCCs). The more diverse the mission, the more difficult it inherently may be to respond to such tactics as an increased bureaucracy creates more complexity and coordination challenges. To gauge qualitatively this relationship, Figure 3.5 illustrates tactical choice and the presence of a UN peacekeeping mission. On average, there appears to be a general increase in tactics as the number of

[51] For more information regarding the United Nation's High-Level Panel on Peace Operations see an information note produced by the UN, dated 16 June 2015, at the following: http://www.un.org/undpa/en/speeches-statements/16062015/HIPPO-report

UN troops increase in size – as expected. In contexts with large peacekeeping operations, there is a higher average number of tactics employed than in situations with no troops.

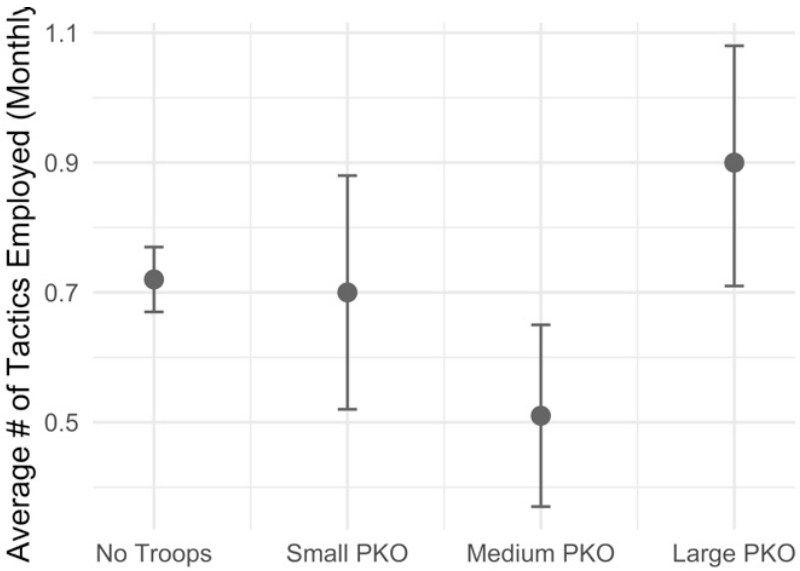


Figure 3.5 The average number of (terrorist) tactics employed during an active civil conflict with respect to the presence and size of a UN peacekeeping mission.

This is because in the absence of such pressure, armed actors might have little reason to make such significant changes that might incur organizational risk prematurely or unnecessarily. As Horowitz et al. (2018) suggest, groups looking to expand their tactical arsenal might spread themselves too thin, which creates organizational vulnerability in exercising effective mission command or even risks failure as a result of using less trained tactics. Such failure can downcast the group's legitimacy and dissuade popular support from those that they seek or require to win (Horowitz et al., 2018). This theoretical development leads the following causal claim that suggests tactical diversification is likely to occur as the number of UN peacekeeping troops increases in size:

Hypothesis 3: As the number of UN peacekeeping troops increases in size, there is an increase in the diversification in tactics.

To measure tactical diversity, my outcome variable, I examine how many different ways insurgent groups carry out their attacks (i.e., armed assault, arson, bombings, hostage-taking, facility, and infrastructure attacks). This variable is coded from GTD (Start, 2013). I analyze this relationship using a negative binomial regression, where the results are presented in Figure 3.6. The findings lend support to my hypothesis: *UN Troops* is positive and statistically significant, implying that increases in *UN Troops* lead to increases in groups expanding their tactical diversity. *UN Police* is negative and statistically significant, suggesting that increasing personnel of UN police decreases militant tactical diversification. This decrease in tactical diversification may arise from the fact that UN police are often limited in their response efforts to conventional tactics and thus serves no need to necessarily diverse terrorist tactics – particularly if *UN Police* are effective at disrupting and preventing attacks as the previous analysis suggests. This finding is also similar to *UN Observers*. *Rebel Strength*, *Biased Intervention*, *Population*, *GDP per Capita*, and *UN Security Council Resolution* lead to the diversity of militant's tactical portfolio. Interestingly, *Adverse Terrain* leads to a decrease in tactic expansion. The adverse may be indicative of a group focusing on mainly guerilla warfare as densely forested areas provide insurgents a safe haven – making the "war of the flea" the modus operandi.

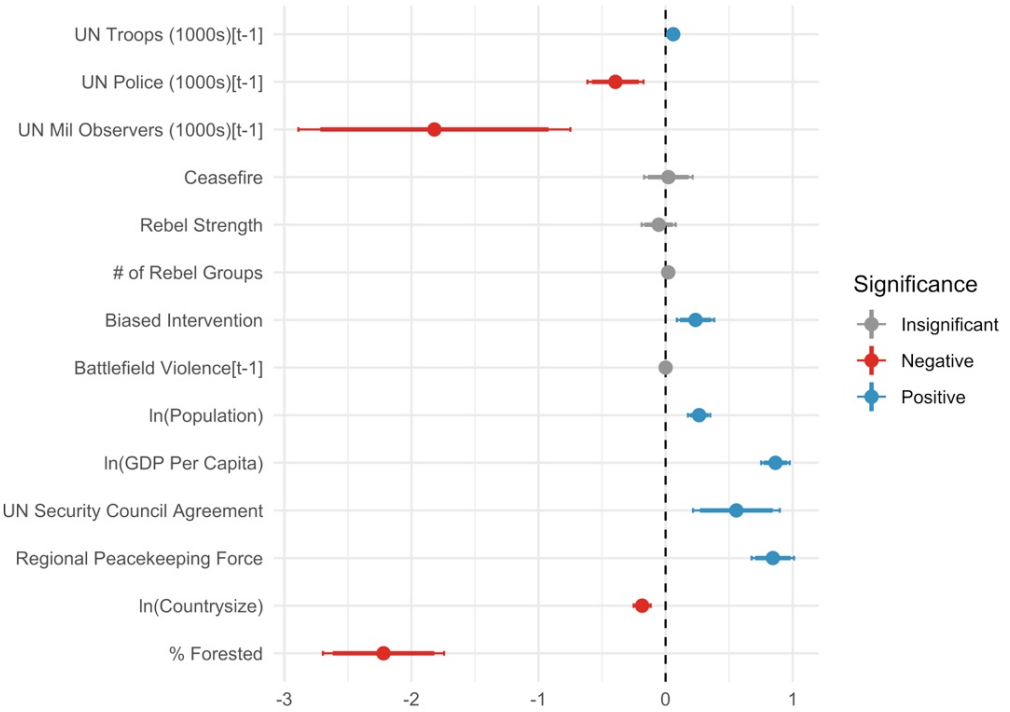


Figure 3.6 Regression results using a count of tactics for the response variable. Darker colors indicate that the coefficient estimate is significantly different from zero at a 95% CI, while lighter the same for a 90% CI. Grey indicates that the estimate is not significantly different from zero at either of those intervals.

I also examine the substantive effects of this relationship using a similar simulation-based method as previously employed. The substantive effects are graphically represented in Figure 3.7. The results of the post-estimation lend credible support to my hypothesis that as the number of UN troops increase in size, non-state actors diversify their tactics when engaging in terror attacks. The increase tactical diversification increases the difficulty for UN peacekeepers to effectively respond to violence. As Horowitz et al. (2018, p. 143) state, "more varied threats therefore require more complex, costly, and coordinated response…" and expands the number of targets that a state [or PKO] must defend and the ways in which it must defend them."

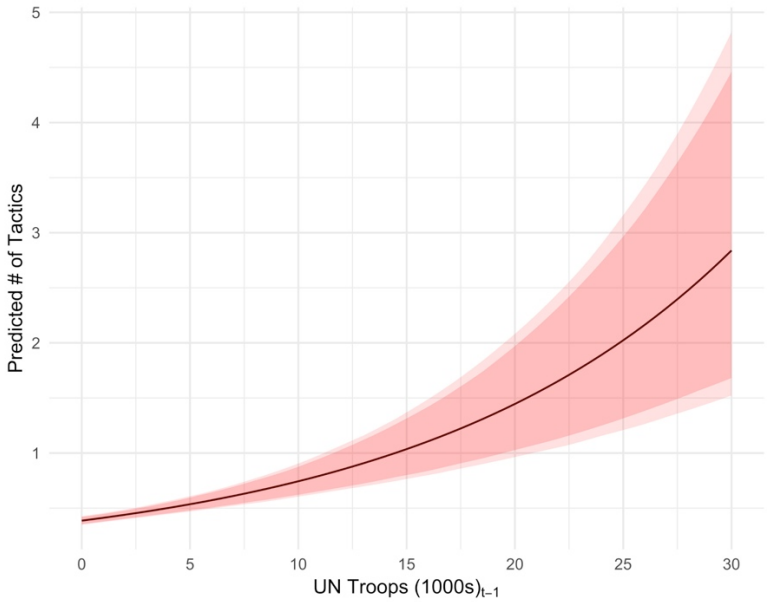


Figure 3.7 Predicted number of tactics employed as UN military troops increases in size (monthly) based on scenarios where all variables are at either their mean or median values. The 90 percent interval of each distribution is shaded in dark red and the 95 percent in a lighter red color.

3.6 Discussion

Some studies have discussed the implications arising from peace enforcement missions and terrorism during civil war (Karlsrud, 2015). However, this study provides one of the first quantitative analyses that examines the general trend of UN peacekeeping operations and terrorism during intrastate conflict. It expands on earlier insights in the peacekeeping literature by examining in greater depth the target preferences and tactical diversity that insurgent organizations consider in the context of conflict. The results shed light on the broad dynamics of targeting and tactical choice when peacekeepers intervene during civil war. The findings suggest that when UN military peacekeepers intervene during civil war, and respectively increase in size, there is an associated increase in attacks against both soft and hard targets. Positively, UN police are associated with a decrease in attacks against both types of targets. Concerning tactical diversity, the results further suggest that groups increase the diversification of their tactics, particularly with increases of UN military troops. UN Police is associated with a decrease in tactical expansion. While the study

provides initial insights to this relationship, further analysis is required to address in greater detail why rebel groups would ever risk such extreme tactics given the costly implications incurred militarily from PKO and politically, both domestically and internationally.

The benefit of the macro-focus of this study is that it allows us to generally understand broad trends of violence concerning the overall UN peacekeeping mission. However, as a consequence, it risks overlooking the conflict dynamics at the local level. It assumes that larger UN peacekeeping missions are better able to deploy forces to at-risk areas in order to protect civilians and deter/prevent armed actor violence. This illustrates that location of UN troops might affect the type of target non-states actors might attack. Thus, one possible extension would be to examine this relationship at a micro-level analysis. Recent studies such as Ruggeri et al. (2016 and 2017), Di Salvatore (2018), and Fjelde et al. (2019) utilize geo-reference conflict and peacekeeping data in their studies. However, these previous studies do not examine terrorism nor differentiate between types of targets being engaged by armed actors and protected by blue helmets. Nevertheless, leveraging such burgeoning data might help us accurately understand the intricate relationship between UN peacekeeping and the employment of violence and under what conditions peacekeeping reduces specific forms of violence during intrastate conflict.

CHAPTER 4

PEACEKEEPING DURING TIME AND PLACE OF TERROR: A SPATIAL ANALYSIS

"If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."

- Sun Tzu

The previous two chapters provided the theoretical backbone to understanding the propensity for non-state actors to increase their use of terrorism during civil war give UN peacekeeping intervention. Chapter 2 empirically finds that terror attacks increase in frequency when UN military troops increase in size during active armed conflict. This result occurs by way of two mechanisms: UN PKO ability to limit opportunity and increased costs for conventional warfare. Chapter 3 extends off that finding by examining in greater detail target type and provides theory and empirical evidence to understand the target selection and tactical choice when conducting terror tactics in the midst of 'blue helmets'.

However, these chapters are limited to a macro-level analysis that ostensibly traces a theory grounded on localized mechanisms using monthly, cross-national data. A crucial assumption to the macro theory is that UN peacekeeping personnel correlates to the UN PKO's coercive capacity and ability to effectively reduce rebel violence across time and the conflict's space. These analyses do not take into account subnational variation across the conflict landscape. The danger posed from using this higher-level of aggregation when trying to explain local level phenomena is the susceptibility to ecological fallacy (as noted in Buhaug and Lujala, 2005 and Powers et al., 2017). For instance, violence could be occurring in part of the country where no peacekeepers are to be found thus unable to effectively impose direct costs, yet at the aggregate-level the correlate would suggest otherwise. This can be further be problematic in that many accounts of civil war suggest violence is

a local phenomenon that is often unrelated to the conflict's master cleavage (Kalyvas, 2006). Thus, if UN peacekeeping intervene due to the broad mandate, it may overlook destabilizing violence occurring at the local level unrelated to master narrative.

Therefore, to rigorously test and gauge the nuance of these inferences, this chapter leverages recently published sub-national data on UN peacekeeping to isolate peacekeeping mechanisms and effects with much more granularity (Fjelde et al., 2019). I find that non-state actors increase attacks against hard targets in a given space and time when there is a higher number of UN troops in that given location. This effect was less apparent when examining attacks against soft targets, where the number of UN troops in a cell was null. It did, however, find encouraging results when using the spatial lag of the number of UN troops in proximate cells, there is an associated decrease in attacks against soft targets. A positive and insightful observation that implies UN peacekeepers are effectively deterring attacks against civilians and vulnerable locations, when forces can leverage the collective effect across a greater space.

Figure 4.1 provides a cursory illustration of the relationship at the localized level, displaying the average number of peacekeeping forces (contrasting blue) and the presence of a terror attack (black crosses) in a given grid cell. Notice that small deployment of troops to a county does not necessarily imply the ability to project forces equally across the conflict space. There exists considerable heterogeneity across the space and time, one that is not readily accounted for in higher levels of aggregation. It also illustrates an overlap of terror attacks and presence of UN peacekeepers, suggesting a possible spatial and temporal relationship. We can observe cells with a shade of blue and crosses, which indicates a presence of a terror attack given the presence of peacekeepers.

The contribution of this chapter is threefold. First, this chapter, while largely empirical, further develops our theoretical understanding of how peacekeeping shapes armed groups' preferences for one type of violence over another and the subsequent selection of targets. My argument is that the

decision to engage in terrorist tactics is mostly a function of the capacity of peacekeepers to reduce battlefield violence. This function is measured by the physical military presence in a geographical location at a given time. I make the assumption that this physical military presence corresponds to coercive mechanisms such as compellence, deterrence, defense, and surveillance, which in turn shapes armed actor behavior. It further supports the notion that the presence and capacity of UN peacekeepers limits opportunity and increases costs for different forms of violence. Beyond the tactic employed, these mechanisms affect the target preference due to military and political costs associated with the type of target, that is whether or not it is a 'soft' or 'hard' target.

Second, this chapter utilizes spatially and temporally disaggregated data, which allows us isolate the mechanisms at work and accurately test the causal theory under rigorous empirical scrutiny. As recent studies illustrate, UN peacekeeping operations exhibit a high degree of spatial heterogeneity (Fjelde et al. 2019; Cil et al. 2019). These critical micro-spatial dependencies between PKOs and armed actor behavior allow me to leverage the variation, which as Fjelde et al. (2019) state is often the noise masked in higher levels of aggregation.

Lastly, the practicality of this study contributes to improving and preparing UN forces for the menu of violence that 'blue helmets' often encounter on the frontlines of the battlefield. Warring actors are smart and adaptive. The operating environment is complex and dynamic, which makes it increasingly difficult to predict the outcome of armed actors' actions at any given moment in time and space. The High-Level Independent Panel on Peace Operations (HIPPO) recognizes the complexity of the war-torn landscape and preemptively recognizes the need to address capability shortfalls that might otherwise be exposed by armed actors (Howard, 2019). Nevertheless, the theoretical framework and empirical findings of this chapter, at minimum, provide a cursory justification for ensuring 'blue helmets' can appropriately apply ways and means toward achievable ends in difficult security circumstances. UN deployment decisions amid the crucible of combat

require greater flexibility and adaptive policies to ensure the security of civilians and the achievable state of conflict resolution without the "Achilles heel" being exposed.

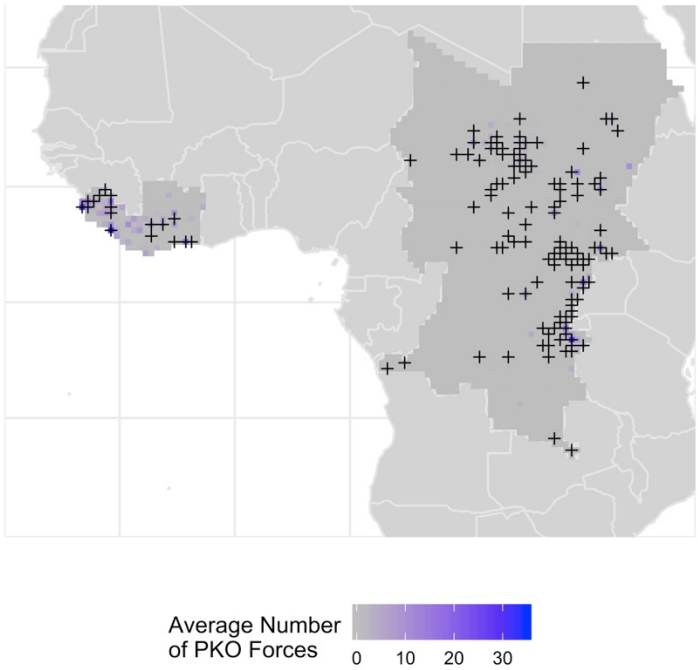


Figure 4.1 Average number UN peacekeeping troops (blue) and terror attacks (black crosses) in given grid between 2000-2011.

4.1 Measures of UN Peacekeeping

As well-established in the previous chapters, many studies agree that UN peacekeeping is generally effective at fulfilling its fundamental task in improving cooperation among armed actors and keeping peace in the aftermath of armed conflict (Doyle and Sambanis, 2006; Fortna, 2004a, 2004b, 2008; Gilligan and Sergenti, 2008; Hartzell et al., 2001; Hultman et al., 2013; Walter, 1997). Some scholars find that UN peacekeeping is effective at reducing conflict diffusion (Beardsley and Gleditsch, 2015). Ruggeri et al. (2013) find that the presence of UN troops increases trust and cooperation between armed actors, thus providing the conditions necessary for conflict resolution. However, these studies generally focus on the macro-level of analysis, thereby making broad assumptions of UN peacekeeping intervention across time and space.

Several recent studies examine the immediate influence of UN PKOs on conflict dynamics during the intrastate conflict. Ruggeri et al. (2017) find at the subnational level that UN peacekeepers reduced the duration of conflict when peacekeepers deployed to conflict-prone locations. Hultman et al. (2014) find that when UN PKOs intervene in a conflict, they are effective at reducing battlefield hostilities during armed conflict, suggesting that an increase in UN military troops leads to a decrease in battlefield fatalities. However, recent studies have examined the closer the effect of UN peacekeeping on one-side violence during civil conflict.

It is important to note that the depth and breadth of data of peacekeeping measures have developed significantly since earlier published findings. While such reliance on rudimentary measures may be attributed to insufficient data availability and strenuous data collection requirements, it is nonetheless essential to highlight the implications of using a binary measure of PKOs. One such implication is that dichotomous measures of PKOs result in observed outcomes being primarily driven by the features of the conflict and characteristics of country rather than the unique characteristics of the PKO mission itself (Hultman et al., 2013, 2014, 2015; Ruggeri et al., 2012). By employing a binary measure, empirical studies overlook considerably the variation that exists within and across PKOs. The immediate effectiveness of UN PKO on violence using a dichotomous, country-year measure such measures overlook the dynamic relationship that exists between PKO and violence that often occurs at the monthly level. Recent insights from Hultman et al. (2013, 2014) underscore this implication and stress the importance of accounting for heterogeneity across and within UN PKOs by using a more disaggregated data.

Hultman et al. (2013, 2014) argue that UN peacekeeping should not be considered as a discrete treatment in empirical models, as previous studies assume. In their respective studies, the authors demonstrate that UN peacekeeping operations differ significantly from one another in terms of their size and composition – highlighting the heterogeneity that exists across and within peacekeeping

operations. Missions vary considerably in terms of size and constitution, particularly across time. Haas and Ansorg (2018) further add that beyond the size of a mission, troop quality - measured in the share of troops from countries with high-quality militaries - are better able to deter violence from state and non-state actors and create buffer zones, extend their efforts to peripheral locations, and exert superior capability. Therefore, if scholars treat peacekeeping operations homogeneously, then empirical studies overlook how PKO missions differ from one another with regards to size and composition – in other words, the capacity and capability of UN PKOs to deter and prevent violence during conflict.

While such advancements in measuring PKO are noteworthy and have improved the accuracy in terms of reliability, validity, and precision, the advent of geo-referenced data, however, allows researchers to tease out with higher resolution the specific mechanisms that might be overlooked using cross-national (or conflict) data, at the monthly level. The conclusions derived from Hultman et al. (2013, 2014) suggest that when PKOs intervene that greater number of peacekeepers are able to reduce violence – finding military peacekeepers to be more effective than police or UN observers. While the previous studies stress the importance of accounting for heterogeneity across and within missions in terms of size and composition, the authors overlook the heterogeneity that exists at the micro-level. The authors' measure assumes a high degree of correlation between operational activity to the size and peacekeeping mission and assumes that the larger the deployment of peacekeepers, particularly military and police, the more capable the mission will be in executing its operational activities.[52] However, across civil conflicts, PKO activities may vary substantially, where violence and peacekeeping may, in fact, be highly localized, making the conflict or country-level analysis unsuitable for the study. It could be the case that violence is occurring in areas where no

[52] Operational activities in this sense consist of active patrolling, interceding warring parties, conducting DDR activities, mediating local disputes, making arrests, and providing humanitarian aid, among others.

peacekeepers deployed and that in areas where peacekeepers are present, there is little violence – lending support to their argument (Clayton, 2016). It could also be the case that violence has diffused or increased to other areas with no peacekeepers, which provides mixed evidence to their argument (Clayton, 2016). While it is important to understand conflict features such as violence intensity, the number of rebel groups, and country-level indicators such as GDP per capita and geographical features, by treating PKOs homogeneously using a dichotomous indicator, scholars risk overlooking vital information as to *how* and to *what* extent peacekeeping influences conflict processes. This problem raises the concern of a measure's accuracy and precision. In order to better understand this relationship, using a more disaggregated indicator might be more appropriate. Spatial analysis and geo-coded is a fruitful empirical avenue that can lend insights and triangulate our theoretical mechanisms.

4.1.a Does UN Peacekeeping Limit Local Violence?

As Ward and O'Loughlin comment in their introduction of the 2002 "Special Issue on Spatial Methods in Political Science" in *Political Analysis*, "virtually all social data are spatial in some sense" (p. 213). Since their remarks (and publication of the special issue), spatial analysis has not been so foreign to conflict studies. Researchers have embarked on extensive geo-data collection efforts - most notably the PRIO-GRID; Uppsala Conflict Data Program Global Events Data (UCDP GED); and more recent Armed Conflict Locations and Event Data (ACLED) – which have afforded the opportunity to investigate social science phenomenon from the spatial perspective.

Several prominent studies have leveraged this trough of data and examined civil conflict using spatial analysis and models. The pioneering results of many studies emphasize the importance of examining sub-national to (exploit) account for spatial interdependencies (Buhaug and Gates, 2002; Buhaug and Lujala, 2005; Buhaug and Rød, 2006; Raleigh and Hegre, 2009, and Weidmann, 2009). The groundwork of these studies emphasizes the critical point that using the "country-level"

indicators in cross-national quantitative studies is flawed given that such factors are localized phenomena that vary considerably across the spatial context such as terrain, population, natural resources, and ethnic group concentrations. Using a variety of geo-coded data and spatial analysis techniques, studies have been able to account for these dependencies and find various evidence of local determinants such population size and density, GDP per capita, mountainous terrain, proximity to the capital, natural resources, and ethnic concentration as explanations for conflict onset and violence intensity (Buhaug and Lujala, 2005; Buhaug and Rød, 2006; Raleigh and Hegre, 2009, and Weidmann, 2009). As such, using spatial techniques to analyze local phenomenon has become prevalent in the discipline, particularly as the availability of geo-coded conflict data becomes increasingly accessible. This disaggregated data has allowed conflict scholars to account for spatial dependencies, tease out mechanisms underpinning our theory, and, in line with the topic of this dissertation, examine the local relationship between UN peacekeeping and violence.

Many studies have evaluated peacekeeping effectiveness using spatial and temporally disaggregated data on peacekeeping and conflict (Costalli, 2013; Di Salvatore, 2018; Fjedle et al. 2019; Phayal, 2019; Powers et al, 2015; Ruggeri et al. 2016; Ruggeri et al. 2017; and Townsen and Reeder, 2014). Costalli (2013), for example, using geo-referenced data on peacekeeping activities finds that peacekeeping forces in Bosnia-Herzegovina deployed to the most violent areas during the conflict, but does not find evidence that peacekeeping reduced the overall level of violence in areas deployed. Townsen and Reeder (2014) extend their analysis to the African context and find similar results to Costalli (2013) – peacekeepers are more likely to deploy to known locations of battlefield engagements. They also found that peacekeepers located around population centers, international borders, and surface-based resources (Townsen and Reeder, 2014). However, the previous studies examine PKO within a single-country context, Bosnia-Herzegovina and Democratic Republic of the Congo (DRC), making the results difficult to generalize to other civil conflicts, which raises the

concern of external validity. Powers at al. (2015) extend beyond just a single case and examine the spatial relationship between peacekeeping and violence within the context of Angola, DRC, Ivory Coast, and Sierra Leone. The authors find evidence that PKOs are more likely to deploy to locations experiencing the most violent activity; however, peacekeepers require some time on the ground to materialize before deploying to "hot spots."

Ruggeri et al. (2016) further contributes to these results. The authors conduct an additional cross-country, subnational analysis where they also conclude with similar evidence to the previous studies: peacekeepers go where the conflict occurs, but there is a sizeable time delay in their deployment to those respective locations. In a follow-on analysis, Ruggeri et al. (2017) find that when local peacekeeping deployed to conflict-prone locations, conflict episodes last for shorter periods. However, the effect is less clear and robust concerning peacekeeping's effect on conflict onset. While using a geographically disaggregated measure yields considerable insights at local-level dynamics, evidence on the ability for peacekeeping to reduce and prevent conflict remained unclear.

Di Salvatore (2018), however, adds to the discussion as to whether peacekeeping operations (PKOs) actually reduce conflict and improve the situation on the ground. Using micro-data on the UN mission in Sierra Leone from 1997 to 2001, the author is able to demonstrate that UN troops reduce one-sided violence, but such mechanisms are conditional on the power asymmetries between warring actors. The study emphasizes the importance of considering local-level differences and factors among armed actors on the capacity and incentive to use violence. Such dynamics, she finds, inadvertently increase in escalation when peacekeepers intervene due to peacekeeping's coercive mechanisms.

These findings are further echoed by Phayal (2019), who examines the UN peacekeeping intervention, UNAMID, in Darfur. Using a single-case study, the author tests similar conjectures regarding UN peacekeeping coercive capacity on the ability to reduce civilians killing using an

original geo-coded data set of the Darfur region of Sudan. The author finds that the deployment of UN troops to a given location significantly reduces civilian fatalities committed by both government and rebel forces. Phayal (2019, p. 21) further adds, "deploying peacekeeping units restrains both government and rebel violence against civilians. Both the presence and size of the deployed peacekeeping units are found to have a positive effect of lowering killings in the area."

However, the recent findings of Fjedle et al. (2019) further our understanding through a rigorous data collection effort the expands upon the single case approach. Using disaggregated, local-level data on UN peacekeeping operations, the authors are able to systematically examine the localized effects of UN peacekeeping armed actors' propensity to commit one-sided violence. The authors are able to empirically demonstrate how the political and military costs imposed by UN peacekeepers on the ground influence belligerents targeting of civilians. Such coercion alters armed actor behavior: civilian targeting by rebel groups decreases as the number of UN troops increases in a given location but has no effect on one-sided violence perpetrated by the government. These findings all lend general empirical support for the recent advancements of peacekeeping reformations made by the UN.

Undoubtedly, the protection of civilians is often the first step toward building sustainable peace, underscored in the series of UN reports published in the early 2000s. The critical self-reports of the UN's failure in Rwanda and Srebrenica, the extensive report on "Responsibility to Protect," and the UN Brahimi Report all indicated that UN could and (must) do more to protect civilians during civil war (Howard, 2008, p. 311). Howard (2019) further adds, quoting portions of the Brahimi Report, "mandates should specify an operation's authority to use force…with better equipped [peacekeepers], able to be a credible deterrent (A/55/305, 21 August 2000, x)" (p. 197). Since the implementation of these reports, the previous disaggregated studies all generally lend support to the idea of peacekeeping being a credible deterrent and thereby reducing one-sided violence.

Moreover, the 2015 High-Level Independent Panel on Peace Operations (HIPPO) report further acknowledges the limits of UN forces and the potential that such limitations could be exposed (Howard, 2019). In light of such capability gaps, the Report, as quoted in Howard (2019, p. 197), asserts that "Different threats must be met with the appropriate use of military force, ranging from containment vie deterrence and coercion to direct confrontation… attackers [must] perceive and know United Nations troops have the determination and capabilities to respond forcefully in case of attack (A/70/95 17 June 2015, para. 128). Yet given this comment, the UN has not implemented the necessary changes to mandate provisions that authorizes UN peacekeepers to effectively contest such threats in the current operational environment, which is specifically highlights in chapters 2 and 3. Di Salvatore (2019) demonstrates different threats emanate unintentionally from UN peacekeeping intervention and that if these threats, specifically criminal violence in this regard, are not met with the appropriate force there can be unintended consequences despite the increase of well-armed UN troops. In her study, she finds that increases in UN military troops exacerbate conflict. Despite UN troops curbing the use of battlefield violence, mechanisms of UN peacekeeping inadvertently create opportunities for criminal violence to take root and intensify– a form of violence that is not readily considered in previous literature or prioritized in most recent UN mandates. Consistent with the HIPPO report, there is also growing concern of asymmetric warfare, specifically the use of terrorism - a threat underappreciated, widely acknowledged, but not fully understood.

This study, therefore, expands upon previous studies to examine much more closely this "different" threat. In what follows, I provide a brief discussion regarding the mechanisms that might influence armed actors to engage in terror tactics. It takes the starting point that insurgent tactics exhibit variation across both space and time. Crucial to understanding how conflicts are fought, and in this case, how peacekeeping influences armed behavior, is by gathering why tactics vary. While

admittedly, the theory that follows is drawn mainly from the previous chapters, it nests within the spatial perspective – that is, connecting coercive mechanisms of peacekeeping to localized effects on violence.

4.1.b UN Peacekeeping During Time and Place of Terror

As Howard (2019, p. 129) states, "Peacekeeping employs some aspects of coercive military power, but not all." Peacekeepers have the ability to deter attacks, defend themselves, and surveil – often through the operational activities of armed patrolling, establishing a buffer zone, and monitoring an area of operations. In what follows, I use a similar definition of coercion as Howard (2019, p. 131 where she defines "coercion as the act of using, or threatening to use, force in order gain compliance. An act of coercion occurs when a physically strong entity (e.g., person, government, or intergovernmental organization) changes the behavior of another party by means of threat of violence or deprivation of liberty." This coercive capacity - measured in the size of UN troops in a given space - is what shapes armed actor behavior and, what I argue, affects the preferences of armed actors to employ one form of violence over another. This preferential change stems from the coercive peacekeeping mechanisms that impose military and political costs on armed actors — this relation in turn effects the utility and, therefore, the preferences of armed behavior.

Following the general logic established in both Chapter 2 and the two types of costs as theorized by Fjelde et al. (2019) and used in Chapter 3, UN peacekeepers impose military and political costs on armed actor behavior. Through active, kinetic force such as armed patrolling and even static defensive positions, military peacekeepers can impose military costs on warring actors should armed actors decide to engage in conventional hostilities or systematic targeting civilians using one-sided violence.[53] UN peacekeepers can also impose direct political costs on armed actors in the form of

[53] Again, as Chapter 2 emphasizes, one-sided violence is conceptualized differently from terrorism. Similarly, this chapter holds true the same assumptions as previously applied in order to make the distinct difference between forms of

arrests, prosecution, condemnations, and sanctions. These political costs are often observable in UN troops determinately monitoring armed violence, arrests made by UN police, and international condemnations voiced by the UN. Coupled together, these costs influence the armed actor's behavior and, as such, affect the decision calculus of armed violence during civil war. Figure 4.2 summarizes this theoretical framework and the causal mechanisms regarding UN peacekeeping and violence. In what follows, I discuss in detail.

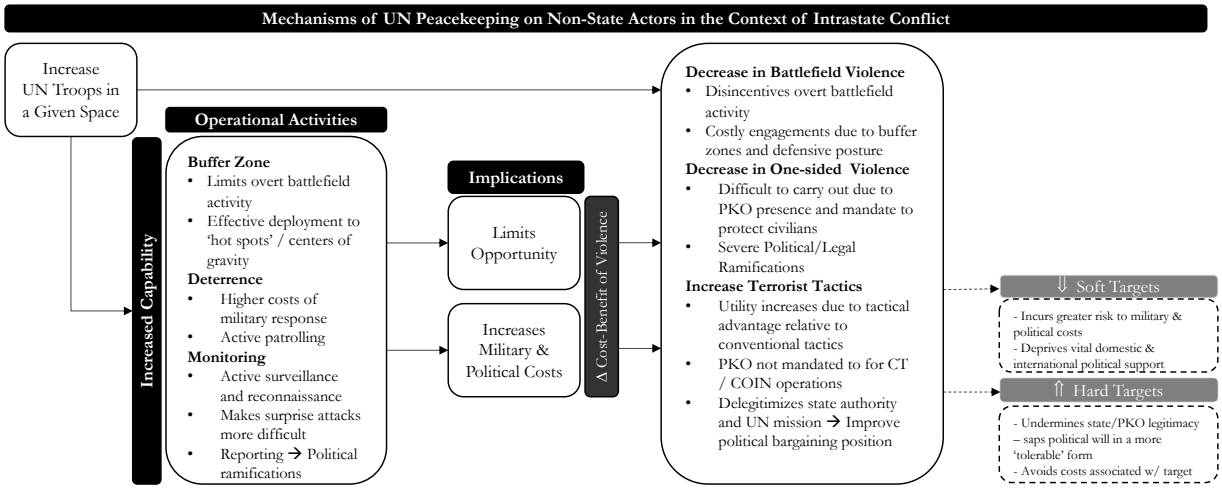


Figure 4.2 Logic Chart of the Expected Relationship between UN Peacekeeping and Violence in the Context of Intrastate Conflict.

As formulated in Chapters 2 and 3, UN peacekeeping operational activities (mechanisms of the coercion) influence armed actor behavior. Patrolling and actively monitoring the conflict space disincentives armed actors from using mostly conventional means of contestation. For instance, as described in chapter 2, the UN intervention in Mali (MINUSMA) carried out medium-range and long-range patrols across the broad sectors of the country and intensified military patrols along the porous border with Burkina Faso where terrorists seek safe haven and among key population centers (S/2017/271, 30 March 2017, para. 28). This type of peacekeeping activity, for example,

violence. While one-sided violence can undoubtedly be perceived as a form of terrorism, it is limited in the scope with regards to the broader definition.

limited the opportunity to engage in conventional style warfare, a common form of maneuver that distinguished the early stages of Malian conflict. The sanctuary of the porous border became limited, thereby affecting the freedom of maneuver and movement of non-state actors. This limitation arguably led warring actors to pursue alternative means, such as terror tactics. Returning to Mali, a UN Situation Report (S/2017/271, 30 March 2017, para. 27) stated, "improvised explosive devices continued to be the most frequent source of collateral damage to civilians, with armed forces being the intended target." This direct decrease in limiting opportunity shapes tactical decisions as to whether or not rebel groups should engage in direct combat.

Concurrent to the decrease in opportunity, armed actors face significant military and political costs, as briefly discussed and outlined in the previous chapter. These increased costs, along with the decrease in opportunity, reduce armed actor propensity to engage in conventional (or even guerilla-style) warfare – which I argue is the preferred tactic among warring actors due to the legitimacy of such fighting – and increase their adoption of terrorist tactics. As Hultman (2007) mentions, "When they perform poorly [or in this case unable to perform at all] on the battlefield, they must, therefore, consider alternative strategies to continue pressuring the government into concessions." Non-state actors are mindful of the tactics they employ, and it is because of this that rebel organizations often employ conventional means over other forms of violence. This tactical awareness is because, as Seth Jones (2016, p.81) reverberates in his book, *Waging Insurgent Warfare*:

> "In short, tactics are critical to insurgent warfare because they help groups execute their strategies and operations… insurgent groups still need to be mindful of how their tactics affect the local population. Tactics may not guarantee success, particularly in the absence of a good strategy. However, the poor use of tactics can undermine local support and potentially seal the fate of insurgent groups."

This observable implication due to costs associated with PKO activity is distinguishable when UN "blue helmets" have been effective in fulfilling their job and limiting the amount of battlefield activity. This effectiveness of UN troop's coercive ability, I argue, improves as the number of UN

troops increases in size in a respective space. This improved ability of peacekeepers incentivizes the preference for non-state actors to engage in terror tactics as the preferred tactic - conventional warfare - becomes largely untenable. These low-intensity attack's objective is to impose small but cumulative costs on state and UN forces.

Nevertheless, insurgents must importantly consider their use of terror tactics against the government and, in this case, the context of UN peacekeepers. Such adoption of extreme tactics comes with military and political costs as well. As postulated in Chapter 3, armed actors must consider their objectives when carrying out their terror tactics. As Jones (2016, p.77) further adds, "effective tactics tend to be those that exploit counterinsurgent vulnerabilities, decrease government legitimacy, strengthen insurgents, or bait the government into overreacting. Ineffective tactics tend to to…expose insurgent weakness." Attacks in this regard aim at targets that exploit the inability of state and peacekeeping force's ability to defend, which can boost the non-state actor's reputation and undermine the perceived effectiveness of UN intervention. Therefore, I expect insurgent's preference for targets also to be a function on UN troop's capacity to impose costs, where such costs are likely to be tied to discrete target preferences that armed actors consider.

UN troops are likely to position forces in the vicinity of government institutions, critical strategic resources (transportation networks (airports, roads, waterways), large cities, and vulnerable population centers, all general locations well-established among scholars and previous empirical, micro-level studies (Powers et al. 2015; Ruggeri et al 2016, 2017; Townsen and Reeder, 2014). Securing logistics nodes to include roads, waterways, and railways provides critical value in peacekeeping's ability to project troops. However, when UN troops can control movement, it limits belligerent's freedom of maneuver and incursions of battlefield hostilities. This limits the ability for armed groups to confront one another directly in contested spaces, which decreases the amount of battlefield violence. Moreover, the security of the local populace in areas of vulnerability is vital to

the stability of a local population and for setting conditions for a peaceful resolution. This physical positioning and deployment of UN troops, therefore, shapes targeting efforts against hard and soft targets (Reference Table 3.1 for typology).

While both types of objectives are inherently tied to costs, I argue that attacks against "soft" targets should be less prevalent to attack than "hard" targets in locations that increase in the number of UN troops. This preference is likely because as the number of UN troops increases in a given location, the costs associated with targeting businesses, civilians, and religious institutions (examples of soft targets) lead to both military and political repercussions that are far more costly relative to other target options. Armed actors are rational actors with specific political goals; therefore, it is expected that armed actors will consider such consequences when using various forms of violence and the recipient of such attacks. When armed actors use terror tactics against these soft targets, they risk direct military force in response – kinetic force that is often committed by better equipped UN troops. These military costs are increasingly expected due to UN peacekeeping mandates authorizing the use of direct military force to protect civilians. For instance, in addition to patrols, military troops can establish outposts to establish a presence over a large area. As listed in the Protection of Civilians Reference Guide (2013, p.98), "[outposts] provide surveillance, control activity at key areas, and monitor vulnerable populations"… and "are normally located at key locations such as hilltops, bridges, major thoroughfares, areas with potentially vulnerable civilians, or critical infrastructure." Naturally, some UN peacekeepers will be allocated to protect hard targets like critical infrastructure, but the majority will be allocated to protect defenseless civilians. Furthermore, if UN peacekeepers are likely to deploy to hot spot locations, areas of highest risk of threat to civilians, then we should expect the physical presence of UN troops in a given location to decrease attacks against soft targets. Soft targets, by the very nature are considerable most vulnerable to attack, will attract peacekeepers to ensure their safety. This in essence makes soft targets not so "soft" and less ideal to target given

military costs incurred from peacekeepers. As developed in the MINUSCA's protection of civilians strategy, robust action was taken in advance where mitigating measures were implemented to ensure a multidimensional response addressed risk and prevent violence in areas like Bangui, Berberati, Bria, and Paoua – all conflict-prone locations. This effect should further compound when UN troops can project across multiple areas where their deployment locations effectively nest their operational activity into adjacent locations.

Attacks against soft targets can also invite political ramifications. Non-state actor atrocities may undermine their respective leader's legitimacy in the political process, and also threaten rebel leaders with punitive measures such as arrest and imprisonment. For example, the UN mission in the Central African Republic, MINUSCA, successfully arrested the Lord Resistance's Army commander, Dominic Ongwen. His arrest and transfer to the International Criminal Courts will allow the first trial of an LRA commander (S/2018/611, 18 June 2018). The reputational costs in the manner of international support can be detrimental to the attainment of peace agreements and concessions. While attacks against soft targets are widely available and simpler to carry out in terms of logistics, the utility limits the fruitfulness of the desired political outcome.

However, attacks against "hard" targets, from the perspective of non-state actors, becomes a viable option. Taber (1965) wrote that insurgents might not have strong expectations of being able to contest control from the state - meaning most often, rebel groups are unlikely to directly challenge the state territorially. Instead, Taber argues insurgents often pursue a war of attrition, one that concentrates attacks that deprives popular support and brings the state to the negotiating table. In this vein, strikes against hard targets impose substantial costs that undermine the legitimacy of the government and peacekeeping force's ability to establish adequate wide-area security. Trinquier wrote in his classic, 1964 counterinsurgency book, *Modern Warfare: A French View of Counterinsurgency*, "the goal of the guerilla, during what can be a long time, is not so much to obtain local successes as

it is to create a climate of insecurity, to compel the forces of order to retire into their most easily defensible areas." Meaning that if non-state actors can strike against hard targets using what Trinquier wrote was the most basic weapon of modern warfare, terrorism, then rebel groups can potentially avoid the direct military and political repercussions that might be associated with systematic civilian targeting and consequences of direct battlefield contestation.

Attacking hard targets also increases in preferential value since UN troops are largely postured defensively to prevent and deter violence. Rarely are UN troops purposefully constituted to conduct actions as a compellent force, meaning that the UN peacekeeping mission is not predicated on possessing the military capacity to wage and win offensive operations[54] (Howard, 2019). The defensive posture of peacekeepers surrounding soft targets invites attacks against hard targets, such as the government, police, transportation hubs, and telecommunications. For example, civilians in the central region of the Central African Republic sought refuge near MINUSCA bases in the area following clashes between armed actors. These presumed fighters then attacked the temporary MINUSCA base in Tagbara, considered a hard target, which led to the death of one peacekeeper and injuring of 12 (S/2018/611, 18 June 2018). While the intention of such an attack was not reported, we can imply that violence against the compound was intended to undermine the legitimacy of UN forces ability to protect civilians in the shelter of a fortified military compound. Local UN troops responded only defensively, which subsequently led civilians to flee the confines of these sites to other areas. Only days after did UN troops dispatch patrols to deter further violence, affording time and space for non-state actors to retrograde. In another example, Anti-balaka rebels often harassed MINUSCA logistics convoys and ambushed peacekeepers, which on two occasions, led to the injuring of five peacekeepers (S/2018/611, 18 June 2018). These attacks as the UN Representative for MINUSCA described in their report to UN Secretary-General "… continue to

[54]; however, there are exceptions with recent and current missions in the DRC, Mali, and the Central African Republic.

pose challenges for troop mobility and capacity to project forces…" The low-intensity attacks against hard targets nevertheless challenge peacekeeping success.

The fact that UN forces are not mandated to conduct offensive counterterrorism or counterinsurgency operations further incentivizes attacks against hard targets. Yet implicating this further is that even when UN peacekeepers are perceived to conduct such types of operations, it has only further implicated the conduct of war. UN Secretary-General Antonio Guterres expressed concern about the mere perception of UN forces engaging in counterterrorism has resulted in the view of the UN mission in Mali as another belligerent – rather than an impartial force (S/2018/541, 6 June 2018). This political limitation has resulted in the mission being stuck between a rock and a hard place, where forces are trying to protect themselves while at the same time being hamstrung in setting the conditions for dialogue between armed groups effectively. It is in this context that non-state actors striking high-value targets are unlikely to evoke immediate military retaliatory responses, therefore, avoiding immediate, direct costs. Attacks against hard targets also serve as a political tool for armed actors to spoil unfavorable peace processes. As highlighted in Chapter 3, the progress of the political process occurred against a backdrop of intensifying attacks of non-state actors outside involved treaty parties, where the collapse of the peace process seemed imminent "… when a deadly terrorist attack in Gao on 18 January killed 54 members of a mixed patrol." (S/2017/271, 30 March 2017).

Thus, attacks against transportation infrastructure, telecommunications, government facilities and personnel, and police/military are viable and preferred targeting options when UN peacekeepers increase their size in a respective space at a given time. It is through these particular strikes that sap the political will of local authorities and peacekeepers, which cumulatively leads to a process of rolling concessions and outcomes with implications for peacekeeping success. This theory leads to the following specific hypotheses:

Hypothesis 1: As the number of UN troops increase in a given space, there is a decrease in number of attacks against soft targets.

Hypothesis 2: As the number of UN troops increase in a given space, there is an increase in the number of attacks against hard targets.

4.2 Research Design

4.2.a Data

The data set includes eight countries that experienced UN peacekeeping interventions (Table 4.1 lists the countries and the respective UN mission). The unit of analysis is the spatial grid that divides countries into roughly equal cells of 0.5 x 0.5 degrees, or roughly 55 x 55 km at the equator, that is temporally recognized at the monthly level. Using this structure affords multiple benefits.[55] As Fjelde et al. (2019) state, the grid structure provides a unit of observation that is not of itself endogenous to the conflict processes itself, meaning if we used conflict zones, then we would inherently being selecting on the unit of analysis that is endogenous of one another.

Table 4.1 Countries and UN Missions, 2000-2011

Country	Mission	Year
Burundi	ONUB	2004-2007
Central African Republic	MINURCAT	2007-2011
Chad	MINURCAT	2007-2011
Democratic Republic of Congo	MONUC, MONUSCO	2000-2011
Ivory Coast	UNOCI	2004-2011
Liberia	UNMIL	2003-2011
Sierra Leone	UNAMSIL	2000-2006
Sudan	UNMIS, UNAMID, UNISFA	2005-2011

[55] However, it is important to note that such advanced spatial techniques do come with its challenges. Spatial analyses are particularly acute to the modifiable areal unit problem (Gleditsch and Weidmann, 2012, p. 476). Depending on the level of aggregation or size of the unit used to measure objects of interest, the unit size can lead to different statistical results. The choice of units of analyses and measures must be chosen to theoretically support the research question (Gleditsch and Weidmann, 2012).

4.2.a.1 Dependent Variables

The dependent variable is a similar measurement to the previous chapters. I use Global Terrorism Database (GTD) (START, 2013) to identify African rebel groups that use terrorism within countries that experience active intrastate conflict in the respective countries where UN peacekeeping intervened. The GTD records attacks by sub-national actors intended to coerce a large audience and attain broader social, religious, political, or economic goals (START, 2013). I distinguish attacks against soft and hard targets by aggregating all incidents based on the coding criteria listed in Table 3.1.[56] I use three different measures to capture the typology of the target robustly. First, I aggregate all terror attacks against soft targets in a given month in a given grid cell. Soft targets classify as all organizations and individuals with no official role in the state apparatus. Second, I aggregate all terror attacks against hard targets in a given month in a given grid cell. Hard attacks are those in which the target is associated with the government and state control to include government, police, and key infrastructure.

4.2.a.2 Independent Variable

In order to examine the primary independent variable, # *UN Troops*$_{i,t-1}$, the localized effect of UN peacekeepers on the propensity of non-state actors to use terrorism in a given space, I reference the dataset collected and variable measured by Fjedle et al. (2019).[57] Fjelde et al. (2019) embarked on an extensive data collection effort that captures subnational deployment of UN peacekeepers across space and over time. In their dataset, the numbers of troops in a given location is recorded as the sum of troops deployed to the grid cell for each respective month. The data for this variable originates from maps produced and published by the United Nations Geospatial Information

[56] My dependent variable follows similar measurement criteria as Polo and Gledistch (2016), which derives from the explicit operational definition based on GTD target categories.
[57] I encourage readers to reference Fjedle et al. (2019) for information regarding the coding procedures for the data used in the study, along with descriptive statistics of the data itself.

Section. These maps are used to ascertain the location, composition, and number of UN personnel deployed to a given mission (in this case, MONUC in the Democratic Republic of the Congo, December 2009). Each UN map provides provincial boundaries, military sector boundaries, and location of UN personnel. While the maps do not provide the exact number of personnel, they do provide unit graphical symbols that correspond to a particular organization size (i.e., Brigade, Battalion, Company, and Platoon). We can then use these symbols to estimate the number of personnel in a respective location. This measure closely corresponds to other existing studies' that used UN maps to generate estimated number and location of UN troops (Levin, 2015; Ruggeri et al. 2017, 2018), however Fjedle et al. (2019) demonstrate a highly correlated value to these other existing measures. Figure 4.3 serves as an example of how the cartographic map produced by the UN in the DRC is then synthesized into data points for the study. In the appendix, I provide a graphical representation of the spatial distribution for each year covered in the dataset (Figure C.1).

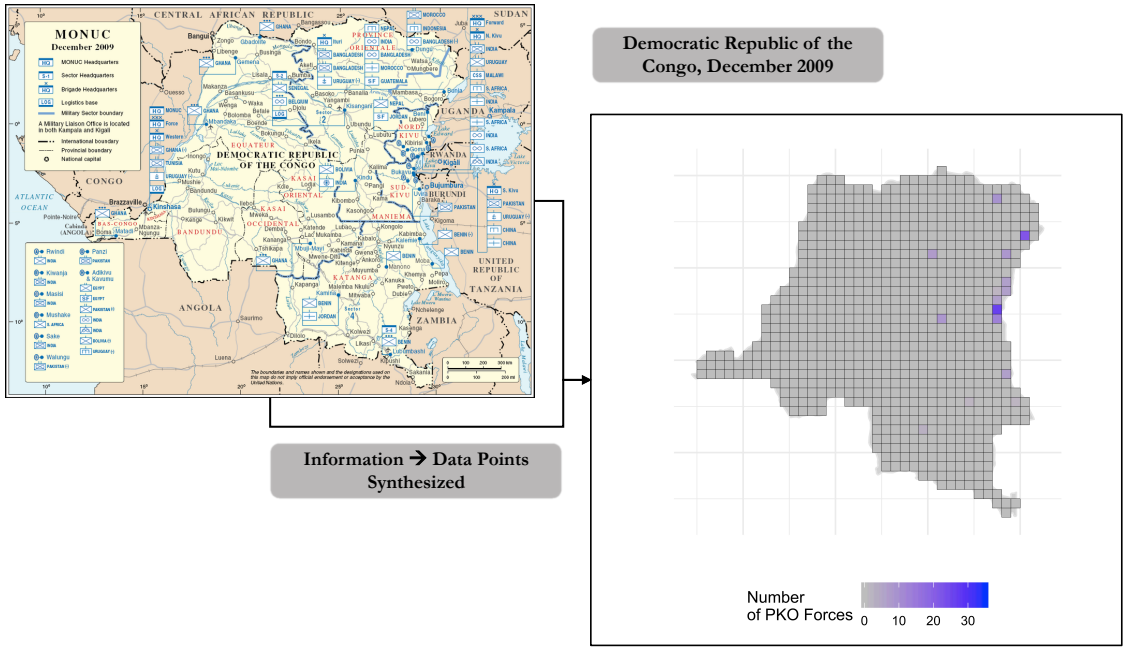


Figure 4.3 MONUC, Democratic Republic of the Congo, December 2009 Cartographic Map Synthesized into Data Points using PRIO-Grid (55km x 55 km).

I also include in a similar fashion as Fjelde et al. (2019) the total amount of UN troops in neighboring cells, # *UN Troops*$_{i,j,t\text{-}1\ (\text{Neighbor Cells})}$. This variable includes the total amount of UN troops in neighboring cells adjacent to the specific cell of interest. This spatial term is sometimes referred to as "first-order lag." This measure allows us to account for diffusion effects from peacekeeping presence. It also allows us to access whether or not groups at attack a location that is nearby peacekeepers, but not necessarily at the location they are present. I also include a binary measure of whether UN troops were present or not in given space. *Inverse Distance Troops* measures is the inverse distance between a grid-cell and a cell with troops. Short distances yield values closer to 1 and further distances yield values closer to 0. It is important to note, the data does not include measures of UN police and observers as the conflict maps only report military troops.

4.2.a.3 Control Variables

Conflict scholars have recognized the importance of terrain, both human and physical, and a host of other factors that shape how wars are fought. In order to account for these possible confounding factors, I include several control variables from PRIO-GRID version 2.0. (Tollefsen, Strand, and Buhaug, 2012). At the grid-cell level, I include a host of human terrain factors: natural log value of population, natural log value of GDP per capita ($US), road density. I also include several physical terrain factors: percentage of mountains, (adverse terrain) percentage of a forest, and distance to the capital. To account for other structural factors, I account for battlefield intensity in each cell and account for the average strength of all rebel groups in each country in a given year.

Table 4.2 Descriptive Statistics

Variable	Min	Max	Mean	Median	Observations
Terror Attacks Soft Targets (Count)	0	5	0.001	0	217,823
Terror Attacks Hard Targets (Count)	0	3	0.001	0	217,823
Total Terror Attacks (Count)	0	5	0.002	0	217,823
Total Terror Attacks$_{t-1}$	0	5	0.002	0	217,823
# UN Troops$_{i,t-1}$	0	55	0. 0.266	0	217,823
# UN Troops$_{i,j,t-1}$ (Neighbor Cells)	0	89.70	1.815	0	217,823
Inverse Distance Troops	0	1.00	0.062	0.005	217,823
Peacekeeping Presence	0	1	0.05	0	217,823
Battle Deaths$_{i,t-1}$ (ln)	0	6.60	0.006	0	217,823
Rebel Strength	0	2	1.330	1	217,823
Population (ln)	4.744	14.520	10.313	10.432	217,823
GDP per capita ($US)(ln)	5.292	10.718	6.223	5.745	217,823
% Mountainous Terrain	0	1	0.084	0	217,823
Adverse Terrain (% Forest)	0	0.891	0.036	0.001	217,823
Road Density	0	0.833	0.082	0.064	217,823
Capital Distance (ln)	1.644	7.555	6.496	6.681	217,823

4.2.b Methods

For this empirical analysis, I use a variety of empirical techniques. Since the dependent variable is a count of terror attacks, I employ a count model. First, I examine the models using a negative binomial to examine the broad relationship. However, since the data is not normally distributed, and there exists a large proportion of zeros and considerable over-dispersion, I also examine the model using a zero-inflated negative binomial regression (ZINB).[58] The simultaneous estimation allows the model to holistically account for the strategy of engaging in terror tactics while accounting for the excessive zeros in areas that are not at risk. For the post-estimation of the ZINB, I focus on the second stage (count). Lastly, I use a generalized additive model (GAM) as a robustness test. While

[58] For readers who are unfamiliar with zero-inflated negative binomial regression, the ZINB estimates the model in two distinct steps. First, the technique employs a logistic inflation model that estimates the likelihood that a particular observation belongs to a population with a probability of 1 of having a zero count. This technique allows us to separate cases at risk and not at risk - or in the context of this study, the observed space and time that essentially has zero probability of experiencing terror attacks and locations at risk of experiencing an attack but might result in a zero count. The second stage uses the negative binomial function to estimate the magnitude of the count (frequency of terror attacks).

no silver bullet, the GAM allows us to account for spatial structure underlying the residuals, and that is inherent to the data. I provide greater discuss in the following section regarding the modeling technique and specification.

4.3 Results

First, I examine my hypotheses using negative binomial regression. Figure 4.4 illustrates the results from each model regarding attacks against soft targets (a) and hard targets (b). Across both models # *UN Troops*$_{i,t-1}$ is positive and statistically significant. Meaning that as the number of UN peacekeepers increase in size in a given space and time, there is an associated increase in attacks against both soft and hard targets, which lends support for hypothesis 2, but not hypothesis 1. Interestingly, neighboring troops is null, while the inverse distance of troops is positive and significant, meaning attacks occur when the proximate distance is close. An increase in battlefield violence is associated with an increase in attacks, while previous terror attacks employed in the previous month associated with a positive relationship. Stronger rebel groups correlated with a decrease in attacks against both soft and hard targets. All other controls are generally in the expected direction.

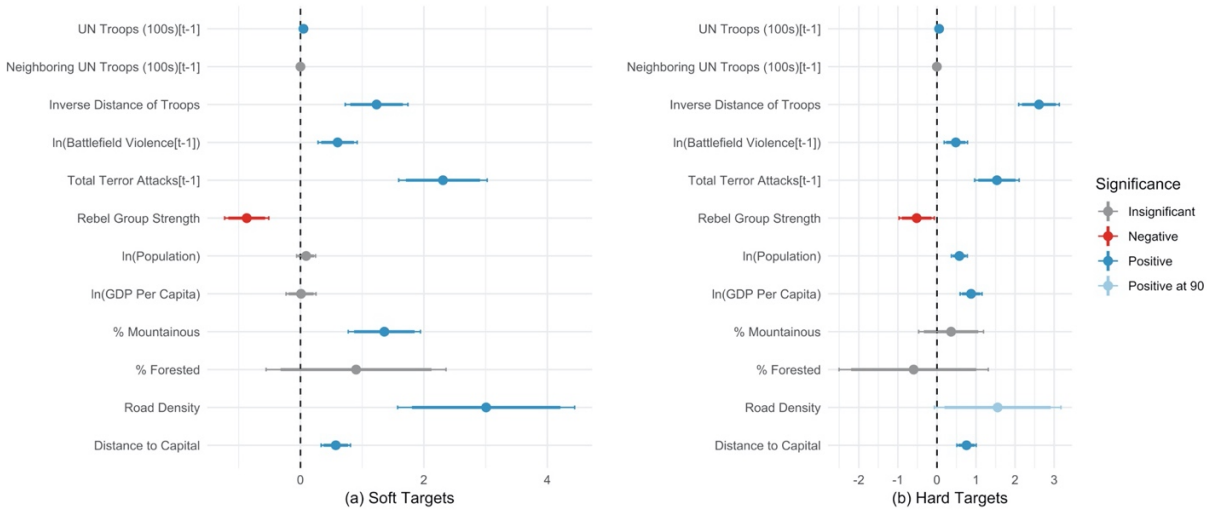


Figure 4.4 Regression results using (a) soft targets (left) and (b) hard targets (right) for dependent variable. Darker colors indicate that the coefficient estimate is significantly different from zero at a 95% CI, while lighter the same for a 90% CI. Grey indicates that the estimate is not significantly different from zero at either of those intervals.

I also use bootstrap resampling in which I resample the data with iterative replacement to generate 1,000 pseudo-datasets for both soft and hard targets. Bootstrap allows us to assess the certainty (or uncertainty) of our estimates with one sample. I then calculate the coefficient's, # *UN Troops*$_{i,t-1}$, average value, and a 95% confidence interval on the simulated data. With this, we have enough information to derive a histogram of the resampled data and a graphical representation of the confidence interval displayed in Figure 4.5. I also include the value of the coefficient from the initial models in the visualization (as the dotted vertical line) to assess the variability of the β# *UN Troops*$_{i,t-1}$. In both panel (a) and panel (b), we see the model's coefficient falls within the bootstrapped confidence interval. However, the average bootstrapped value markedly differs from the baseline model, which highlights the degree of uncertainty of the estimate. Despite the general normality of the distribution represented in both panels, the variability of the negative binomial regression estimate's effect on hard targets raises some concerns to the degree of accuracy that might stem from the structure of the data and the data generating process defined by the excessive zeros that

encompass the outcome variable. Therefore, it seems appropriate to examine the model using other regression techniques that attempt to account for these dependencies.

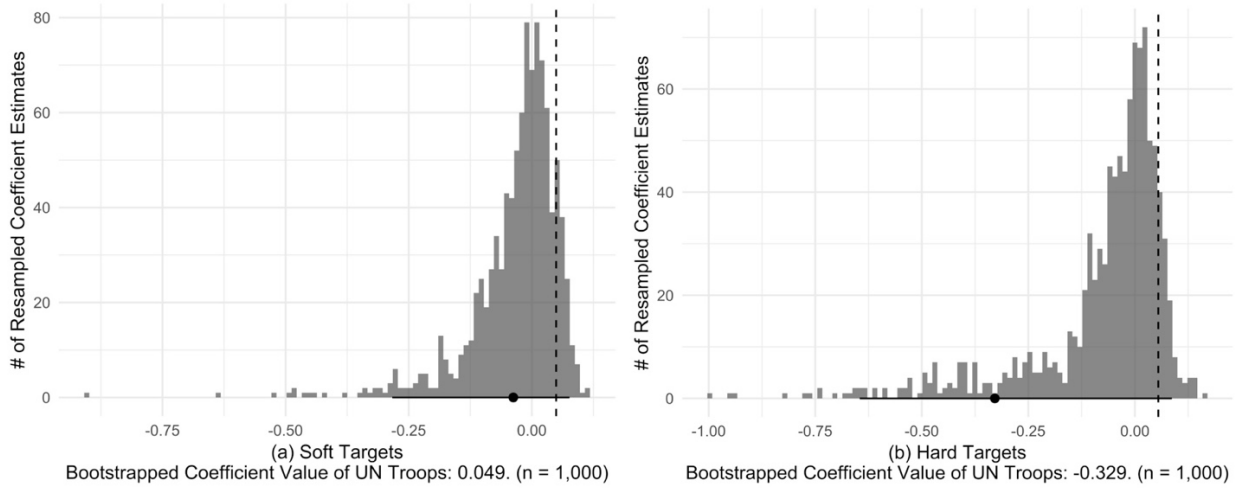


Figure 4.5 Bootstrap resampling of the model covariates with a focus on the coefficient # *UN Troops*$_{i,t-1}$ (n = 1,000) in relation to using (a) soft targets (left) and (b) hard targets (right) as the dependent variable. The dashed line represents the coefficient value from the respective model before sampling, while the point represents the average estimate, and the line range represents a 95% confidence interval of the bootstrapped estimate.

While the initial analysis provides some empirical light to understanding this complex relationship, the primary empirical technique employed in this chapter is the zero-inflated negative binomial regression. Table 4.3 lists the statistical results from the ZINB models. The benefits of the ZINB are that it allows us to account for the data generating process, particularly in instances where there is a probability of 1 of observing a zero. This is important in dealing with spatial data as ther may not be any areas where the population is located thus no need to carry out an attack or to deploy peacekeepers. It then separates areas at risk where we then can better discern the magnitude of attacks. Therefore, for discussion I focus only on the count stage. The count stage reflects the coefficient values on the number of attacks against a type of target, adjusted for zero-inflation. The inflation stage represents the coefficients from the logistic inflation model. The inflation stage, while it is not the basis for the analysis, it is reported since it is part of the total model.

Beginning with attacks against soft targets (Model 1), the number of UN troops in a given time and space is null. A null effect, while not directly supportive of my hypothesis, is not necessarily a poor outcome. Although we prefer UN troops to decrease attacks against soft targets, they are not statistically correlated with an increase – which can be viewed favorably that a null effect is not necessarily bad as it is suggesting peacekeepers do not increase or decrease terror attacks against soft targets. It does appear that the number of UN troops collectively in an area, measured by UN troops in neighboring cells, has a statistically significant negative effect. In this regard, the cumulative effect appears to possibly deter attacks against soft targets. Hence, the argument goes that the greater capability to impose costs, especially across a larger area, reduces the frequency of attacks against businesses, refugees, NGOs, among others. This could also limit the ability for rebel groups to commit the attack against a target. The expansive presence surrounding an area makes it increasingly difficult to carry out the attack. Regarding Model 2, the number of UN troops in a given time and space correlated with an increase in attacks against hard targets. This finding supports the argument that as UN capability increases in a given location, non-state actors target state institutions, infrastructure, and other sorts of hard targets. Attacks against hard targets are also positive and statistically significant the closer UN troops are to a given location. This might further add to the point that if groups are to execute a terror attack, that groups prefer to strike against targeta that carry the greatest cost – one that undermines at the legitimacy at the inability to protect the most difficult targets.

Concerning possible confounding factors, battlefield violence corresponds to a statistically significant increase in attacks against both soft targets and hard targets. This finding would lend support to previous studies (Hultman, 2007), where battlefield engagements affect the propensity to use other forms of violence. Using terror tactics in a given location the previous month is likely to increase attacks against hard targets, but not soft ones. Stronger rebel groups correlated with a

decrease in terror attacks. Interestingly, the larger populations are associated with a decrease in attacks against soft targets, but an increase in hard targets. This result could imply that non-state actors are cognizant of targeting outcomes and audience costs, in that when groups engage in terror tactics, they are concentrating efforts that maximize utility.

Adverse terrain does not appear to be a significant factor in non-state actor targeting preferences. The only *% Mountainous* is statistically significant. Grid cells with higher proportions of mountainous terrain are observed with an increase in attacks against soft targets, but not hard. Mountainous terrain, in this case, could support the notion that rough terrain is favorable to rebel forces, where such adverse geographic features provide shelter out of reach from both government forces and UN peacekeepers. This effect allows non-state actors to strike targets and quickly retrograde into the mountains without incurring high military costs. Lastly, distance to capital corresponded with increases in attacks against hard targets. A higher number of attacks increase at further distances from the capital. This result could be indicative of the significant amount of military costs likely to incur if a non-state actor attacked in an area typically heavily congested with UN peacekeepers and government troops.

Table 4.3 Effect of peacekeeping personnel on terrorism in civil conflict using ZINB, 2000-2011

Variable	Model 1 – Soft Target		Model 2 – Hard Target	
	Count Stage	*Inflation Stage*	*Count Stage*	*Inflation Stage*
# UN Troops$_{i,t-1}$	0.026	-0.107	**0.152*** **	16.381
	(0.019)	(0.060)	**(0.021)**	(13.727)
# UN Troops$_{i,j,t-1}$ (Neighbor Cells)	**-0.049*** **	**-0.112*** **	-0.003	-1.399
	(0.012)	**(0.023)**	(0.008)	(1.283)
Inverse Distance Troops	0.047	**-1.125***	**2.357*** **	-1.008
	(0.423)	**(0.556)**	**(0.280)**	(16.869)
Battle Deaths$_{i,t-1}$ (ln)	**0.541*** **	0.139	**1.380*** **	102.289
	(0.152)	(0.261)	**(0.226)**	(88.671)
Total Terror Attacks$_{t-1}$	0.551	**-3.508****	**1.173****	22.283
	(0.363)	**(1.291)**	**(0.389)**	(29.323)
Rebel Strength	**-1.414***	-0.426	**-0.570***	-25.588
	(0.562)	(0.579)	**(0.240)**	(25.369)
Population (ln)	**-0.849*** **	**-0.901*** **	**0.532*** **	-10.013
	(0.174)	**(0.195)**	**(0.104)**	(9.554)
GDP per capita ($ US) (ln)	0.192	0.098	**0.835*** **	-77.167
	(0.312)	(0.326)	**(0.147)**	(70.023)
% Mountainous	**3.398*** **	**1.920***	0.488	-51.535
	(0.658)	**(0.759)**	(0.408)	(46.905)
% Forested	1.049	-0.842	0.436	35.282
	(1.226)	(1.383)	(0.950)	(70.619)
Road Density	-1.530	**-6.586*** **	1.022	-118.632
	(1.022)	**(1.585)**	(0.785)	(120.411)
Distance to Capital	-0.197	**-0.975*** **	**1.199*** **	103.186
	(0.146)	**(0.235)**	**(0.143)**	(87.174)
Constant	**20.621***	**20.621*** **	**-26.826*** **	-257.776
	(3.901)	**(3.901)**	**(2.040)**	(222.567)
Observations	188978		188978	
AIC	2550.38		1460.35	

* p<0.05, ** p<0.01, *** p<0.001

Note: Standard errors reported in the parentheses. Blue color added to emphasize UN peacekeeping variables. Gray added to emphasize conflict dynamics.

With ZINB, it is possible to make substantive estimations of the effects of our covariates on the inclination to engage in terror attacks against different objectives. One way to gauge the substantive effect is to use a simulation-based method – comparable to the methods employed in chapters 2 and 3. Since only two of the peacekeeping variables, # *UN Troops*$_{i,t-1}$, and # UN Troops$_{i,j,t-1}$ (Neighbor Cells), were statistically significant, I focus on these variables for their substantive effects. Using estimates from Model 1 and Model 2 (Table 4.3), I simulate a series of scenarios in which # *UN Troops*$_{i,t-1}$, and # UN

$Troops_{i,j,t\text{-}1\ (Neighbor\ Cells)}$, varies from its minimum to maximum, while holding all of the other parameters at either mean or median values. I then conduct 1,000 random draws from a multivariate normal distribution to obtain a distribution of the point estimates for each regression coefficient. Lastly, I matrix multiply the draws with the transposed scenario matrix to obtain the predicted count of terrorist attacks across the range of the respective variable. Figure 4.6 displays the graphical representation. In the left panel, as the number of UN troops increases in neighboring cells of cell *i,* there is a decrease in attacks against soft targets. In the right panel, the substantive effect of an increase of troops in a given cell is discernable when peacekeeping elements are much more significant in size.[59]

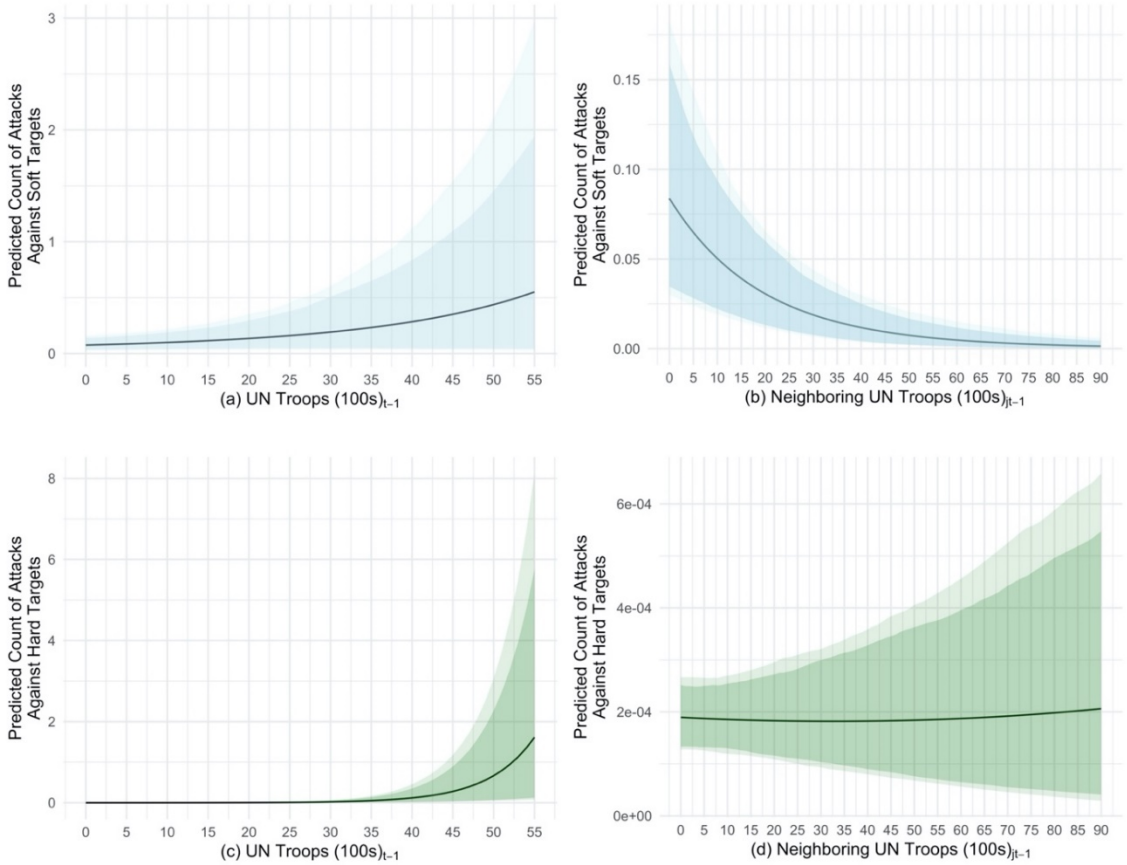


Figure 4.6 Predicted count of terrorist attacks against soft targets (light blue) and hard targets (forest green) as UN troops in cell (a, c) and UN military troops in neighboring cells (b, d) increases

[59] I also provide a post-estimation of the model concerning the outcome variable, total targets – located in the appendix. Reference Figure C.2 (Appendix C).

Figure 4.6 (cont'd) in a given space and size (monthly) using count stage of ZINB where scenarios of all variables are at Figure 4.6 either their mean or median values. The 90 percent interval of each distribution is shaded in dark color and 95 percent in a lighter color.
Note: Figures scales are different for visual ease of interpretation.

Another way of evaluating the effect of this change is by looking at the percent change when the independent variable increases in a specified amount. Therefore to gain a better sense of the relative effect of our covariates, # *UN Troops*$_{i,t-1}$, # *UN Troops*$_{i,j,t-1}$ (Neighbor Cells), and *Battlefield Violence*, on the count of *Terrorist Attacks*, Figure 4.7 displays the graphical representation of the calculated first difference change in probability for each respective covariates in percent with 95% confidence intervals. These quantities were calculated from the count stage of Model 1 (DV- soft target), Model 2 (DV- hard target), and Model 1 (Table A.4) (DV- total target)[60] estimates using 1,000 Monte Carlo Simulations, where each estimate corresponds to the effects of # *UN Troops*$_{i,t-1}$, # *UN Troops*$_{i,j,t-1}$ (Neighbor Cells), *Battlefield Violence* on terror attacks against soft, hard, and total targets. Changing the number of UN troops in a given cell, month from 0 troops $\Rightarrow$ 100 troops, which equates an increase of no troops to roughly a company size element, increases the count of terror attacks against hard targets by roughly 15%. However, there is no statistically significant effect of # *UN Troops*$_{i,t-1}$ in regard to attacks against soft targets and all targets. Interestingly, the number of UN troops in neighboring cells reduces the percentage of terror attacks against soft and total targets, but not hard targets. This effect, again, could be the result of the cumulative deterrent effect of UN peacekeeping when troops array across and around a given location.

[60] The model estimates are located in the appendix. Reference Table C.4.1 (Appendix C)

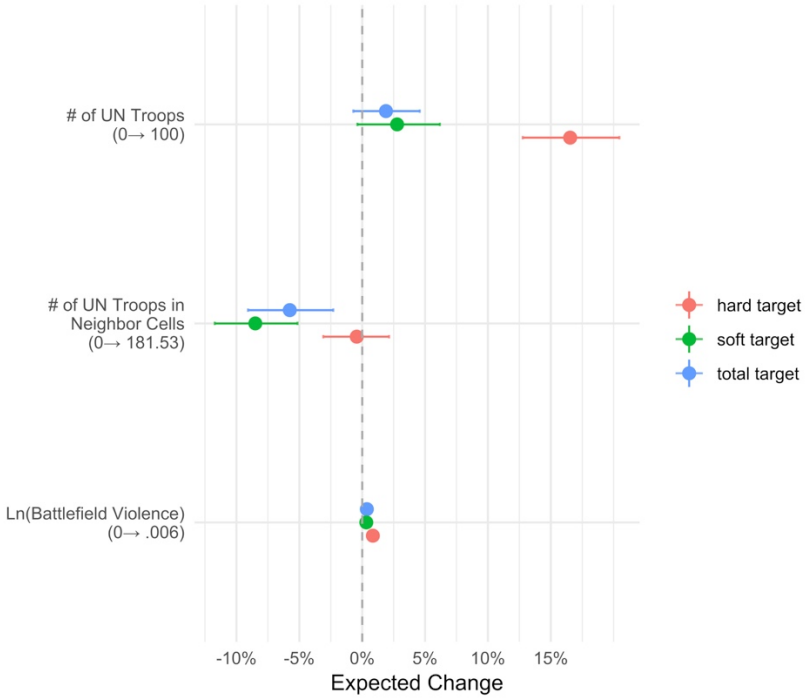


Figure 4.7 First difference change in probability in the expected count of terror attacks against soft targets, hard targets, and all targets per cell in month-year *t*, using Models 4, 5, and 6 estimates, respectively.
Note: Percentage changes based on increasing the covariate from its min to its mean value (denoted in parentheses under the variable) while holding all other variables at their median or means, respectively. Error bars represent 95% confidence intervals.

4.3.a Robustness

The previous empirical results offer mixed support to this study's hypotheses. It supports the hypothesis that terror attacks increase as UN peacekeepers increase in size, but the target type remains mixed. However, this might stem from the fact that previous models may not fully account for the spatial and time dependencies noted in the structure of the data. Therefore, as robustness, I examine the general relationship between peacekeeping and subsequent terror attacks using a semi-parametric Generalized Additive Model (GAM) with a quasi-Poisson link (Zhukov, 2017).[61] The

[61] I also estimate generalized additive models using a logit link, where the outcome variable is whether or not an attack (0 or 1) occurred against a soft and hard target in a given space-time. These empirical findings and post-estimation are located in Appendix C. Using a binary outcome, I only find statistical evidence concerning UN neighbor troops and soft targets.

GAM is similar to the generalized linear model (GLM) but allows us to include non-linear terms in the linear predictor term (Wood, 2006). This modeling technique affords multiple benefits.

In GAMs, the linear predictor is the sum of smoothing functions, which affords greater flexibility and ability to fit complex functions (Wood, 2006; Bivand et al. 2008). Simply put, the GAM has the interpretability advantages of the GLM but affords greater flexibility in that the relationships between the independent and dependent variables are not assumed to be linear. The quasi-Poisson model – an extension of the Poisson GLM with an unrestricted dispersion parameter – is applicable in this case since the outcome variables are over-dispersed event counts (Bivand et al. 2008; Zhukov, 2017). The flexibility of this type of model, as Zhukov (2017) comments, allows us to favorably account for long term geographic variation and temporal shifts in baseline intensities of terror attacks with the inclusion of a spatial spline and time fixed effects. Specifically, the thin-plate spatial regression spline is used as a semi-parametric trend surface, which smooths the spatial structure from the residuals to the fit and in effect, accounting for underlying patterns in the data (Bivand et al., 2008). The following equation (1) is the core specification of the model:

$$y_{it} = g^{-1}(\alpha + \gamma \mathbf{Z}_{i,t-1} + \beta \mathbf{X}_{it} + s(\text{long}_i + \text{lat}_i) + \zeta_t + e_{it}) \quad (1)$$

In the model $g^{-1}(\cdot)$ is an inverse quasi-Poisson link function, $Z_{i,t-1}$ is peacekeeping troops during the previous month in a given cell, X_{it} is a matrix of control variables (i.e., battlefield violence, population, GDP, distance to capital, among others.), $s(\text{long}_i + \text{lat}_i)$ is a thin-plate spatial spline of the geographic coordinates of each PRIO grid cell, ζ_t is time fixed effects, and e_{it} is an i.i.d. error term. Table 4.4 reports the statistical results.

Examining the GAM models, we find relatively similar results to the ZINB, particularly in regard to the count stage. For the number of UN troops in a given space and time, there is a null effect against soft targets, but a positive and statistically significant relationship with hard targets (albeit at the $p<.05$ level). While this does not support both hypotheses, it nevertheless provides robust

support that an increase in UN troops in a given space and time leads to non-state actors increasing their attacks against hard targets. However, when we look at the number of UN troops in neighboring cells, there is a statistically significant decrease against soft targets, but null effect against hard targets. This result, again, may stem from the cumulative effect of UN troops across increase space. The inverse distance of UN troops is positive and statistically significant for both soft and hard targets.

Concerning our control variables, battlefield violence positively correlated with the propensity for non-state actors to attack soft targets but not hard objectives. When we look at the lagged, total terror attacks in a given space and time, there is a positive and statistically significant effect for both models. Regarding our terrain variables, both human and physical, we see that the population is only statistically associated with an increase in attacks against hard targets. Surprisingly, there is a decrease in attacks against hard targets when there is a higher proportion of mountainous terrain in a given space. The proportion of forested terrain is associated with an increase in attacks against soft targets. Only road density is positively correlated with attacks against hard targets, whereas when the distance from the capital increases, there is a statistically significant decrease in attacks against soft targets. It is important to note that in both models that our spatial spline smoothing function has a statistically significant effect ($p<0.001$), which suggests that there may have been some residual spatial variation unexplained in the generalized linear model employed earlier.

Table 4.4 Effect of peacekeeping personnel on terrorism in civil conflict, 2000-2011 using Quasi-Poisson Generalized Additive Model Regression

Variable	Model 3 – Soft Target	Model 4 – Hard Target
	GAM	*GAM*
# UN Troops$_{i,t-1}$	0.010	**0.034***
	(0.002)	**(0.017)**
# UN Troops$_{i,j,t-1}$ (Neighbor Cells)	**-0.020***	-0.012
	(0.008)	(0.010)
Inverse Distance Troops	**0.910*****	**2.520*****
	(0.024)	**(0.030)**
Battle Deaths$_{i,t-1}$ (ln)	**0.379*****	0.235
	(0.100)	(0.014)
Total Terror Attacks$_{t-1}$	**0.897*****	**0.773*****
	(0.177)	**(0.018)**
Rebel Strength	0.036	0.425
	(0.317)	(0.054)
Population (ln)	-0.028	**0.527****
	(0.110)	**(0.016)**
GDP per capita ($ US) (ln)	-0.470	0.559
	(0.378)	(0.052)
% Mountainous	0.398	**-1.355***
	(0.488)	**(0.066)**
% Forested	**1.648***	-0.077
	(0.818)	(1.187)
Road Density	1.254	**1.836***
	(0.662)	**(0.087)**
Distance to Capital	**-0.415****	0.222
	(0.155)	(0.099)
Intercept	-4.325	**-26.505*****
	(3.037)	**(5.141)**
EDF $s(long_i,lat_i)$	28.80***	28.68***
Time FE	√	√
Observations	188978	188978
Deviance Explained	0.28	0.40

* p<0.05, ** p<0.01, *** p<0.001

While the results in Table 4.4 substantiate this paper's claims, it is useful to convey the results of these statistical analyses in substantively meaningful and directly interpretable ways. Therefore, I graphically illustrate the substantive effect of number of UN troops in a given cell and UN troops in neighboring cells on attacks against soft targets in panel (a, b) and on attacks against hard targets in panel (c, d) of Figure 4.8. To assess the substantive effect, I estimate a range of my variable of interest while holding all other variables are at sensible values (either mean or median value). In panel (a) of Figure 4.8, we can immediately discern that as the number of UN troops in neighboring

cells increases in size, there is an associated decrease in attacks against soft targets. However, as the number of UN troops increase in size in a given space and time, there is an increase in attacks against hard targets. It is important to note the considerable amount of inferential uncertainty associated with the result in panel (b) despite # *UN Troops*$_{i,t-1}$ being positive and statistically significant in Model 4.

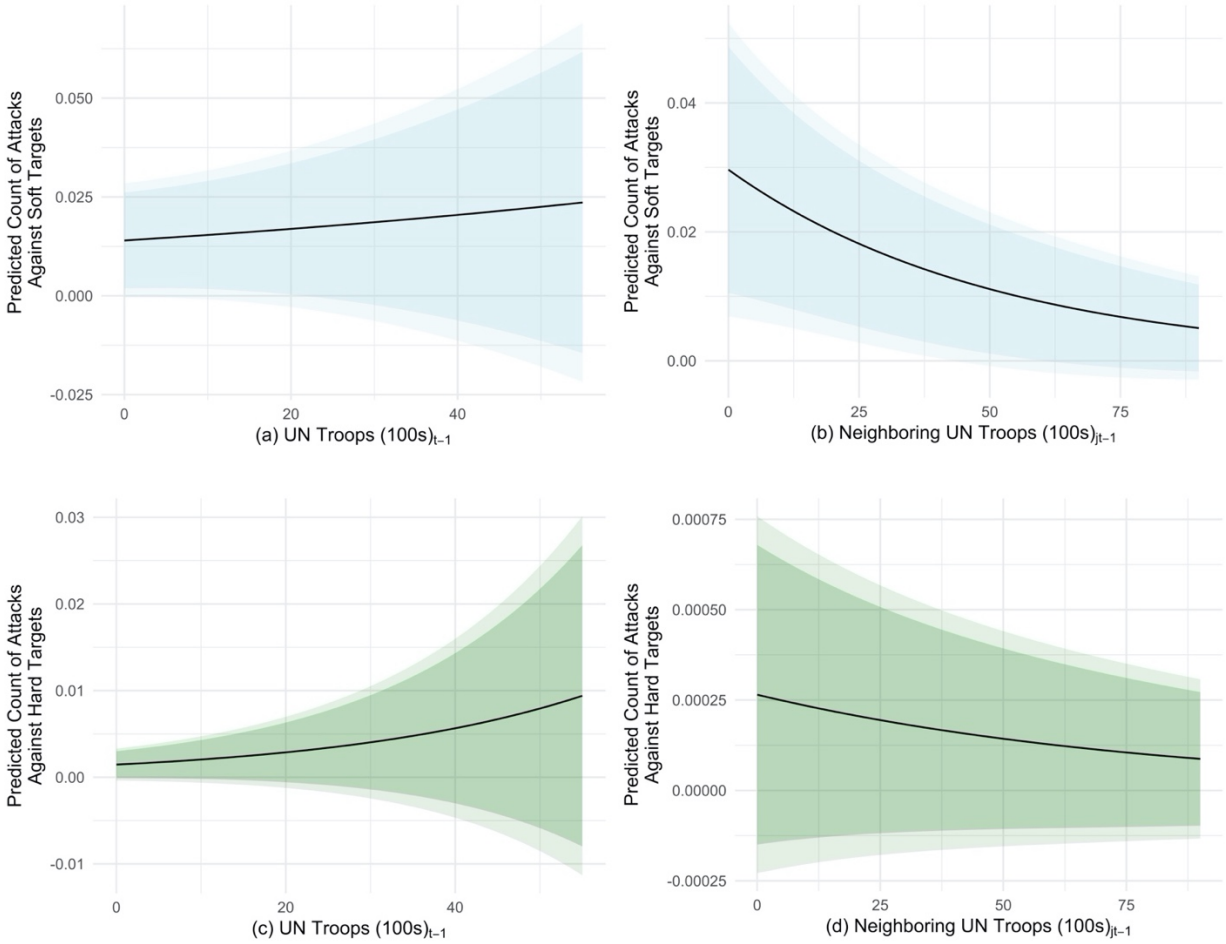


Figure 4.8 Predicted count of terrorist attacks against soft targets (light blue) and hard targets (forest green) as UN troops in cell (a, c) and UN military troops in neighboring cells (b, d) increases in a given space and size (monthly) using Quasi-Poisson GAM where scenarios of all variables are held either at their mean or median values. The 90 percent interval of each distribution is shaded in dark color and 95 percent in a lighter color.
Note: Figure scales are different for visual ease of interpretation.

Another way to gauge the substantive effects of our models is to examine the result with respect to the fitted value across the conflict landscape. This empirical technique is especially of interest,

given the spatial structure of the data. Figure 4.9 is the graphical representation of the average predicted values of Model 4 across the geographical space. In panel (a), we observe the average predicted value of attacks against hard targets in a given cell. In panel (b), we can observe the maximum average predict value. In panel (c), we can observe the residual value of the prediction. The residual value allows us to gauge how accurate the model was able to perform. In this particular context, blue represents instances where the model overperformed, while red represents observations that were underpredicted. Ideally, we prefer instances where the model has minimal residual.

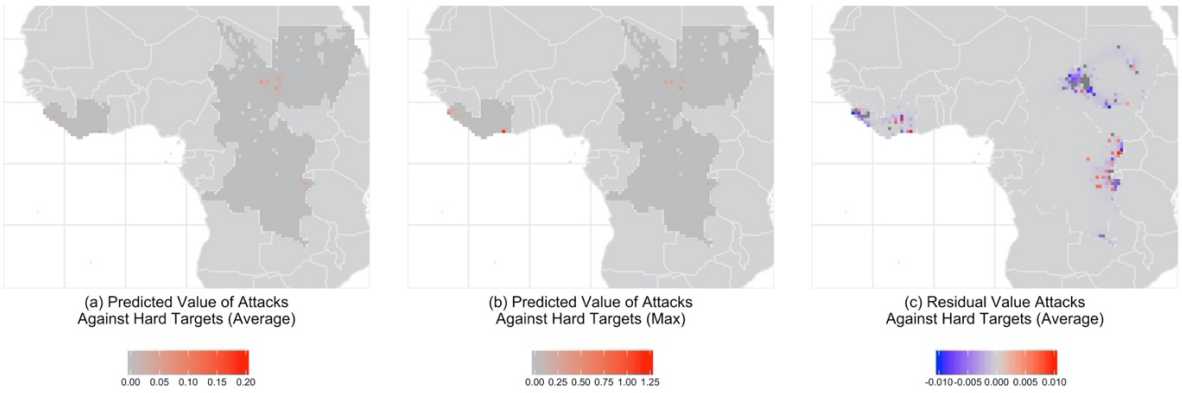


Figure 4.9 Average predicted count of terrorist attacks against hard targets (a); max predicted value of attacks against hard targets (b); and the average residual value when examining the fitted values from the baseline model (Model 4) in a given space and month using Quasi-Poisson GAM.

Lastly, I am interested in how the model might perform out-of-sample, meaning its ability to predict occurrences of attacks against hard targets using an omitted slice of the data as a validation set. To examine this, I withhold some of the sample data from the model estimation process, which in this case, is all grid cells in Ivory Coast in December 2010.[62] I further exclude any of the Ivory Coast data beyond December 2010, which omits all of the remaining grid cell months in 2011 from

[62] I also examine out-of-sample attacks against soft targets using data from Sudan for the entire year of 2011 (See Appendix C, Figure C.5.). Preceding the post-estimation is qualitative anecdotal evidence from the conflict in Sudan.

the training data. I then use the remaining training data (n=187,586 observations) to estimate the parameters of the model using the same estimation technique as Model 4. The statistical results yield nearly the same estimates as presented in Model 4, Table 4.4. # *UN Troops*$_{i,t-1}$ is positive and statistically significant with a coefficient value of 0.038 ($p < .05$). Using these coefficient estimates, I then predict the fitted value using the test data, which in this case, is all grid cells in Ivory Coast during December 2010. The results are graphically represented in Figure 4.10.

The model performs modestly. While the model did not predict the exact count of observed attacks in a given space, it nevertheless forecasted the highest value of attacks in the cell that experienced the highest number of strikes against hard targets. The model predicted an estimated value of $\hat{y}_i = 0.047$ – the highest predicted value of any space in the test data. This grid cell experienced three attacks against hard targets. In fact, one of the attacks in this grid-cell targeted both a UN convoy and the mission's headquarters in Abidjan. The attack came amid growing demands for UN peacekeepers to withdraw from the country (Nossiter, 2010). The propensity to attack hard targets in this particular regard was primarily a function of the UN peacekeeping force's ability to array troops that prevented two competing armed factions from re-engaging militarily. As analysts commented on the tense situation in Ivory Coast, "Mr. Gbagbo's troops could probably outgun them [Mr. Ouattara's state forces]; the only force in the middle is the United Nations troops and police officers, in place since the end of the [active stages] civil war…" (Nossiter, 2010).

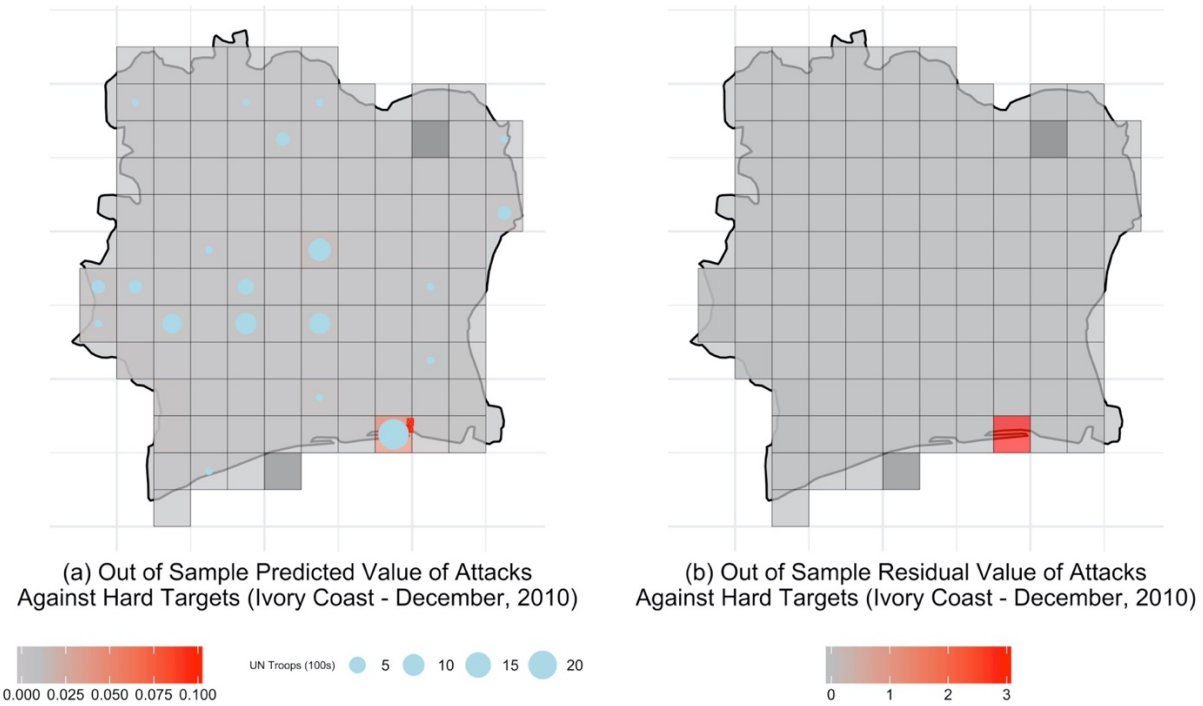


Figure 4.10 (a) Out of sample predicted count of terrorist attacks against hard targets (red shade) in given space using Quasi-Poisson GAM, where blue points represent UN troop presence and size of this point adjusts for troop strength and red points represent an observed attack against a hard target; and (b) the out of sample residual values (red shade) in a given space using Quasi-Poisson GAM.

4.4 Discussion

Early cross-national studies provide considerable insight into broad, aggregated national characteristics that affect the likelihood of violence during civil war and how peacekeeping influences violent contention during a UN intervention. These findings have provided the discipline with results that are generalizable across cases at the country-year level and highlighted peacekeeping mechanisms that shape armed actor behavior. However, micro-level analyses have provided new insights to the study of civil war conflict and peacekeeping literature. This low level of aggregation is beneficial as cross-national studies have typically overlooked sub-national processes such as group-level behavior, non-state and state interactions, and micro-level processes such as local variations of violence, terrain, economic activity, and ethnic demographics. Too often, our aggregated country-

level characteristics take for granted measures that imply localized effects. By examining beyond (or below) the state, scholars have been able to evaluate the strength of our leading theories and the robustness of our measures under immense empirical scrutiny. These advancements in how scholars approach the level of analysis in their empirical studies have allowed our current theories to strengthen, and, when such notions fall short, generate new insights that would potentially be overlooked using broader levels of aggregation. As commented by Cunningham et al. (2009, p. 572):

> "… aggregate cross-country approach to studying civil war may be rapidly approaching a state of diminishing marginal returns. A promising alternative is to disaggregate the study of war below the level of entire countries and consider the underlying interactions and mechanisms underpinning theories of conflict."

In light of Cunningham et al. (2009) comments, this chapter attempted to empirically triangulate the core concepts of this dissertation by examining the cross-national findings made in the previous chapters at the subnational level. It further extended the logic by spatially contextualizing key mechanisms of UN peacekeeping that influence non-state actor behavior. Leveraging recent innovations in data collection, the chapter found results that substantiate my central hypothesis: non-state actors increase attacks against hard targets in a given space and time when there is a higher number of UN troops in that given location. Spatial analysis allowed us to isolate the mechanism directly with the observed outcome. We are able to better assess that the presence of UN peacekeepers in terms of location effect the propensity for terror attacks. This effect is due to several factors that shape the tactical utility when employed against this type of objective.

This effect was less apparent when examining attacks against soft targets, where the number of UN troops in a cell was null. It did, however, find encouraging results when using the spatial lag of the number of UN troops in proximate cells. As the number of UN troops increases in nearby locations, there is an associated decrease in attacks against soft targets. A positive and insightful

observation that implies UN peacekeepers are effectively deterring attacks against civilians and vulnerable locations.

The results also held consistent under multiple modeling techniques, suggesting the robustness of the findings and durability of the hypotheses. It first examined the relationship using series generalized linear models. To start, I employed a negative binomial regression, a similar technique used in the previous chapters. This modeling technique allowed us to account for over-dispersion in the outcome variable. The results provided some initial empirical support for this study's hypotheses. I then employed the zero-inflated negative binomial as a two-stage, simultaneous process that allowed the model to account for the excessive zeros in the outcome variable. This modeling technique served as a means to account for the unique data generating process that underlies the structure of the outcome variables as it provide a technique in holistically accounting for the strategy of engaging in terror tactics, while also accounting for the excessive zeros in areas that are not at risk. The results further substantiated the manuscript's expectations. Lastly, the generalized additive model was employed to triangulate the study's expectations empirically. The GAM accounted for the spatial structure and time dependencies rooted in the data. The results followed in line with previous models. I also used this model to examine out-sample using Ivory Coast as an example. The model was able to generate the highest predicted values in the grid-cell that experienced the highest observed hard target attacks in that given month. It is with hope the methods employed serve as an example (and reason) to make use of such modeling techniques. Using multiple rigorous statistical techniques can provide the empirical grounding need to formulate effective strategy and policy for UN missions.

Lastly, this chapter highlights that when we carefully examine peacekeeping but myopically focus on battlefield violence and civilian victimization, we inherently risk overlooking other forms of political violence that characterize the conflict landscape. Previous studies enhance our

understanding of the dynamic nature of peacekeeping concerning armed actor behavior, but consequential to their theory is understanding potential adverse effects associated with increases in UN military troops. The results of this study again bring to attention the expressed concern in the UN HIPPO report that UN peacekeeping operations must understand the threats facing peace and how such mission and mandates limitations can expose challenges to fulling such strategic objectives. The use of terrorism as a tactic and the propensity for non-state actors to use such tactics against hard targets further reifies the proposition that different threats must be met with the appropriate use of military force, one that can effectively signal and demonstrate the UNs willingness and efficacy to confront emerging challenges in pursuit of peaceful outcomes.

CHAPTER 5

CONCLUSION

"There is nothing so likely to produce peace as to be well prepared to meet the enemy."

- George Washington

The post-cold war threat encompasses a hybrid actor that employs a range of tactics to achieve their respective goals. Many of these rebel organizations have become increasingly inclined to employ a violent approach of tactics through the combined use of conventional, guerrilla, and terrorist tactics. The irregularity that defines armed conflict is highlighted by Kalyvas and Balcells (2010) observation that rebel movements typically employ irregular warfare in nearly two-thirds of civil wars, with only one-third focusing on the use of conventional tactics. This is inherently problematic considering peacekeeping is designed and intended to deter and prevent conventional tactics between warring belligerents. It is important to important to highlight that the ability to deter and prevent battlefield violence is not indicative of the ability to prevent attacks against hard targets and worse at soft targets. Battlefield violence is not reflective of attacks against hard targets, but discrete engagements of armed actors, which nevertheless can take place in the vicinity of both hard targets and soft targets. Yet a majority of tactics employed by non-state actors in civil conflicts is irregular. The results from this dissertation's research reify the implication that stem from this general trend. This chapter therefore presents an overview of the results across the three empirical analysis: cross-national analysis of terror attacks; cross-national analysis of target selection and tactical diversity; and subnational analysis of UN peacekeeping across time and space of terror. Building on these findings and addressing the research question, it then outlines a set of recommendations for policy and application to future peacekeeping operations. Finally, the chapter describes areas for future research emerging from the gaps identified in this manuscript.

5.1 Summary of Key Findings

At the outset of this dissertation, I set out to better understand the relationship between UN peacekeeping operations and terrorism. This investigative journey stemmed from the observation of past and present UN peacekeeping – 'blue helmets' are increasingly on the frontline against non-state actors that employ terror tactics. Surprisingly, this implication has yet to date received any rigorous, quantitative attention from the academy. In light of this lacuna and underscored by the practicality of such a topical question, the results of the study suggest four key findings:

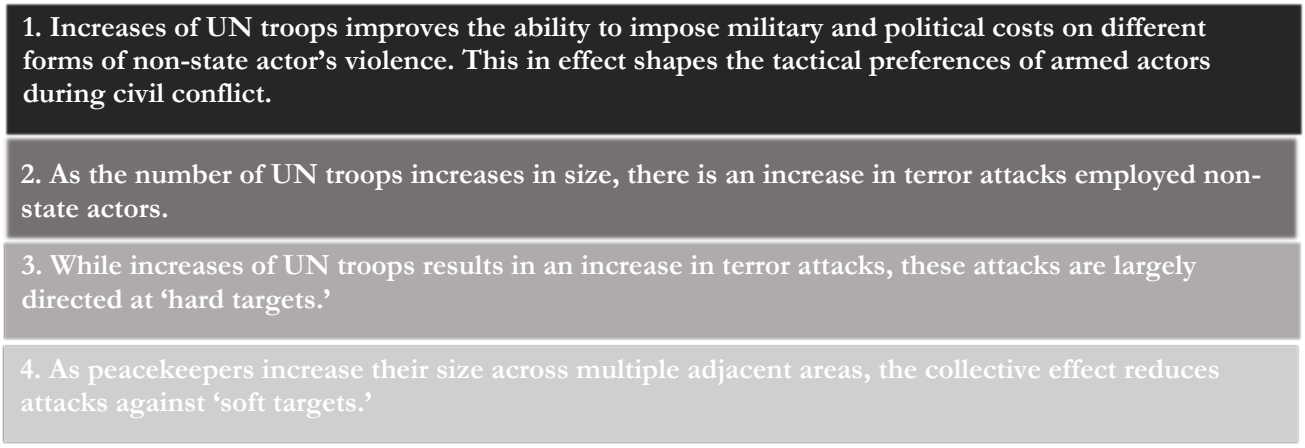


Figure 5.1 Key findings of the study.

These main findings largely stemmed from a three-part effort. First, I established a theory of why we would expect non-state actors to engage in terrorism despite the significant intervention of UN peacekeepers. Increases of UN peacekeepers limits the ability and imposes costs on warring actors to contest on the battlefield. An unintended consequence that is manifested from increases UN capability to limit conventional means is the tactical incentive for rebel groups to engage in terrorism. To test this conjecture, I then conducted a quantitative cross-national analysis and where I found that as the number of UN troops increase in size monthly during active armed conflict, there is an associated increase in terror attacks. This relationship was robust to multiple specifications. Theory also suggested a conditional relationship, where the ability of UN troops to decline conventional battlefield hostilities effected the number of terror attacks employed in a given month.

This interaction effect was statistically significant, but only at very low levels of battlefield fatalities and not high. It also found the results to be consistent at the dyadic level, further supporting the main findings of this study.

Given the baseline theory and statistical findings of Chapter 2, I next provided a closer examination of the target selection and tactical diversity. In Chapter 3, I provided an expanded theory on the implications stemming from UN peacekeepers limiting opportunity and imposing military and political costs. Adding to the baseline of why we would expect to observe an increase in terror attacks in a given month, I further suggested that such a relation should affect the target preference of non-state actors. This is because military and political costs imposed by UN peacekeepers will result in a different degree of consequences based on the target selection of the terror attacks. In this vein, I argued that there is an increase of terror attacks against hard targets, but a decrease in terror attacks against soft targets as the number of UN troops increases in size monthly in a given country. This is because there exists greater tactical utility in attacks directed against hard targets than soft ones. Using, again, a quantitative cross-national study, I found mixed results in support of my hypotheses. While I found statistical support for the notion that there is an increase in attacks against hard targets, I also found that there is increase in attacks against soft targets. The result remained the same despite examining with alternative modeling techniques.

As extension, I also examined the relationship between UN peacekeepers and tactical diversity. I argued that rebel groups should increase their tactical diversification when the number of UN troops increases in size monthly. Increased tactical options provide the non-state actors the flexibility to pursue multiple options that might be less costly to carry out given conditions on the ground. This increases the likelihood of an attack's success and creates new vulnerabilities that undermine the UN's ability to effectively establish a climate of security.

Lastly, I triangulated my argument at the subnational level using spatial analysis. In this context, the effect was less apparent in attacks against soft targets, where the number of UN troops in a given space was null. However, I found results when using the spatial lag of the number of UN troops in proximate locations. As the number of UN troops increases in neighboring locations, there is an associated decrease in attacks against soft targets. A positive and insightful observation that implies UN peacekeepers are effectively deterring attacks against civilians and vulnerable locations when we take into account the collective effect across time and space. Although, as expected, non-states increase attacks against hard targets when there is an increase of UN troops in a given space and time. In fact, the models suggest that increase to a company size formation of blue helmets in a location that had no peacekeepers previous, there is roughly a 15% increase in attacks against hard targets.

Given the statistical results of this study, the findings broadly suggest the United Nations is faced with a moral hazard. The United Nations has publicly and explicitly state it will not engage in counterterrorism operations yet has institutionalized a moral obligation to protect civilians during armed conflict through increased resources, equipment, and clear and credible mandates. While I show it has done so positively against soft targets, it has largely poorly protect civilians in relation to hard targets. Therefore, at this crossroad lies whether or not UN peacekeeping operations will further implement counterterrorism measures to its present and future missions at a risk of compromising impartiality for the sake of ensuring the mission is addressing the safety of civilians to the best of its ability. The following section elaborates on this dilemma rooted in the implications derived from this research, future directions of the academy and recommendations for policy.

5.2 Areas for Future Research and Consideration

While this study contributed to the understanding of UN peacekeeping and violence, there are several areas that are left underexplored. First, this study focused largely on the operational activities

conducted UN military troops. However, UN missions are complex efforts that pillared across multiple line efforts. In many missions, civilians make up a considerable portion of non-military UN peacekeeping efforts such as humanitarian aid, governance, rule of law reform, reconciliation efforts, demobilization and reintegration efforts, and civilian job training, among others. Therefore, one could examine how the full spectrum of UN peacekeeping affects the propensity for non-state actors to engage in violence.

This dissertation also, admittedly, focuses only on the utility of violent strategies for non-state actors. However, in many contexts UN peacekeepers are caught in the midst of non-violent protests of civilians and political groups. For instance, seven Nepalese peacekeepers were injured in a day of rioting and protests across Haiti in November, 2010 – largely in response to the cholera outbreak caused by the presence of foreign UN peacekeepers.[63] Therefore, one fruitful avenue of research could explore the how UN peacekeeping affects the efficacy of using non-violent strategies of non-state actors.

Lastly, it is important to consider how we conceptualize and measure UN peacekeeping in our studies. While earlier findings represented a bleak outlook for peacekeeping effectiveness in reducing violence during civil conflict, using a more nuanced, disaggregated measure of peacekeeping – one that provides greater accuracy and precision to the concepts that underpin our theories of peacekeeping effectiveness – allow us to delineate closely the effect of UN peacekeeping on armed actor violence. Therefore, it is vital for future studies to continue to examine peacekeeping operations using a more nuanced, disaggregated measure – possibly one that includes the holistic

[63] See "Protestors in Haiti attack UN peacekeepers in cholera backlash" Mail and Guarian. 16 November 2010. Available at: https://www.theguardian.com/world/2010/nov/16/protestors-haiti-un-peacekeepers-cholera.

approach discussed previously - then merely including the binary indicators that were often employed by earlier studies.[64]

Moving forward, the challenge associated with developing and refining measures of peacekeeping that accurately capture the concepts under examination will largely hinge on data availability and selection. This challenge is particularly acute in developing a comprehensive, geo-referenced dataset on peacekeeping events. During violent civil conflict, the U.N. has incentive to obscure or omit operational details given the imperatives of the security environment and its perception as organization (Clayton et al. 2016). Therefore, what data is released by the UN and is used in our datasets may yield inconsistent results – raising concern of the validity and reliability of the measures (Clayton, 2016). One way to improve our measures of peacekeeping is for researchers to collaborate with United Nations personnel on improving their respective reporting procedures and own data collection efforts. If the UN seeks to make data informed decisions, then researchers must communicate to the organization the imperatives of accurate measures that are publicly available. In conjunction, researchers must continue to validate measures derived from UN reports, resolutions, and articles with media-based publications, non-governmental organizations and civil society organizations. By synthesizing all fronts, data collection efforts can include greater information that allows us to alleviate concerns due to any associated biases.

Ultimately, scholars must decide which measure is most appropriate for their respective study. However, this manuscript recommends researchers to dissuade from previous rudimentary measures and seek to use or incorporate the following datasets as a basis for selecting the most appropriate measure.[65] For example, Kathman (2013) provides a comprehensive dataset that captures the size, composition and contribution of peacekeepers for all PKOs since 1990. This provides information

[64] Again, it is important to note that these earlier studies were largely constrained to data availability and data collection efforts.
[65] For a more exhaustive list of peacekeeping datasets that have or in the process of emerging, see Clayton et al. (2016).

on the mission capacity, and information on which countries provide peacekeeping personnel. Such data allows research to dig deeper into the causal mechanisms in terms of mission capacity and constitution that enable peacekeeping effectiveness, and effectively connect concepts to empirics with greater accuracy and precision. This dataset was vital to the cross-national quantitative analyses in Chapters 2 and 3. Fjedle et al. (2019) provide a geo-referenced dataset on size and location of UN peacekeepers in given conflict. This subnational data allowed for both cross-national comparison and accuracy of testing localized mechanisms. This data was critical to the analyses in Chapter 4.

Other scholars such as Dorussen and Raleigh (2009) have embarked on an even more disaggregated collection effort that focuses on micro-level measures on the *who*, *what*, *when*, and *where* of peacekeepers during conflict. Dorussen and Raleigh (2009) collect geo-referenced data on the location, time, and response to activities conducted by peacekeeping operations during civil conflict. This has allowed researchers to investigate local variations in peacekeeping that are often overlooked using state-year and even monthly measures. Another data collection effort by Bove at al. (Clayton et al. 2016) focuses on the leadership of peacekeeping, and to what extent does leadership of these missions influence the operation's effectiveness. Do peacekeeping operations fail due to mission capacity or to ineffective organizational leadership? Leadership measures provide an alternative measure to assessing different ways in which success and effectiveness are rooted.

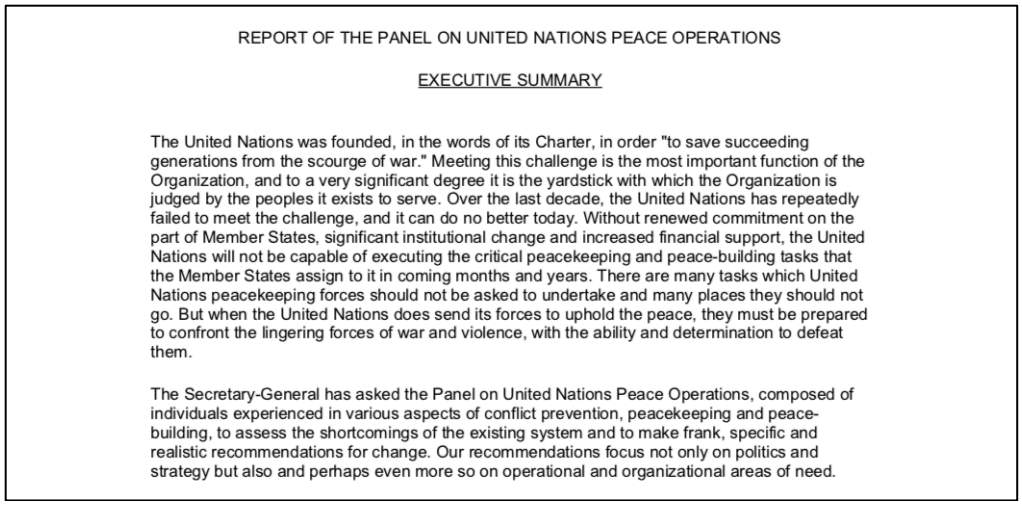
While these various measures are pioneering the way in which scholars analyze peacekeeping and violence, the challenge associated to these various measures, however, is which of these various measures are "better" at allowing us to discern patterns and make meaningful causal explanations with a high degree of accuracy and precision. If our measures are not accurately representing the concepts we are analyzing, then the strength in our predictions and inferences fall under scrutiny and therefore are inadequate for advancing the literature and designing policy prescriptions. If we are to

move forward with research, as King, Keohane, and Verba (1994, p. 153) state, " [the] key point is to use the measure that is most appropriate to our theoretical purposes."

Addressing future areas of research and ensuring we employ the appropriate measures at the proper aggregation is quite topical for academy. If the UN is to continue on its current trajectory in such an expansive role and high-degree of demand, then the academic community must strive to ensure our measures are accurately and precisely representing concepts being theorize in order for us to advance the literature and make data informed decisions for present and future peacekeeping operations.

5.3 Recommendations for Policy and Future UN Peacekeeping: Is Countering Terrorism A Bridge Too Far?

In the aftermath of the UN's failure to prevent systematic killing of civilians in the Rwandan genocide and the inhabitants of Srebrenica in Bosnia and Herzegovina, the United Nations embarked on an extensive effort to address the consequential shortcomings of its inability to prevent human suffering and make recommendations to increase effectiveness of future UN peacekeeping operations. The result, known as the "Brahimi Report" (2000), called for several extensive recommendations and renewed political commitment to meet the challenge that underlines the founding motive of the United Nations, "to save succeeding organizations from the scourge of war" (Figure 5.2).



REPORT OF THE PANEL ON UNITED NATIONS PEACE OPERATIONS

EXECUTIVE SUMMARY

The United Nations was founded, in the words of its Charter, in order "to save succeeding generations from the scourge of war." Meeting this challenge is the most important function of the Organization, and to a very significant degree it is the yardstick with which the Organization is judged by the peoples it exists to serve. Over the last decade, the United Nations has repeatedly failed to meet the challenge, and it can do no better today. Without renewed commitment on the part of Member States, significant institutional change and increased financial support, the United Nations will not be capable of executing the critical peacekeeping and peace-building tasks that the Member States assign to it in coming months and years. There are many tasks which United Nations peacekeeping forces should not be asked to undertake and many places they should not go. But when the United Nations does send its forces to uphold the peace, they must be prepared to confront the lingering forces of war and violence, with the ability and determination to defeat them.

The Secretary-General has asked the Panel on United Nations Peace Operations, composed of individuals experienced in various aspects of conflict prevention, peacekeeping and peace-building, to assess the shortcomings of the existing system and to make frank, specific and realistic recommendations for change. Our recommendations focus not only on politics and strategy but also and perhaps even more so on operational and organizational areas of need.

Figure 5.2 Excerpt from the executive summary of the "Brahimi Report".
Source: United Nations Department of Peacekeeping, Executive Summary of the Brahimi Report.

The report admittedly acknowledges that there are many tasks which UN peacekeeping forces should not undertake, but expresses the notion that if UN forces are sent to a conflict – particularly those where there is no peace to be kept – that peacekeepers must be prepared to confront and defeat the gamut of violence that often plagues the conflict landscape. Since the institutionalization of the 'Brahimi Report', the UN has made significant strides and progress to ensuring the safety of civilians and the prevention of systematic killing that was characterized by its failure in the 1990's. In fact, recent studies provide robust support that UN peacekeepers with sufficient capacity and composition are able to effectively reduce violence during and post-civil wars. Despite recent notable successes in the aftermath of its failures, the UN, I argue, is once again at a crossroads in its ability to effectively "confront the lingering forces of war and violence, with the ability and determination to defeat them."

As this study demonstrates, UN peacekeepers are on the frontline against non-state actors who utilize terrorism as a tactic. Additionally, I show clearly that increases in UN troops are associated with increases in terror attacks during active civil conflict. This is problematic given the UN has publicly stated it will not conduct counterterrorism operations, yet there is greater demand from the

international community for the UN to maintain security and protection. The objectives that UN peacekeeping missions wish to accomplish and how these objectives are achieved are often in tension with one another. Despite this tension this study optimistically finds that despite an increase in attacks, most attacks occur against hard targets.

While the following propositions[66] do not necessarily serve as a panacea for reducing violence, peacekeeping operations should, however, look to improve along three fronts to combat terrorism in civil conflicts:

First, PKOs need to enhance mission capability and capacity through greater flexibility with distinct provisions in mission mandates. This will allow peacekeepers to respond quickly when violence escalates in order to effectively and efficiently ameliorate any threat.

UN mandates should look to adopt rules of engagement that allow UN troops to immediately address hostile threats that potentially compromise the security of civilians and derail local and national peace efforts. Such provisions would further include pre-emptive efforts that authorize UN troops to conduct offensive operations in an effort to take initiative and achieve relative gains prior to the situation exacerbating.

Second, peacekeeping operations should look to ensure proper equipment and allocation of resources for counterinsurgency and counterterrorism operations.

The ability to conduct accurate intelligence, surveillance, and reconnaissance will allow peacekeeping forces to improve information asymmetries and facilitate operations that are informed decisions despite operating in an uncertain, volatile environment. In the case of Mali, the

[66] Blue highlighting for the three propositions is added to emphasis key recommendations for improving UN peacekeeping operations.

introduction of Western troops add important capabilities that have typically lacked in previous peacekeeping missions such as better trained and equipped intelligence units, advanced intelligence, surveillance, and reconnaissance platforms such as lightweight drones, helicopters such as the CH-47 Chinook for rapid deployment of troops, transportation and supply, and attack platforms such as the AH-64 Apache attack helicopters for close combat attack and reconnaissance and surveillance (Karlsrud, 2015: p. 47). The introduction of these capabilities, combined with a robust and reinvigorated mandate, have demonstrated piloted success in the case of the DRC when the UN reduce the imminent threat posed by M23 rebels.

Lastly, the UN should reassess current UN peacekeeping doctrine in order to meet greater mission demands. When peacekeepers cannot meet their mission requirements, they risk becoming part of the conflict when they should be preventing it.

Developing peacekeeping missions to meet the difficulties of the complex and ambiguous conflict environment remains a challenge for policymakers and the UN's ability to safeguard human security. While recommendation include expanded mandates that afford the ability to conduct offensive operations to reduce violence, UN peacekeeping must balance the role of maintaining security while facilitating the political arena in order to afford belligerents an alternative means to violence. However, contemporary UN peacekeeping mandates have often blurred the lines between peacekeeping, stabilization, counterinsurgency, and counterterrorism. It is important, however, that UN missions maintain sight of the political process and carefully combine military and political approaches. There it is recommend that the United Nations publicly and institutionally recognize that terror tactics will be met with credible and costly consequences. It is these costs, underlined through direct military intervention and coupled with political ramifications, that will deter non-state actors from pursuing such tactics towards political dialogue.

APPENDICES

APPENDIX A (CHAPTER 2)

As briefly discussed in Chapter 2, I want to ensure my model is performing in line with the previous literature. To do this, I reexamined my full model using battlefield fatalities as the dependent variable. The model employs a negative binomial regression and performs in the direction as expected and is statistically significant, as supported by previous studies (Hultman, Kathman, and Shannon, 2014). As expected, the coefficient estimates listed in Table A.1 demonstrate that increases in monthly UN Troops during active armed conflict is associated with a decrease in battlefield violence. Generally, all other covariates perform in the expected direction as maintained in existing literature. This, again, highlights that as UN troops increase in size, their respective ability to impose costs and limit opportunity for battlefield contestation improves. By way of these mechanisms, we can observe a decrease in the number of fatalities associated with battlefield violence as the number of troops increases. I also conduct a post-estimation of the model to assess the magnitude of the effect of UN Troops on battlefield violence (Figure A.1). The post-estimation follows closely to previous empirical simulations conducted in existing studies – as the number of troops increase monthly, there is a decrease in battlefield fatalities. The relationship seems rather robust as the inferential uncertainty remains fairly tight across the range of predictions.

Table A.1 Effect of peacekeeping personnel on battlefield violence in civil conflict, 1992-2011

Variable	Model 1
UN Troops (*t* -1)	**-0.085*** **
	(0.026)
UN Police (*t* -1)	-0.261
	(0.241)
UN Observers (*t* -1)	**2.508** **
	(0.872)
Ceasefire	**-0.482** **
	(0.154)
Rebel Strength	**0.248***
	(0.104)
No. of Rebel Groups	**0.148*** **
	(0.024)
Biased Intervention	0.028
	(0.149)
Battle Deaths (*t* -1)	**0.003*** **
	(0.0002)
Population (ln)	0.109
	(0.078)
GDP per capita ($ US) (ln)	**0.482** **
	(0.088)
UNSC Agreement	**-0.651***
	(0.320)
Regional PKO	0.098
	(0.169)
Country Size (ln) (sq km)	-0.064
	(0.054)
Adverse Terrain	**2.290*** **
(% Forested)	**(0.356)**
Constant	-1.179
	(0.947)
Observations	2311
Countries	28
AIC	17677

* p<0.05, ** p<0.01, *** p<0.001

Note: Standard errors reported in the parentheses.

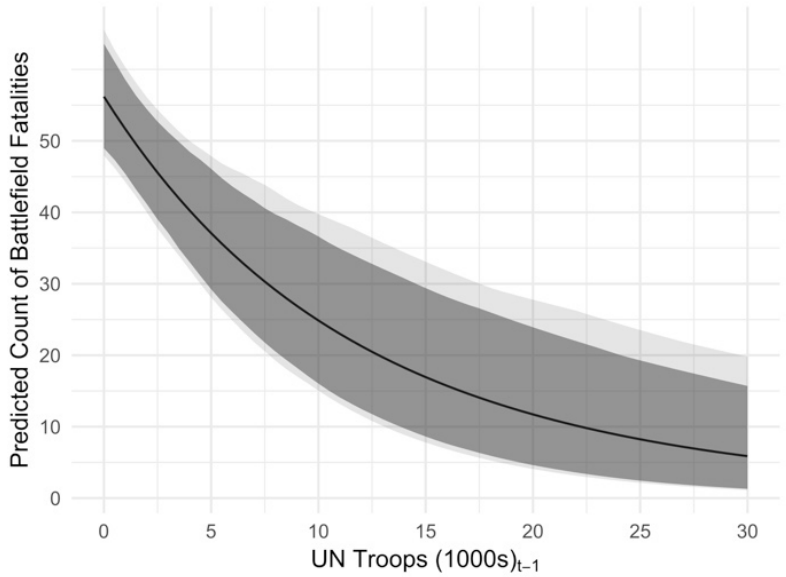


Figure A.1 Predicted count of battlefield fatalities as UN military troops increases in size (monthly) based on scenarios where all variables are held to either their mean or median values. The 90 percent interval of each distribution is shaded in dark gray and the 95 percent in a lighter gray color.

Below I provide a model criticism plot (Figure A.2). This innovative graphical representation allows us to find observations that are leading to poorer model performance (Colaresi and Mahmood, 2017). The goal is to visualize when our forecast is distant from the observed value, where the plot visualizes discrepancies between a dichotomous target and a forecast by plotting the forecast values on the x-axis for each observation (Colaresi and Mahmood, 2017). These are then colored by the observed value, no attack (blue) and attack (red). The y-axis rank-orders the model's forecasts from lowest to highest value. The distribution of the forecast values is on the x-axis with a separation plot on the y-axis (Greenhill, Ward, and Sacks, 2011). Overall, the model performs modest, at best. Using the training set, the model predicted several months of the Sudanese conflict as a highly probable time and place for a terror attack, for example. The model also predicted, incorrectly, that several months of conflict in Democratic Republic of the Congo (Zaire) were relatively safe and unlikely to experience a terror attack in that given month.

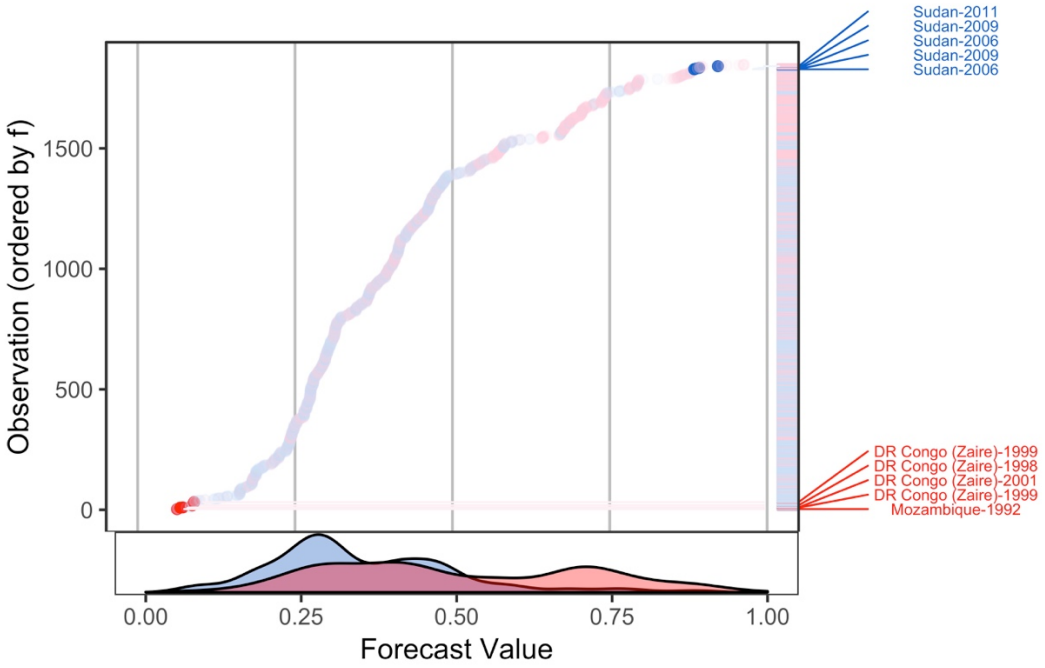


Figure A.2 Model criticism plot for the probability of observing a terror attack in a given month.

APPENDIX B (CHAPTER 3)

When examining the effect of UN troops on total terror attacks, the count stage predicts similar directions as the models in the previous chapter. As the number of UN troops increase in civil conflict there is an associated increase in the number of terror attacks. UN police is statistically significant and negative, suggesting as the number of UN police increase there is a decrease in total terror attacks. Interestingly, rebel strength is associated with an increase and is statistically significant. This indicates that terrorism is not just a weapon of the weak, but a calculated means as the conflict landscape evolves. Battlefield deaths is associated with an increase in total attacks. The remaining controls are in the expected direction as suggested and demonstrated in Chapter 2.

Table B.1 Effect of peacekeeping personnel on terrorism in civil conflict, using ZINB 1992-2011

Variable	Model – Total Target	
	Count Stage	*Inflation Stage*
UN Troops (*t* -1)	**0.056****	**0.121***
	(0.021)	**(0.060)**
UN Police (*t* -1)	**-0.671*****	**-108.005†**
	(0.193)	**(63.848)**
UN Observers (*t* -1)	**-4.663*****	-7.490
	(0.867)	(7.639)
Ceasefire	0.051	**2.069†**
	(0.170)	**(0.770)**
Rebel Strength	**0.264***	-0.284
	(0.133)	(0.337)
No. of Rebel Groups	-0.022	0.036
	(0.024)	(0.356)
Biased Intervention	**-0.358***	-1.137
	(0.145)	(0.880)
Battle Deaths (*t* -1) (ln)	**0.147*****	**-0.241****
	(0.022)	**(0.087)**
Population (ln)	**0.452*****	-0.431
	(0.085)	(0.411)
GDP per capita ($ US) (ln)	**1.770*****	**3.159*****
	(1.022)	**(0.953)**
UNSC Agreement	**0.793†**	0.344
	(0.286)	(0.932)
Regional PKO	**1.736*****	**1.700****
	(0.160)	**(0.570)**
Country Size (ln) (sq km)	**-0.618*****	**9.145*****
	(0.057)	**(2.290)**
Adverse Terrain (% Forested)	**-1.463*****	**20.621*****
	(0.436)	**(3.901)**
Observations	2311	
AIC	5110.12	

† p <0.10, * p<0.05, ** p<0.01, *** p<0.001

Note: Standard errors reported in the parentheses. Blue color added to emphasize UN peacekeeping variables.

APPENDIX C (CHAPTER 4)

In this appendix, I provide a number of extensions to the main findings presented in Chapter 4. I provide additional qualitative evidence that illustrates the spatial and temporal trends in the data, both across the African landscape and with a focus on Sudan. I provide additional models that examines alternative outcome variables and conduct an additional out-of-sample estimation, focusing on attacks against soft targets.

Figure C.1 illustrates the yearly number of UN peacekeeping troops and terror attacks against both hard and soft targets. The figure is particularly useful in identifying the unique clustering of terror attacks and UN peacekeepers.

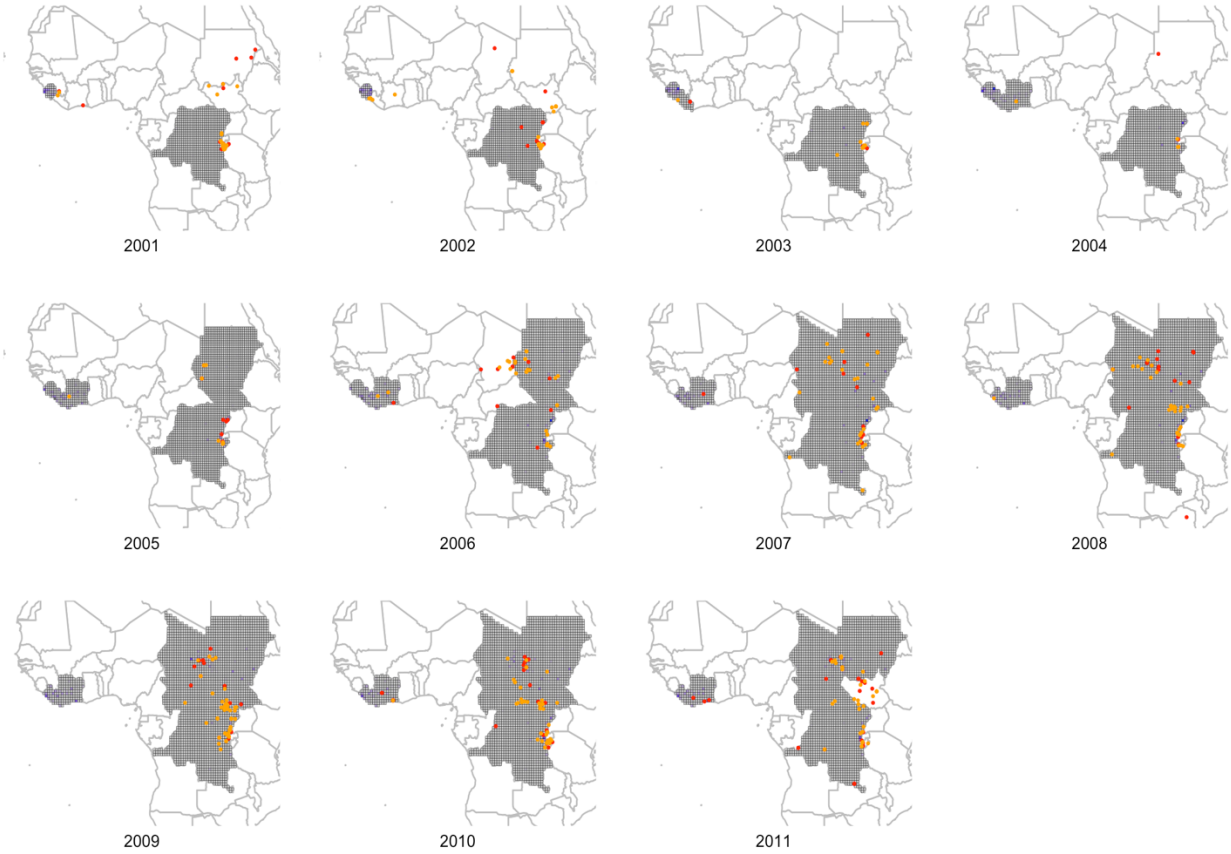


Figure C.1 Average number of UN peacekeeping troops (blue) and terror attacks against hard targets (red points) and soft targets (orange points) in a given grid between 2000-2011.

Table C.1 provides the model estimates using a zero-inflated negative binomial with total targets as the outcome variable. The number of UN troops in a given is not statistically correlated with total terror attacks. However, the number of UN troops in neighboring cells of given location is statistically associated with a decrease in number of total terror attacks. The model also suggests that as the number of battle deaths increases, there is increase in frequency of terror attacks – in line with existing studies (Hultman, 2007). Previous month terror attacks is statistically significant and positive. Interestingly, population is statistically significant, but negative. This might suggest in context of peacekeeping, we could expect significant number of "blue helmets" to be co-located in areas with a high population concentration, such as major cities.

Table C.1. Effect of peacekeeping personnel on terrorism in civil conflict, 2000-2011

Variable	Model – Total Target	
	Count Stage	*Inflation Stage*
# UN Troops$_{i,t-1}$	0.018	**-0.194*** **
	(0.016)	**(0.052)**
# UN Troops$_{i,j,t-1}$ (Neighbor Cells)	**-0.033*** **	**-0.072*** **
	(0.009)	**(0.018)**
Inverse Distance Troops	-0.211	**-1.639*** **
	(0.383)	**(0.458)**
Battle Deaths$_{i,t-1}$ (ln)	**0.608*** **	0.112
	(0.161)	(0.256)
Total Terror Attacks$_{t-1}$	**0.758** **	**-2.581** **
	(0.262)	**(0.810)**
Rebel Strength	-1.414	0.116
	(0.410)	(0.454)
Population (ln)	**-0.329***	**-0.650*** **
	(0.128)	**(0.148)**
GDP per capita ($ US) (ln)	0.581	0.085
	(0.237)	(0.258)
% Mountainous	**3.398*** **	0.560
	(0.508)	(0.597)
% Forested	-0.111	-1.293
	(1.014)	(1.300)
Road Density	0.368	**-2.795***
	(0.792)	**(1.278)**
Distance to Capital	-0.197	**-0.856*** **
	(0.115)	**(0.181)**
Constant	-2.811	**16.641*** **
	(2.295)	**(2.980)**
Observations	188978	
AIC	3707.47	

* p<0.05, ** p<0.01, *** p<0.001

Note: Standard errors reported in the parentheses. Blue color added to emphasize UN peacekeeping variables. Gray added to emphasize conflict dynamic.

I conduct a post-estimation of the neighboring UN troops to assess the substantive effect of the covariate on the outcome variable. Using a similar technique employed in Chapter 4, I find that as number of UN troops in neighboring spaces increases, there is a decrease in the predict count of total targets. This is relatively in line when examining qualitatively the spatial distribution in Sudan (Figure C.4).

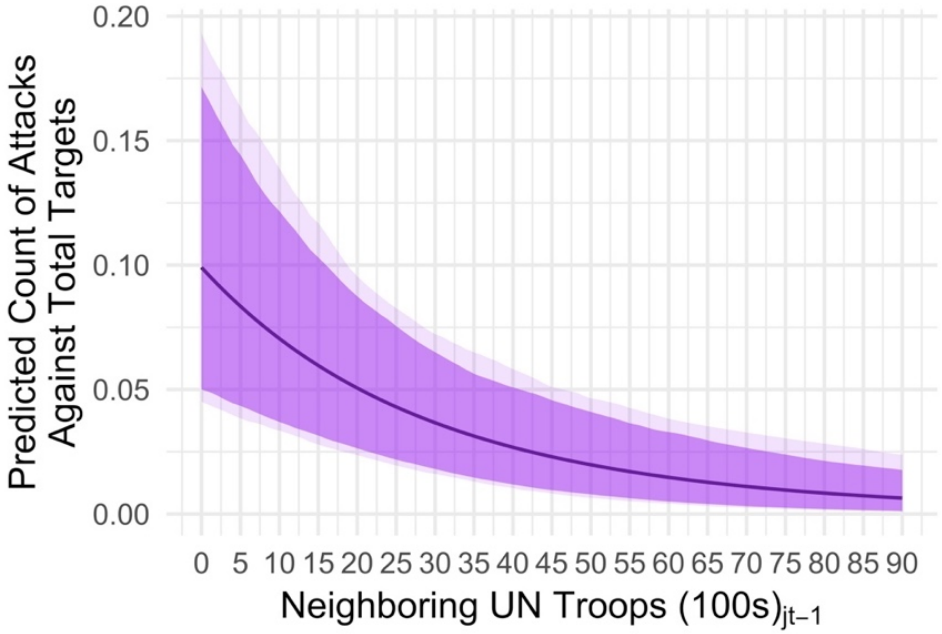


Figure C.2 Predicted count of terrorist attacks against total targets (purple) as UN military troops in neighboring cells increases in a given space and size (monthly) using count stage of ZINB where scenarios of all variables are held to either their mean or median values. The 90 percent interval of each distribution is shaded in dark color and the 95 percent in a lighter color.

Table C.2 provides the coefficient estimates from using a logistic generalized additive model. The model is similar to that employed in the main empirics, expect that it employs a binomial link function. Concerning the outcome variable, soft target (model 5), UN troops in neighbor cells is negative and statistically significant. This relationship suggests that as the number of UN troops increase in neighboring cells, there is a decrease in a probability that a terror attack against a soft target will occur. Battle deaths is statistically significant and positive – in line with previous research. Terror attacks in the previous month are statistically significant and positive, suggesting increases in total terror attacks leads to increases in attacks against soft targets. Regarding other confounding variables, increases in proportion of forested terrain and density of roads is statistically significant and positively correlated with increases in the probability of observing an attack against a soft target. Increase in distance from the capital is negative and statistically significant.

Concerning terror attacks against hard targets only a few variables are correlated with an increase in the probability of observing an attack against a hard target. The inverse distance of peacekeepers is positive and statistically significant. Previous terror attack is positive and statistically significant. Increase in size of population is correlated with a statistically significant increase in probability of observing an attack against a hard target. All other covariates are, surprisingly, null.

Table C.2 Effect of peacekeeping personnel on terrorism in civil conflict, 2000-2011 using Logistic Generalized Additive Model Regression

Variable	Model 5 – Soft Target	Model 6 – Hard Target
	GAM	*GAM*
# UN Troops$_{i,t-1}$	0.009	0.025
	(0.02)	(0.017)
# UN Troops$_{i,j,t-1}$ (Neighbor Cells)	**-0.022****	-0.009
	(0.008)	(0.009)
Inverse Distance Troops	**0.881*****	**2.591*****
	(0.024)	**(0.308)**
Battle Deaths$_{i,t-1}$ (ln)	**0.412*****	0.180
	(0.104)	(0.161)
Total Terror Attacks$_{t-1}$	**1.129*****	**1.068*****
	(0.200)	**(0.244)**
Rebel Strength	0.008	0.518
	(0.317)	(0.533)
Population (ln)	0.122	**0.491****
	(0.115)	**(0.165)**
GDP per capita ($ US) (ln)	-0.492	0.633
	(0.381)	(0.486)
% Mountainous	0.481	-1.271
	(0.504)	(0.675)
% Forested	**2.017***	-0.172
	(0.840)	(1.208)
Road Density	**1.608***	1.498
	(0.669)	(0.942)
Distance to Capital	**-0.470****	0.328
	(0.157)	(0.222)
Intercept	-5.334	**-26.001*****
	(3.043)	**(5.025)**
EDF $s(long_i,lat_i)$	28.52***	28.52***
Time FE	√	√
Observations	188978	188978
Deviance Explained	0.25	0.34

* p<0.05, ** p<0.01, *** p<0.001

I assess the substantive effect of UN troops in neighboring cells using a simulation-based approach (Figure C.3). Using a similar technique as employed in Chapter 4, I find that as the number

of UN troops in neighboring cells increases in size, there is a decrease in probability of observing an attack against a soft target – similar to the trend presented in main findings.

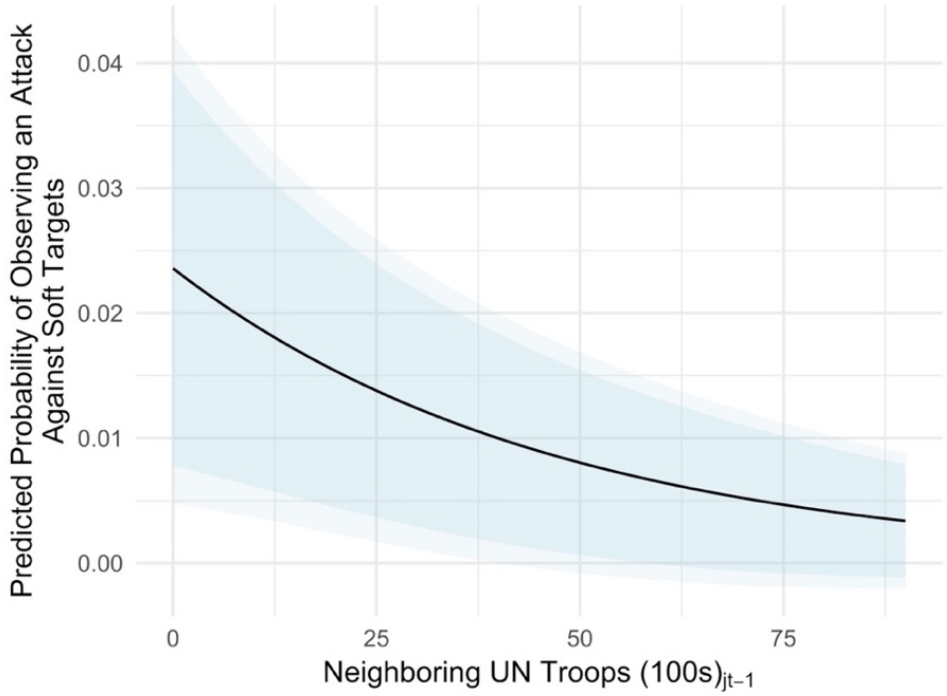


Figure C.3 Predicted probability of a terrorist attack as UN troops in neighboring cells increases in size in a given space-time based on scenarios where all variables are held to either their mean or median values and coefficients are derived from the randomly drawn training set. The 90 percent interval of each distribution is shaded in dark blue and the 95 percent in a lighter blue color.

Next I conduct an in-depth quantitative assessment of Sudan to assess the robustness of the models. First, I examine qualitatively both the spatial and temporal trends from the civil war in Sudan (Figure C.4). In the bottom portion of the figure, we observe temporally the propensity for groups to use terror attacks against soft targets. However, as the number of UN troops increased dramatic size following 2007, the amount of attacks against hard targets follows closely to the slope of UN troops. Concurrently, the attacks against soft targets precipitates. Spatially top portion of the figure, we can observe that most attacks against soft targets (yellow points) generally occurred outside the geographical reach of troops. However, frequency of attacks against hard targets

occurred in spaces containing sizeable UN troops. Again, this qualitatively highlights the notion of non-state actors consider the military and political costs in using terror tactics and subsequent target identification when carrying out such violence.

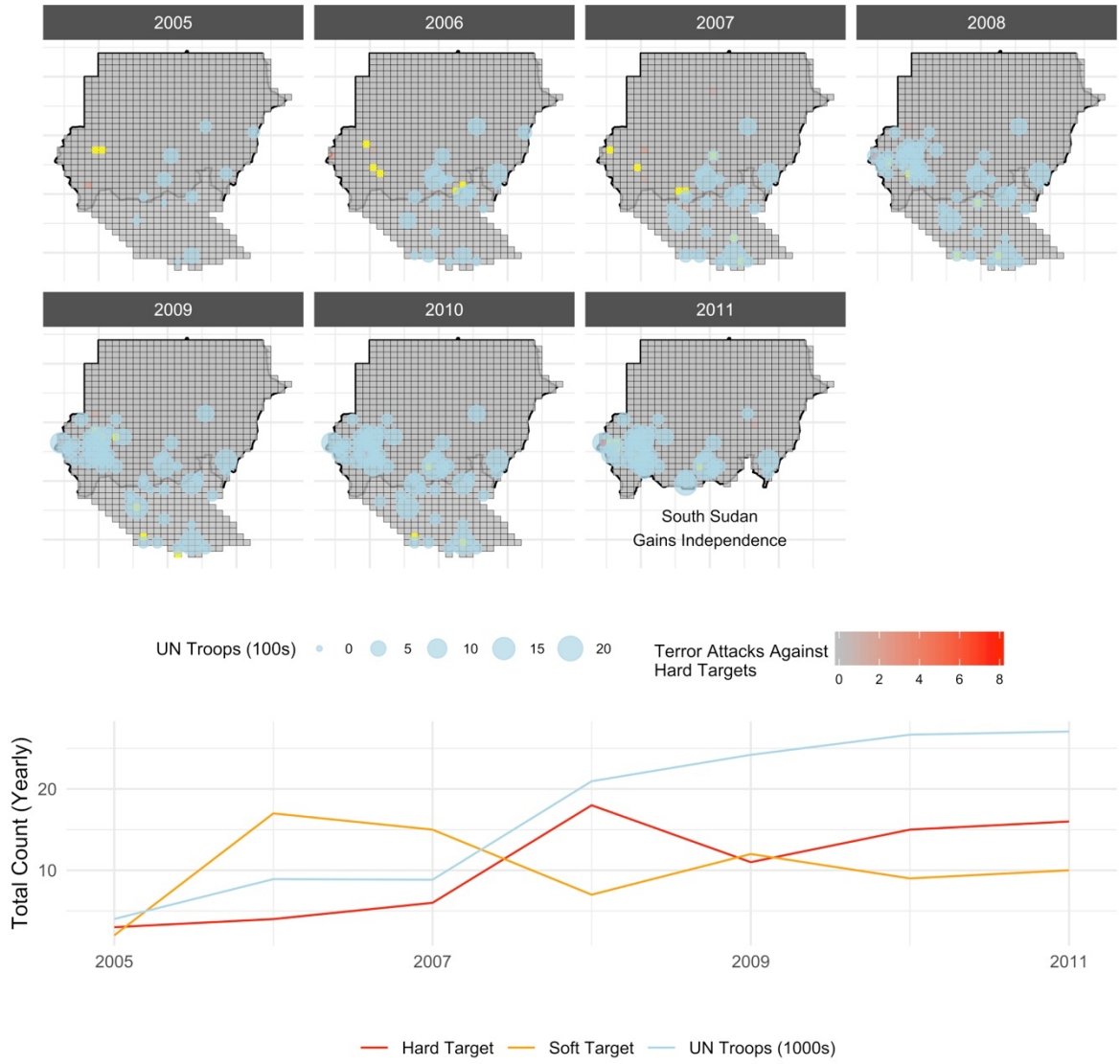


Figure C.4 Qualitative evidence from Sudan, 2005-2011 using spatial and temporal data. Yellow points represent instances of attacks against a soft target.

Next, I conduct an out-of-sample estimation to see how the model is able to predict the number of attacks against soft targets in a given space-time using an omitted slice of the data corresponding to Sudan. To examine this, I withhold some of the sample data from the model estimation process,

which in this case, is all grid cells in Sudan for all of 2011. I then use the remaining data (n=181,754 observations) as a training set to estimate the parameters of the model using the same estimation technique as Model 3 (Quasi-Poisson GAM). The statistical results yield nearly the same estimates as presented in Model 3, Table 4.4. UN troops in neighboring cells is negative and statistically significant with a coefficient value of -0.025 ($p < .05$). Using these coefficient estimates, I then predict the fitted value using the test data (n=7,896 observations), which in this case, is all grid cells in Sudan for every month in 2011. The results are graphically represented in Figure C.5. The model performs modest, at best. The model appears to over-predict in several months where an observed attack did not occur (i.e., February, March, April, and July). It does fairly well in predicting attacks in September, October, and November. While the predicted count is relatively small, the predicted value nevertheless highlights spaces that experience an attack against a soft target.

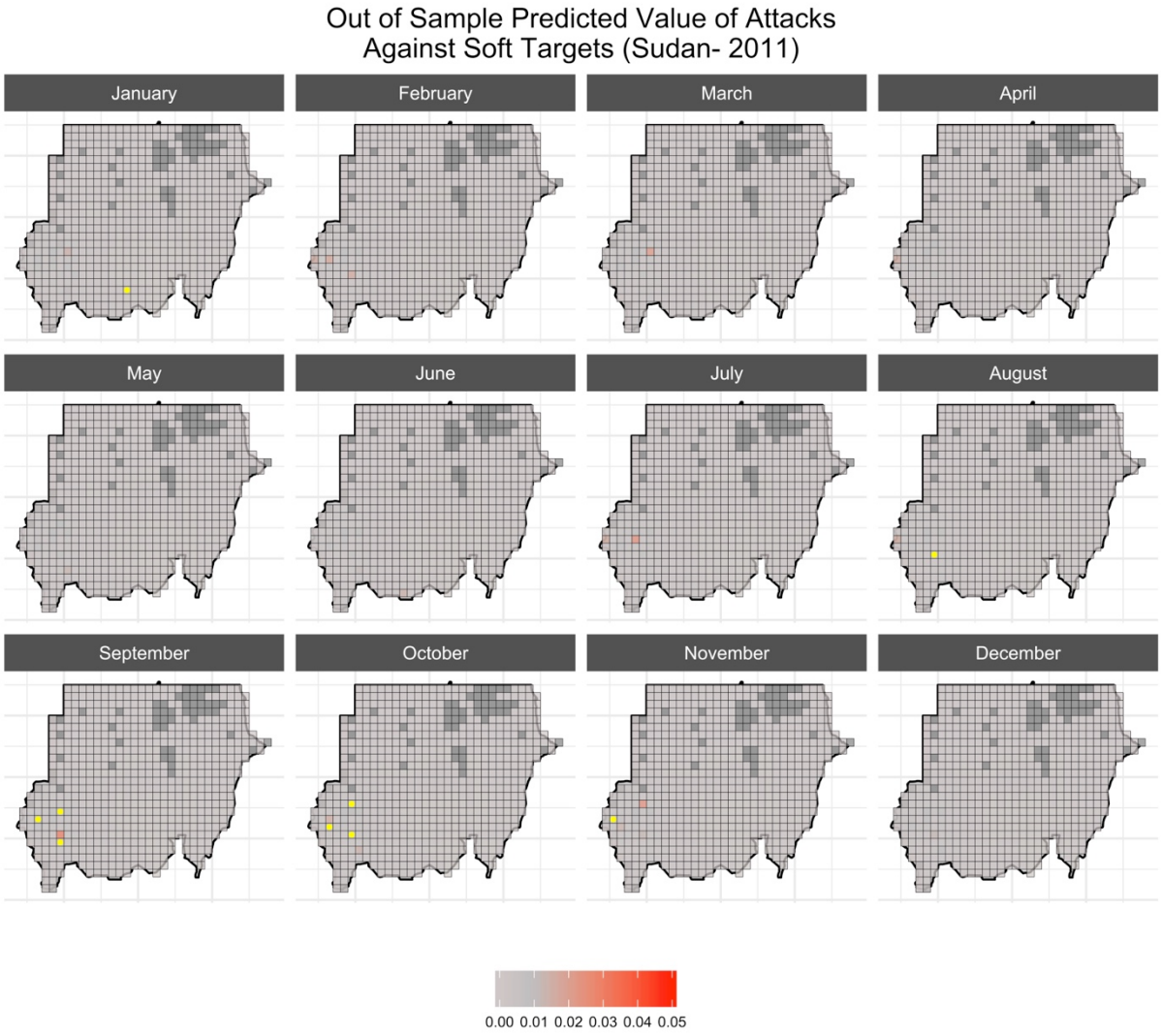


Figure C.5 Out of sample predicted count of terrorist attacks against soft targets (red shade) in a given space using a Quasi-Poisson GAM. Yellow points represent an attack against a soft target in a given grid cell. Dark gray grid cells indicate missing data for that respective space. Peacekeeping locations omitted due to clarity.

APPENDIX D (BIOGRAPHICAL SKETCH)

Thomas William Bentley was born in Augusta, Georgia and raised in Minnesota. He earned a Bachelor of Arts degree in Political Science with emphasis in International Relations and minors in International Studies, History, and International Relations from the University of Iowa in 2013. Upon graduation, he commissioned as an Engineer officer in the U.S. Army as a Distinguished Military Graduate. In 2016, he earned a Master of Arts degree in Political Science from Michigan State University. His military education includes Engineer Captains Career Course, Engineer Basic Officer Leader Course, Basic Combat Training, Air Assault, and the Sapper Leader Course. In 2016, he was recognized as Junior Officer of the Year by the Iowa National Guard Officer's Association. He has had the opportunity to serve overseas with the military in South Korea and Ukraine and in a variety of leadership and staff positions to include Platoon Leader, Executive Officer, Company Commander, and Brigade Plans Officer. He currently serves with the US government, working in national security. His research interests include causes, dynamics, and outcomes of intrastate conflict; UN peacekeeping operations; counterinsurgencies and insurgencies; terrorism; and regional interests in Africa, Middle East and North Africa, and Central/Eastern Europe.

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