Frontlines in Irregular Warfare: Territorial contiguity and the incidence of civilian violence episodes

Deschodt, Nicholas

Citation

Deschodt, N. (2024). *Frontlines in Irregular Warfare: Territorial contiguity and the incidence of civilian violence episodes*.

Version:	Not Applicable (or Unknown)
License:	License to inclusion and publication of a Bachelor or Master Thesis, 2023
Downloaded from:	https://hdl.handle.net/1887/3765187

Note: To cite this publication please use the final published version (if applicable).

Student: Nicholas Deschodt – s3177688

Supervisor: Dr. Jonah Schulhofer-Wohl

Bachelor Project, Civil Wars in Theory and Practice

Bachelor Thesis

Frontlines in Irregular Warfare:

Territorial contiguity and the incidence of civilian violence episodes

Leiden University

Faculty of Social and Behavioural Sciences

– International Relations and Organizations (BSc) –

May 24th 2024

Embargo statement: (a) public

Word count: 8312 Words

APA 7th Edition reference style

Warrenpoint and Newry are two small towns of Northern Ireland, about fifteen kilometres from one another. Amidst the Troubles that shattered the country, Newry saw the occurrence of fifty-three violent attacks that resulted in deaths. Strikingly, Warrenpoint experienced only two incidents of this nature. A commander of the Irish Republican Army recounted that the difference in levels of violence between the two places was so striking that it felt as if they were located in different countries (Collins, 1999, p. 98, as cited in Kalyvas, 2006, p. 2). What explains the difference of violent events occurrence between the two cities, in spite of their immediate proximity? Why do localities close to one another are exposed to so contrasting levels of violence? Answering these questions require to dive into the micro-dynamics of civil conflicts, look at how territories interact with each other and investigate the way geographical manifestations of a civil war shape the belligerents' use of violence. The grounding of insurgencies in the civilian population, as it is generally understood, and the ensuing use of civilians for armed actors' strategic purposes points to a precision of the question. What explains variations in the exercise of violence against civilians between areas newt to each other? When investigating determinants of civilian violence during civil wars, Richardson (1952, p. 220) offers an uncontroversial premise: "The obvious reason why the murderer and his victim were usually subjects of a common government is their localization". While this claim might appear trivial, it underlines a common denominator for civilian violence to occur, that is the geographical proximity between the perpetrator and the target. It assumes that regardless of whether the belligerent is an insurgent or an incumbent, if he wants to kill, he should be able to have the target in his line of sight.

In inter-state conflicts, a dichotomy exists between 'the frontline', where combat takes place, and 'the rear' supposed to be exempt of direct violence, suggesting a link between contiguous areas held by adversaries and the exercise of violence. Bearing the same logic in mind, in civil war, territories next to each other but controlled by opposing armed actors should display different dynamics of civilian violence than territories surrounded by allied locations. This contribution will thus investigate the following question:

What is the effect of territorial contiguity on the level of civilian violence?

The first part of this paper discusses and compares the different approaches that exist in the field concerning civilian violence, territory in civil war and insurgency. From these insights of the literature, I develop a theory of contiguity in irregular warfare, in which I argue the applicability of a conceptualization of frontlines in un-conventional asymmetric civil wars. Based on micro-level data of three Afghan provinces between 2017 and 2021, I statistically test this theory with two sets of models. The findings reveal that a form of frontline is formed along the course of the conflict, where violence against civilians is higher than in other areas.

Literature review:

From the outset of the study of civilian violence the academia has attempted to answer this simple question: "Why we kill?". Scholars seeking the rationale for harming unarmed individuals have investigated a great diversity of conflicts from conventional to irregular, and yet, fail to provide a consensus. Nonetheless, a large body of the literature rejects the "wanton and senseless" justification of civilian violence, rather, they agree that violence against the unarmed is motivated by war belligerents' strategies (Kalyvas 1999; Valentino, 2014). In line with this trend, this paper assumes an instrumental use of violence against civilians along the development of a civil war.

When investigating determinants of civilian violence during civil wars, Richardson (1952, p. 220) offers an uncontroversial premise: "The obvious reason why the murderer and his victim were usually subjects of a common government is their localization". While this claim might appear trivial, it underlines a common denominator for civilian violence to occur, that is the geographical proximity between the perpetrator and the target. It assumes that regardless of whether the belligerent is an insurgent or an incumbent, if he wants to kill, he should be able to have the target in his line of sight. In respect to this analogy, some of the civil war literature focuses on micro level interaction between warring belligerents and civilians, inferring a relationship between actor's presence and the level of civilian victimization perpetrated. One of the first work of this trend is Kalyvas' (2006) *Logic of violence,* where the author develops the control-collaboration model predicting warring parties' type of civilian violence as a function of their level of territorial control. The model stems from the counter-insurgency (COIN) assumption stressing that for a party to win an irregular warfare, it must win the support of the population (Kalyvas, 2006, pp. 174-175).

Such assumptions roots in the COIN literature developed for European colonial empires to manage extra-state wars during the decolonization movement. Both the French and the British identified the need to galvanize the local popular support, as civilians, in addition to provide resources to sustain the warring parties' capability to wage the war, offer a potential solution for the recurrent COIN identification problem (Smith, 2001; Trinquier & Fall, 1961, p. 41). In context of irregular warfare, the task of identifying foes is more contentious than during conventional warfare, the main issue being that combatants are not explicitly recognizable. Insurgents can hardly be distinguished from the popular masses, neither do they show allegiance to a flag, nor do they wear uniforms differentiating them from bystanders. In short, during irregular warfare, insurgents are more *Fabian* than *Napoleonic* (Biddle, 2021, p. 7). The inherent struggle for an occupier to identify foes during irregular warfare provides a valuable opportunity for the resister. Mao Zedong (2000, pp. 92-93) offers a useful analogy to conceptualize the issue, civilians "may be likened to the water" while insurgents "to the fish who inhabits it". Thus, the popular masses provide a "human camouflage" for insurgents to blend in to avoid the occupier’s detection (Valentino, Huth & Balch-Lindsay, 2004, p. 384).

One may say that if the main concern of the identification problem lies in the blending of the insurgency within the civilian population, then a solution would be to fish by “draining the sea” (Valentino, Huth & Balch-Lindsay, 2004). This logic of simple problems requires simple solutions suggests a silver bullets for the counter-insurgents, that the “civilian sphere hideout” can be denied to insurgents by massacring the local population. Furthermore, victimizing the civilian population can undermines the insurgent’s legitimacy as they often claim that “We fight for the people”(Doãn Quang Khải, 1951). The infliction of indiscriminate violence on civilians would guilt insurgents, as the incidence of violence signals their inability to ensure the security of the local population (Hultman, 2012, p. 167). Additionally, indiscriminate violence would deter civilian to support the adversary (Kalyvas, 2006, p. 150). The collective punishment inflicted, regardless of the victims’ allegiance/support, creates a norm, that to back the adversary is to accept future indiscriminate violence. Thus, indiscriminate violence forces a zero-sum collective action problem onto civilians, everybody has to support the occupier, otherwise, everybody will be punished. Hence, indiscriminate violence would impose a new set of incentives, deterring bystanders to support the opposition while compelling them to denunciate the defectors. While this narrative offers a compelling rationale for war belligerents to engage in civilian violence, the claim that indiscriminate violence is a tool to curb civilian support has been disregarded by the guerrilla literature. Despite benefits of indiscriminate violence, as cited above, most insurgents and COIN strategists agree that indiscriminate violence is not a silver bullet. Che Guevara (1961) notes on terrorism:

> a measure that is generally ineffective and indiscriminate in its results, since it often makes victims of innocent people and destroys a large number of lives that would be valuable to the revolution. […] But the killing of persons of small

importance is never advisable, since it brings on an increase of reprisals, including deaths. (Guevara; 1961, pp. 13-14)

Indiscriminate violence is argued to be a cure worse than the disease. From the civilian perspective, the fear of a collective punishment creates a demand for security, as Kalyvas (2006, p. 157) notes: “Protection emerges as a good only because of indiscriminate violence”. Therefore, civilians, when confronted with the threat of indiscriminate violence, are compelled to seek alternative security providers, which in the context of a civil war, is often the adversary party. Thus the “ugly face” of the occupier backfires. Violence, rather than deterring, compels individuals to defect (Mason & Krane, 1989, p. 188). Such mechanism of shifting civilian loyalties as a consequence of indiscriminate violence is not only understood by scholars, as evidence shows that warring parties are able to leverage indiscriminate violence in order to fuel their support. Ellsberg (1970) offers a useful metaphor to conceptualize insurgents’ provocation. Assuming an asymmetry of violence capability between the incumbent and insurgents, the weakest side can provoke the strongest to resort to indiscriminate violence. In the similar fashion that a judoka uses its opponent’s weight and momentum against them, insurgents can leverage the incumbent’s indiscriminate violence to fuel its popular support (Ellsberg, 1970, pp. 10-23). While this behaviour has traditionally been associated to guerilla tactics, it is not exclusive to them. Lieutenant General Roméo Dallaire (2005, pp. 116) in charge of UNAMIR witnessed multiple simulacrums of civilian massacre that where initially pointing toward the Rwandan Patriotic Front’s (RPF) responsibility. Subsequently, it unveiled that these atrocities had been orchestrated by Habyarimana’s government in the aim of discrediting the RPF cause. Thus, indiscriminate violence is effective to galvanize popular support under the condition that it has to be perpetrated by the adversary (Schutte, 2017a, pp.1612-1620).

Hence, if indiscriminate civilian violence is assumed to lead to greater defection by compelling bystanders to seek for alternative security providers, it can be conversely assumed that providing security leads to greater popular support. This logic is popular among the COIN literature as it allows to achieve counterinsurgent's main objective, popular support. The occupier, to maximize his local support and minimize defection must ensure the provision of security to the civilian sphere. This prompted COIN scholars to develop strategies avoiding civilian victimization while ensuring their protection such as the Heart and Minds doctrine. This doctrine, first developed during the wars of decolonization, assumes that the counterinsurgents have to address and eliminate the grievances fuelling an insurgency. In this views, such grievances are the result of bad governance, and are the reason why rebels took up arms from the beginning (Kilcullen, 2006, p. 111; Hazelton, pp. 83-85). Therefore, the solution for suppressing an insurgency is reforming the government, the so-called good governance. In a materialistic fashion, it is aimed at the provision of public goods and greater political rights to the population. This derives from the assumption that legitimacy originates from the successful distribution of these assets. Security is considered to be one of these public goods that have to be delivered to the population (Joint Chiefs of Staff [JCS], 2018). Indiscriminate targeting of civilians is seen as detrimental to the belligerent engaging in it, as the population perceives no benefit from it (Joint Chiefs of Staff [JCS], 2018, p. 37).

Thus, to undermine the adversary, the warring belligerent must apply a selection criterion when engaging in violence. As indiscriminate violence is assumed to be counterproductive, actors have to be accurate in their targeting to avoid a popular support rift. A precise elimination of defectors and their sympathizers undermines the adversary's capabilities and survivability by eliminating combatant and their source of backing. Additionally successful selective violence would make the perpetrator more legitimate to the eyes of the local population as it displays its ability to accurately punish defectors. Furthermore, selective violence generates the feeling that the perpetrator "has a thousand eyes and a thousand ears" strengthening the pressure not to defect (Degregori, 1998, p. 143; Kalyvas, 2006, pp. 190-191). These considerations suggest greater benefits of accurate violence over indiscriminate violence. However, this circles back to the identification problem: how can the perpetrator of violence determine who is innocent, and who is guilty?

Kalyvas' (2006, pp. 173-174) response lies in his definition of selective violence as a "joint process". The operationalization of violence is perpetrated by one of the civil war contenders, while the selective aspect is enabled by the provision of information from the civilian sphere. Newcomers often lack information on the identities, histories, allegiances of local individuals and on the dynamics internal to localities. Civilian lived their life in such environment, they shaped and remember local stories, thus they are the richest source of information when coming to know who could be a potential defector. Lyall & Wilson (2009) support this claim in their analysis comparing the performance between motorized and foraging militaries. They infer the better performance of foraging forces over their mechanized counterpart thanks to better intelligence collection enabled by greater level of proximity that foraging forces maintain with the local population (Lyall & Wilson, 2009 pp. 73-75). The presence of armed forces might be a condition for better intelligence collection but it does not guarantee collaboration with the civilian basis, as "snitches get stiches". Civilians might be refrained to collaborate with the occupier, as war belligerents compete for their support and for the hunt of defectors (Joint Chiefs of Staff [JCS], 2018, pp. 71-72). Thus, collaborators put themselves in the crosshair of the adversary of the party they are assisting. Additionally, the stigma of the denunciation practice and the fear of counter-denunciation sets up an environment with poor incentives to collaborate (Kalyvas, 2006, pp. 176-179). Therefore, armed forces, to incentivize civilian collaboration, must set up the most secure environment (Trinquier & Fall, 1961, p. 38; JCS, 2018, pp. 57-58, 71, 113-114). From this assumption, Kalyvas (2006) develops the control-collaboration framework, predicting the level of civilian denunciation and subsequently the level of selective violence according to armed forces' level of territorial control. The control collaboration model has extensively been tested, replicated, and extended within the civil war literature (Kalyvas, 2012, pp. 661-665). Bhavnani, Miodownik, & Choi (2011), in their study of the Israel-Palestine conflict points to the flawed assumption of symmetrical distribution of power between warring parties. The significant gap in favor of Israel enabled them to engage in selective violence in territory where the adversary had a high level of control. Other studies point at the inconsistencies of the level of territorial control as a predictor of selective violence. Shapiro & Weidmann (2015) find that the emergence of new technologies enabled civilian-counterinsurgent collaboration to bypass geographical constraints. Insurgents can also benefit from the technological factor. Pierskalla & Hollenbach (2013) highlight that the growing access to telecommunication systems reduce communication capability asymmetries, allowing insurgents for greater monitoring and coordination. These findings suggest limitations to the baseline control-collaboration model to predict the level of intelligence collection, and subsequently the level of selective violence. This forces to relaxes the assumption of civilian information sharing as a driver of civilian violence (Kalyvas, 2012, p. 665).

Another part of the civil war literature argues for non-strategic motives of civilian victimization. Civilian violence is assumed to have little to do with rationality, rather, it is the product of an "ancient hatred" that leads to the incidence of malicious behavior. Such narrative was popular during the 90's to rationalize civilian massacres in Bosnia, Somalia and Rwanda (Valentino, 2014, pp. 91-92; Wood, 2015, p. 16). It is understood that drivers of violence stems from "ancient hatred" rooted in past grievances between inter-ethnic groups asking for retribution (Kaplan, 1993; Huntington, 1996, pp. 29-35). Such approaches were widely criticized for assuming a deterministic behavior based on ascriptive and descriptive characteristics, downplaying the murderers' agency (Muller, 2020, pp. 62-63). Other approaches put their focal point on the structural setting of the conflict, such as insurgents' source of funding, organizational structure, and ideology (Salehyan, Siroky, & Wood, 2014; Manekin, 2020; Thaler, 2012). While these perspectives provide valuable insights on actors' behavior and environment, non-strategic theories are symptomatic of the same shortcoming. Structural settings tend to be static along the development of the conflict, thus they fail to explain variation of civilian victimization over time. As Wood (2015, p. 18) outlines "Structural and organizational theories are unable to answer these questions because they focus on largely static components of an often dynamic conflict environment."

Perhaps the original cause of civilian violence stems from actor's strategy to win the war. A Clauswitzian account of civilian violence could argue that "sometimes mass killing is simply war by other means" (Valentino 2000, p. 47). When politics and military confrontations are not sufficient to alter the other's behavior, then killing the adversary's civilian base might be the game changer. This perspective focus solely on war belligerent's relationship. Such perspective is analogous to Fearon's (1995) model of a rationalist explanation of outbreak and settlement of a war. War is understood as a bargaining game where parties compete for zero-sum excludable goods. In the context of civil war, indivisible goods can encompass a territory, a population, or resources (Humphreys & Weinstein, 2006, p. p.430, Schutte, 2017a; Ziemke, 2008, p. 23-24). Actors are assumed to be rational, thus it is expected that they would resort to a strategy where they expect higher return on investment (Fearon, 1995, pp. 386-388; Boehmer, Gartzke, & Nordstrom, 2004, pp. 8-10). Actors' decision to engage in a specific strategy emerges from a cost benefit calculus. Fearon (1995, pp. 390-401) reminds that such calculus stems from the information available to the actors, it can be one's perception of balance of power, or the resolution of the adversary. However, available information is never complete, as it is in war belligerents' best interest to alter the cost/benefit calculation to their advantage. Thus, they have to rely on their perception (Fearon, 1995, p. 381). For instance, one's assessment of the adversary's military capabilities can be inferred from their past performance on the battlefield (Reiter, 2003, pp. 29-30). Therefore, actors can follow strategies that set the bargaining balance to their best advantage. One of them can be the deliberate targeting of civilians. While targeting civilians does not directly affect the adverse party's capability to fight, a belligerent can see the opportunity to increase his adversary's cost to continue the fighting. On the short run, strategic killing of the civilians can be a cheap tactic. In face of the asymmetry of the armed against the unarmed, this strategy requires little means and poses little risks for the perpetrator. For instance, Hultman (2007, p. 209, 218) finds that insurgents following battle losses can signal their resolution to the incumbent by deliberately targeting civilians. Additionally, insurgents' targeting of civilians can inflict extra political costs for the incumbent to sustain the fighting by following a terrorist logic, as the incidence of civilian victimization indicates the incumbent's inability to protect its constituents (Hultman, 2012, p. 167). Similarly, the incumbent can adopt civilian victimization as a last resort strategy to undermine insurgents' civil support base (Valentino, Huth, & Balch-Lindsay, 2004). While the aforementioned strategies seek to inflict costs to the adversary by targeting civilians, not all strategic move resulting in significant civilian casualties are carried out with the intent to kill non-combatants.

Rather, an actor can determine that the benefit of an operation is greater than the political cost of causing civilian collateral damage. (Schwenkenbecher, 2014, p. 97; Epps 2012, p. 338; Schneider & Bussman, 2012, p. 636). Schneider, Bussman and Ruhe (2012, p. 449) dichotomize between first and second order civilian violence. The former entails the systematic targeting of civilian as a strategy, the latter stands for one sided violence as a biproduct of military operations, suggesting a distinction between violence as an operational mean and violence as an operational end. While disentangling between first and second order violence remains a challenge, as identifying whether the perpetrator willing fully targeted civilians during a military maneuver is a difficult task, Eck & Hultman (2007, pp. 242-244) support that civilian violence increases amidst fighting. Both the massacre and the collateral logic offers compelling arguments on actors' willingness to inflict or accept cost of civilian violence. Yet, such approaches confine predictions of civilian violence to warring parties. Such account looks like an incomplete two-level game. By putting the focal point on war belligerents, it downplays the essential role of civilians in irregular warfare. Only taking into account strategic interactions between them overlooks the relationship between the population and the occupier. Thus, these explanation fails to explain dynamics such as an occupier's hunt for defectors.

As outlined above, one sided violence against civilians can be instrumentalized to achieve military strategies. While these explanations have the merit to underline the fluctuating nature of civilian violence during a conflict, their tendency to posit civilian violence as a tool to achieve military goals tends to overlook why the fighting takes place in the first place. The incidence of internal fighting within the unit of the state indicates the fractionalization of domestic unity. As Clausewitz dictates, "war is an extension of politics by other mean", the emergence of armed forces falling outside of the state's control highlights the challenge to centralized authority (Roxborough, 1994, p. 621). This element is inherent to the definition of civil war, to distinguish combatant from thugs and criminals (Licklider, 1993, p. 9; Sambanis, 2004, pp. 820, 822, 828). Civil war is a competition between politically organized group to uphold their preferred institution, thus it can be conceptualized as a rupture of sovereignty (Sambanis & Schulhofer-Wohl, 2019, pp. 1544-1547). Along the course of a civil war, in addition to achieve military victory, a belligerent must appear capable to impose its *polity.* To achieve success in the competition over sovereignty, one "requires the independence from any outside power and final authority over men who live within certain boundaries" (Strayer, 2011, p. 58). Sovereignty requires to have authority over the people, yet this authority is challenged by other actors. Then, a civil war can be seen as gladiators fighting for an audience, but with the audience inside the Colosseum. The locus of violence is to impose the *polity* to the audience, whether an actor engages in it or not depends on the contextual situation in which the belligerents are. Wood (2010, p. 604) argues that the greater the insurgent force is, the lesser it will engage in civilian violence in order to maintain its level of support. Conversely, the weaker the group is, the more associated they are with a terrorist repertoire of violence, with the goal to punish defectors (Wood, 2010, p. 605). However, De la Calle (2017, pp. 438-439) refutes the latter assumption, his study of political violence in Peru indicating that low insurgent capability is not always associated with terrorist violence, as insurgents can also show restraint to prevent backlashes following episodes of indiscriminate violence. Both coercive and people-centric approaches are the two sides of the same coin, aiming at curbing civilian support towards the belligerents' institution. An actor, following a successful conquest can resort to civilian victimization to coerce them to abide to the set of rules and norms of the new occupiers (Vargas, 2009, p. 127). Conversely when a belligerent loses, violence can be a tool to prevent civilian defection (Ziemke, 2008, p. 30). In this prospect, civilians are seen as "fence-sitters", they will not support one party over the other because of their convincing political claims, rather, they will support the party that they perceive as the most successful: "the nature of the song depends on who is holding the gun" (Ziemke, 2008, p. 31). Thus, to maximize their survival, civilians would comply to the occupying armed force, making geography the main predictor of civilian loyalties as "residence determined which party one belonged to", filling Kalyvas' (2006, pp.147-148) gap of the identification problem (Brinkman, 2003, pp. 217-218)

The contiguity hypothesis.

Throughout history, geography was first understood as a servant of the military field. “God created war so that americans would learn geography”. The study of territorial contiguity has long been a tradition of the interstate conflict research. The field of study has associated contiguity with interstate war onset, explained by the territorial proximity between actors. As the closeness between states increases, so does the number of potential interactions, it is then assumed that it increases the probability of war onset (Vasquez, 1995, p. 278). The idea that frequent interactions lead to a greater likelihood of conflict onset has been delineated by Starr’s (1978) opportunity and willingness framework. Such framework stresses that contiguity provides the opportunity for conflictual interaction (Starr, 1978, p. 368). The other assumed that the condition for fighting to occur is the willingness of parties to engage in a conflict (Starr, 1978, p. 369). While contiguity has been studied for interstate war onset, I argue that the concept can be applicable to civil conflicts. Balcells (2010, p. 292) in her study of the Spanish civil war, identifies frontlines, as the conventional nature of the war allows her to draw a delimitation of the battleground between actors’ respective territory. While it has been assumed that in irregular warfare the distinction between battlefield and non-battlefield is irrelevant as combat locations are uneven, I reject the absolute character of this assumption (Balcells, 2010, p. 296; Kalyvas 2005, p. 91). Rather, I argue that a frontline exists at the limit of controlled territories, it might not take the form of a line, instead, the frontline can be determined by roadblocks, checkpoints or combatants’ cognitive perception and understanding of the fog of war (Kalyvas, 2005, p. 92; Molendijk & Kalkman, 2023, p. 6; Lieberman et al., 2002). Adapting Starr’s (1978) opportunity and willingness framework to the civil war context is straightforward. The willingness assumption is considered constant as actors are already committed to fight, thus, the opportunity element leads us to expect that variation in contiguity will predict the frequency of interactions. Thus, contiguous territories are expected to witness more incidences of violence than a non-contiguous territory.

I supplement the theory by drawing on Boulding's (1962) Loss-of-Strength Gradient (LSG). The LSG considers that an actors' capability to project power decreases for each unit increase in distance from his home base (Boulding, 1962, p. 245). Then, the closer the target is from the home base, the more easily the perpetrator can project his kinetic capabilities. I derive this assumption by relaxing the home base premise, instead I argue that the referent point of the LSG should be placed at the closest territory from the frontline. I support this claim by the upholding that combatants, when traveling within their territory are not as much impacted by the LSG than when they are traveling in a territory occupied by the adversary. As civilian loyalties depend on who is capable to monopolize violence within the boundary of the territory, I expect civilians to assist the occupier in the identification of intruders. For instance, in Taliban controlled areas, civilians alerted the insurgents at the arrival of United State forces using cellphones, pigeon and mirrors (European Asylum Support Office [EASO] 2012, p. 28). Furthermore, in enemy territory, the 'attacker' is less advantaged than the 'defender'. The latter can set up ambushes, fortify their positions or choose a location providing them a comparative advantage (Schutte, 2017b, p. 384). Therefore, I expect that the location where an actor is capable to project the maximum of its power is at the frontline. Thus, territories neighboring the 'frontline' is where the actor have the best tactical advantage to project their power, consequently, the best situation to project violence against civilians. Mixing the opportunity and willingness framework with my derivation of the LSG, I expect that contiguous territories are where actors can more frequently and effectively project their violence. From this extrapolation, I derive the hypothesis:

H1: War belligerents kill more civilians in contiguous territories.

Methodology & Data

The empirical analysis relies on two datasets to test the hypothesis that contiguity leads to greater civilian abuse. To measure changing contiguity along the development of the conflict, I use Roggio's (n.d) *Mapping of the Taliban Control in Afghanistan: Map of Afghanistan's district*. The data covers the Taliban's territorial control from the 1st October 2017 to the 6th September 2021 in Afghanistan. It provides information on which actor controls which territory at the district level. The data typologize territorial control in three categories, between Afghan government, Taliban and contested control. The data coding rules defines a district as controlled when one of the two war belligerents has a significant foothold on the territory. A controlled district indicates that an actor can be "openly administering a district, providing services and security, and also running the local courts." (Roggio, n.d). A contested district indicates that the Afghan government maintains a certain level of control within the district centre but is challenged by Taliban control in the peripherical areas. The data relies on opensource information such as press, government agencies, Taliban and Special Investigator General for Afghanistan Reconstruction (SIGAR) reports. SIGAR data was used until it was discontinued after April 2019. The data is represented on a dynamic map of Afghanistan allowing to examine the distribution of territorial control across the available timeframe.

The Armed Conflict Location and Event Dataset (ACLED) (ACLED; Raleigh and Hegre, 2005) offers georeferenced data on incidence of violence. While its provision on non-lethal incidents would have allowed to investigate other form of violence than killings, systematic inconsistencies in the ACLED geocoding of violence can pose serious threats to the internal validity of the research (Eck, 2012, pp. 131-135). The SIGACT for "significant activities" offers geocoded information on incidence of violence in Afghanistan or Iraq, specifying the initiator of the attack, the type of violence and the record of casualties. However, the 2002-2014 timeframe covered does not overlap with Roggio's *Mapping of the Taliban Insurgency.* The Georeferenced

Event Dataset's (GED) broader coverage does allow to combine data on territorial control across time (Sundberg, & Melander, 2013; Davies, Pettersson, & Öberg, 2023). The data collection is coded and sustained by Uppsala University. The GED only records incidents that led to the death of one or more individual (Sundberg, & Melander, 2013, p. 523). The dataset allows to distinguish between combatant and non-combatant. Civilians are defined as an unarmed individuals who is not an active member of armed, security forces or member of a militia or organized group (Högbladh, 2023, p. 30). While it does not directly indicate the initiator of violence, the GED identifies the dyad involved in the incident, which those recording the civilians as an actor always indicate them as the victim. The GED records incident based on journalistic sources, which can lead to a bias in the reporting as more densely populated cities more susceptible to be covered than non-populated areas (Jenkins & Maher, 2016, p. 45). The decision to use the GED for this study is that the GED informs on which district the episode of violence occurred during the time period covered by *Mapping of the Taliban Control in Afghanistan: Map of Afghanistan's district.* This allows to empirically test the contiguity hypothesis.

Transformation of the data:

As Roggio's data does not directly code district contiguity, I choose to manually code a "contiguity" variable according to the visual representation provided. To make the task workable considering the limited time allowed for this research, I narrow down the focus to three Afghan provinces. The three chosen provinces are Kabul, Khost and Nangarhar. This choice was motivated by the fact that these three provinces are surrounded by the Hindu Kush, the Himalayas and the Balochistan ranges (Snethlage & al., 2022a; Snethlage & al., 2022b). The geological depression of these provinces creates a natural divide from other provinces, which reduces the accessibility to neighbouring provinces, limiting the potential risk of exogenous interferences (Tollefsen, & Buhaug, 2015). The coding rule of the contiguity is constructed based on different 'situations' in which a province can be observed. Rather than coding an actor's contiguity, I decide to code the contiguity from the district's point of reference to limit the number of 'situations'. For instance, regardless of who controls the district, if an actor is fully surrounded by territories controlled by the same actor, it will be coded as "fully contiguous with the same party". In a situation where there are more than two types of district control contiguous to the reference district, the variable is coded according to the largest share of contiguity type. In the situation where the reference district type is contested the contiguity cannot be defined based on its allegiance, I therefore add three more categories for contested districts: majority contiguous with one of the party, full contiguity with one party, even contiguity between both parties. The list of different types of scenarios encountered when coding district's contiguity and the coding sheet are available in the appendix section. The coding takes into account the changing contiguities along the development of the conflict. Whenever a change of contiguity is observed, a new 'phase' is coded for all districts. Thirteen phases are identified in the three provinces between 1st October 2017 and 6th September 2012, they are represented on figure 1 down below.

To respect the temporal sequence of event, the integration of the coding of the contiguity in the GED was made by splitting the GED in thirteen different phases. Split files were merged with the contiguity coding according to the phase of the conflict and the district of the incident, after that, all phases were remerged together. This allows the contiguity variable to respect the changing contiguity environment.

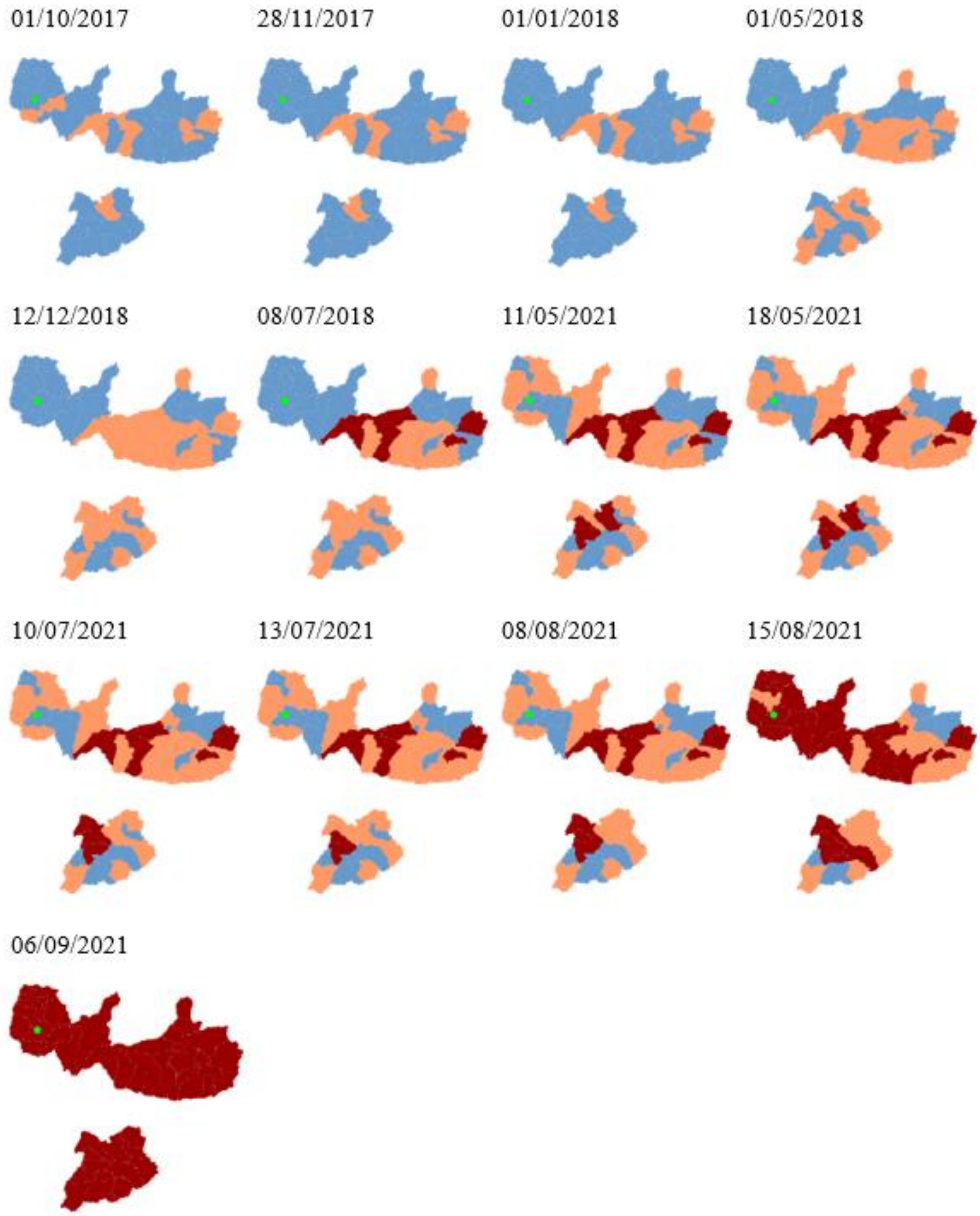


Figure 1. *Control shift in Kabul, Khost and Nangarhar (Nangarhar and Kabul are contiguous)*

Operationalization:

The dependent variable is the number of civilian casualties in a violent event, while the independent is the district contiguity. The dependent variable is measured with the GED's *death_civilians* variable. As the variable counts the civilian casualties, it directly reflects the level of civilian violence. The independent variable is district contiguity. The merging of the data allows to determine the type of district contiguity in which the episode of violence occurred. Hence, the unit of analysis is the conflict event according to the of contiguity type.

The model is complemented with three control variables to minimize the risk of inferring a spurious relationship. The first is the count of combatant deaths. As battles are correlated with higher civilian violence, it is expected that the observation of combatant deaths is associated with incidences of civilian violence (Eck & Hultman, 2007). However, considering the challenge to disentangle first to second order violence, I control for combatant deaths to rule out potential civilian collaterals. To code the combatant death variable, I sum the amount of combatant death from both sides. The second variable that I control for is the population. The conflict literature often suggests population as a control, additionally, controlling for the population can mitigate the media reporting bias over more populated areas (Fearon, & Laitin, 2003; Jenkins & Maher, 2016). I use the World Bank ([WB], 2019) 2016 district level data to control for the population, it might not account for varying levels of population across time, but in the absence of more complete data, I rely on a static census. The third control variable is the Islamic State. In 2014 former members of militant groups such as Al-Qaeda, Tehrik-e-Taliban or the Taliban defected to form the Islamic State of Khorasan (IS-K) (International Centre for Counter-Terrorism [ICCT], n.d.). The group pledged allegiance to the Islamic State and sought to establish an Islamic State in the territory of the Khorasan, referring to the historical eastern region of the Sasanian empire that nowadays overlaps with territories in Afghanistan, Iran, Pakistan and Central Asia (National Counterterrorism Center [NCTC], 2022; Britannica, 2024). While both the Taliban and IS-K aimed at the demise of the central Afghan government, I choose to not put them on the same side of the war master cleavage (Kalyvas, 2006, p. 364; Sambanis & Schulhofer-Wohl, 2019; Schulhofer-Wohl, 2020, p. 406). While both the Taliban and the IS-K took up arms to pursue the Jihad, it is hard to assume that they form a coalition.

As the latter prone the transnational jihad, their goal does not meet those of the former. Rather, they reject the Taliban goal to make Afghanistan the school of "jihad" (Ibrahimi, & Akbarzadeh, 2020, pp. 1092-1093, 1098). Their contentious interactions led to ups and downs in their relationship, resulting in phases were the two cooperated, and other were they fought against each other. (Ibrahimi, & Akbarzadeh, 2020). Additionally, although the IS-K succeed to establish bases, they never managed to gain the total control of a district during the 2017-2021 window (United Nations Security Council [UNSC], 2020, p. 18; "Islamic", 2020; Kermani, 2021). Not accounting for the IS-K poses a risk to the internal validity of the research, as investigating the relationship between territorial contiguity and civilian violence for an actor that did not control any might lead to misleading conclusions. The statistical model could attribute variations of civilian death to territorial contiguity that is not applicable to IS-K, thus cofounding the results. Hence why, episodes of civilian violence including the dyad IS-K – civilian is controlled. Therefore, I code a dummy variable identifying IS-K's violence perpetrated against civilians.

Analysis:

In this section I test the contiguity hypothesis to determine whether there is a relationship between district contiguity and civilian violence. I first provide descriptive statistics to identify potential trend in the data. I run two sets of models using different independent variables, the first one that I call the 'simple set of models' employs a single dichotomous variable of interest, distinguishing between contiguous and non-contiguous districts. Later, I test the second regression that I call the 'disaggregated set of models'. The contiguity variable is disaggregated into multiple dummies allowing to elaborate on the type of contiguity. This model aims at identifying whether one type of contiguity yields different results than another.

As the dependent variable, *civilian death*, is a non-negative discrete count, I need to use a count model for the regression. Descriptive statistics indicates that 86.6% of the observations are zeros. Thus, I privilege the Negative Binominal (NB) regression over the Poisson one as the overdispersion of the data violates the assumption that the variance equals the mean.

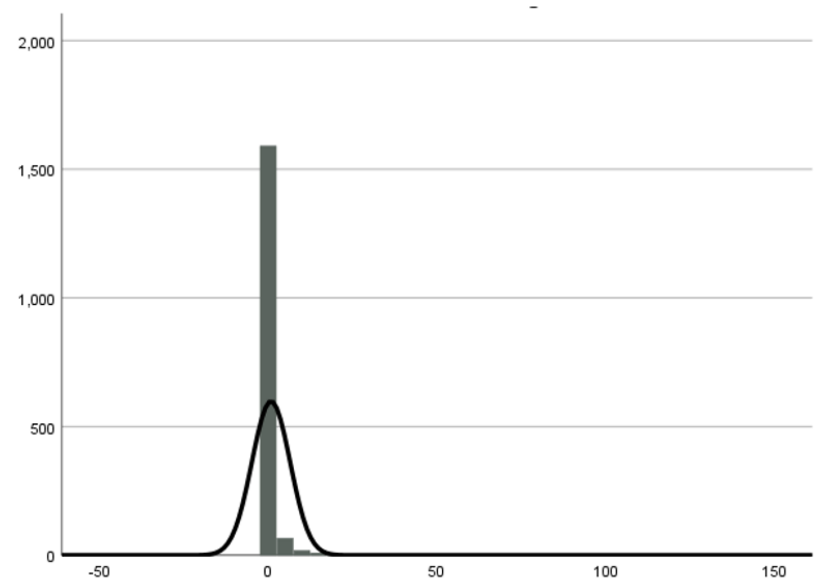


Figure 2 *Civilian death histogram with normal curve.*

Considering the excess amount of zero observable in figure 2, I deduce that the most appropriated statistical model is the Zero-Inflated Negative Binominal regression (ZINB). Since I have no theoretical explanation predicting the excess of zero, I use the same set of predictors for the count part and zero-inflation. As the ZINB statistical output is limited to indicate the goodness of fit, I first report a table comparing the standard NB regression to the ZINB regression. Since ZINB regressions have a higher log-likelihood and a lower Akaike Inferior Criterion (AIC), I assess that the ZINB model has a better fit. Thus, I only report results from the ZINB regression.

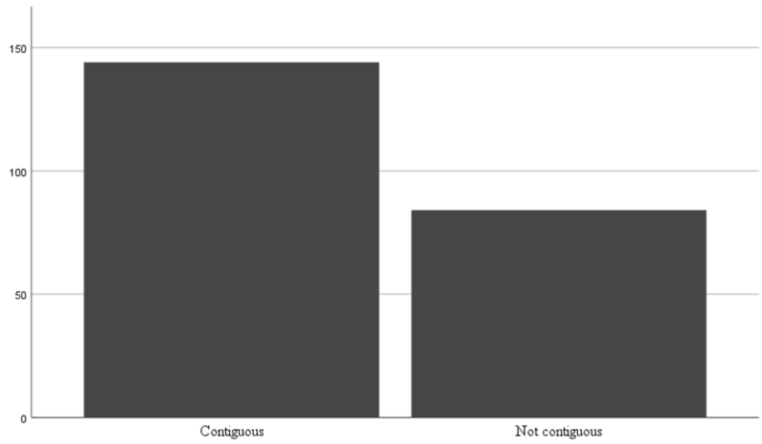


Figure 3. *Conflict event involving at least one civilian according to the contiguity type.*

Figure 3. represents how many of fatal civilian violence incidents occurred according to the contiguity type. Non-contiguous districts witnessed 84 episodes of fatal civilian violence while contiguous districts saw 144 incidents involving fatal violence against civilians. Considering that the contiguous districts are the mode, I define it as my reference category to test the hypothesis.

Table 1. provide the comparison between the standard NB regression and the ZINB regression of the 'simple set of models'. Looking at the log-likelihood and the AIC, it confirms that the ZINB is a more appropriate statistical model. Table 2. report results from the three models of the 'simple set of models'. Contrary to theoretical expectations, the first model indicates that non-contiguous territories are statistically significantly associated with more civilians killed by armed forces ($p< 0.05$). Coefficients can substantively be interpretated by exponentiating them. For the first model, the expected number of civilian casualties in a same-side contiguity territory in comparison to other contiguous territory is higher by a factor of 1.391 (39.1%). When introducing control variables, the variable of interest loses its significance. Both the *Population Log* and the *Combatant Death* variables are significant (p. < 0.001). The former indicates an incidence rate ration (IRR) of 1.084 implying that for each unit increase in the population, it predicts 8.4% increase for civilian fatalities. The latter, *Combatant Death*, provides an IRR of

***Table 1**. Results from Negative Binominal and Zero-Inflated Negative Binominal model*

	NB	ZINB
	DV: Civilian Casualties	DV: Civilian Casualties
Total same side contiguity	-0.248***	-0.405*
	(0.063)	(0.202)
Combatant Death	0.006	0.148***
	(0.006)	(0.038)
Population Log	0.577***	0.273*
	(0.032)	(0.112)
Islamic State	0.937***	0.850***
	(0.084)	(0.191)
Constant	-6.881***	-2.397
	(0.428)	(1.484)
Log Likelihood	-1587.109	-1085.127
Akaike Inf. Crit	3184.218	2192.254

*Note: (Robust standard errors in parentheses. Sig level: *p < 0.05, ** p < 0.01, *** p < 0.001)*

1.553, meaning that for each unit increase in *Combatant Death,* an increase of 55.27% in civilian death is expected. When adding the *Islamic State* variable into the model, the variable of interest becomes significant (p. < 0.05). The direction of the relationship reverses and meet the expectation of the theory. It is then understood that civilian fatal incidents in a district surrounded by other districts controlled by the same party, is lower by a factor of 0.667, meaning that civilians in a district with *Total same side contiguity* are 33.3% less likely to be victims of fatal violences. All control holds their significance at the (p< 0.001) level except for the *Population Log* variable which significance decrease at the (p< 0.05) level. In the third model, the IRR for *Combatant Death* is 1.16 meaning that for each unit increase in *Combatant Death, Civilian casualties* is associated with an increase of 16%. The IRR for the *Population Log* is 1.314, meaning that a unit increase in the *Population log* is associated with a 31,4% increase in the incidence of civilian death. The *Islamic State* control variable have an IRR of 2.34, meaning that the involvement of the IS-K in civilian violence event is associated with 134% increase in civilian death than when the violence is perpetrated by another actor. As the log-likelihood increases while the AIC decreases when adding control variables, it can be assumed that controls are improving the overall model fit.

Table 2. *Results from Zero-Inflated Negative Binominal model: 'simple set'*

	ZINB		
	Model 1	Model 2	Model 3
	DV: Civilian Casualties	DV: Civilian Casualties	DV: Civilian Casualties
Total same side contiguity	0.330* (0.137)	-0.350 (0.197)	-0.405* (0.202)
Combatant Death		0.081** (0.029)	0.148*** (0.038)
Population Log		0.440*** (0.096)	0.273* (0.112)
Islamic State			0.850*** (0.191)
Constant	0.282* (0.137)	-5.249*** (1.282)	-2.397 (1.484)
Log Likelihood	-1213.248	-1115.253	-1085.127
Akaike Inf. Crit	2436.495	2248.506	2192.254

*Note: (Robust standard errors in parentheses. Sig level: *p < 0.05, ** p < 0.01, *** p < 0.001)*

Following the testing of the 'simple set', I test the hypothesis on the 'disaggregated set' to investigate whether the type of contiguity influences the incidence of fatal civilian violence episode. Table 3 provides the frequency sheet for each type of contiguity, it is supplemented by the visual representation in figure 4. When disaggregating the data, two categories are left without any observation, therefore, *full contiguity with the adversary* and *contested: share of contiguity between parties is even* are not included in the result.

Table 3. *Frequency statistic*

Contiguity type	Frequency
Full contiguity with the same party	84
Major contiguity with the same party	44
Major contiguity with contested district	63
Full contiguity with contested district	7
Major contiguity with the adversary	2
Contested: Major contiguity with one party	22
Contested: Full contiguity with one party	6
Total	228

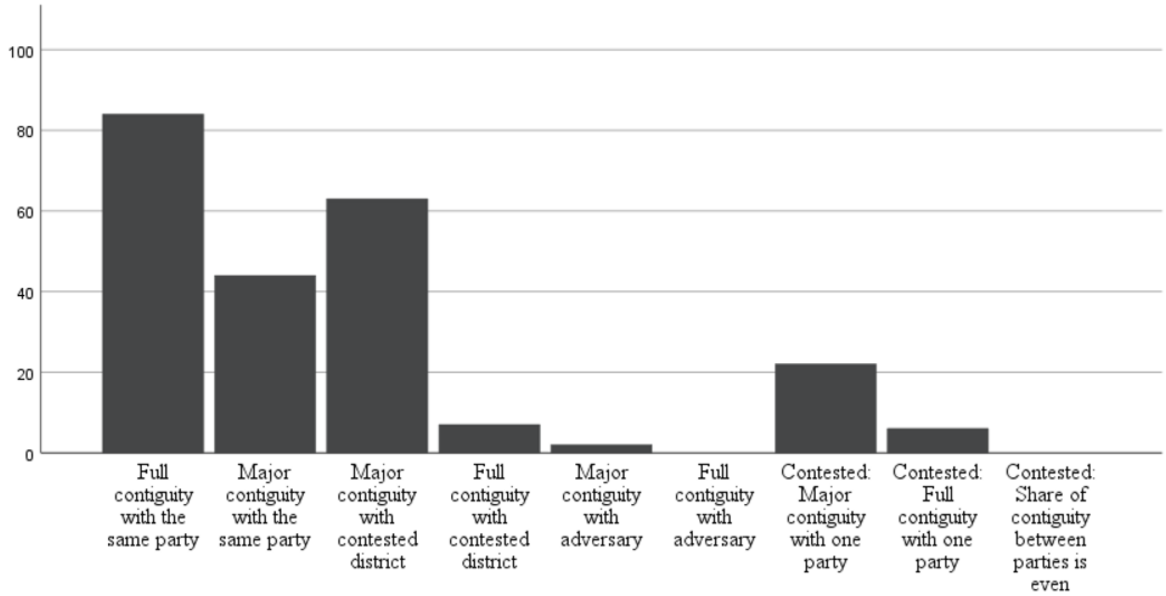


Figure 4. *Conflict event involving at least one civilian according to the contiguity type.*

Table 4. Results from Zero-Inflated Negative Binominal model: 'disaggregated set'

	ZINB		
	Model 1	Model 2	Model 3
	DV: Civilian Casualties	DV: Civilian Casualties	DV: Civilian Casualties
Total same side contiguity	0.319 (0.164)	-0.508* (0.232)	-0.535** (0.205)
Majority same side contiguity	0.110 (0.191)	-0.264 (0.177)	-0.263 (0.160)
Total contested territory contiguity	-0.037 (0.384)	0.198 (0.348)	0.200 (0.313)
Majority of adversary contiguity	-0.116 (0.687)	0.158 (0.643)	-0.183 (0.611)
Contested: major contiguity one of the parties	-0.226 (0.236)	0.095 (0.229)	0.090 (0.203)
Contested: Total contiguity with one party	-0.499 (0.402)	0.078 (0.403)	0.108 (0.354)
Combatant Death		0.089** (0.028)	0.152*** (0.037)
Population Log		0.502*** (0.104)	0.330*** (0.100)
Islamic State			0.815*** (0.178)
Constant	-0.476 (1.024)	-5.725*** (1.659)	-3.134* (1.568)
Log Likelihood	-1202.827	-1107.008	-1076.130
Akaike Inf. Crit	2435.653	2252.126	2194.260

*Note: (Robust standard errors in parentheses. Sig level: *p < 0.05, ** p < 0.01, *** p < 0.001)*

The first model does not show any significance. This changes in the second model with *Total same side contiguity* variable being significant (p< 0.05). This variable is associated with an IRR of 0.602, meaning that districts surrounded by other territories controlled by the same party is 39.83% less likely to experience a fatal civilian violence episode. The *Combatant Death* control variable is significant (p< 0.01) and shows an IRR of 1.093 (9,3%). The second control variable *Population Log* have an IRR of 1.652 (65%) and is significant (p< 0.001). The last model shows an increased significance for *total same side contiguity* (p< 0.01). It predicts that districts surrounded by same side districts are 41,3% less associated with episodes of civilian violence than ones contiguous with territories that are contested or controlled by the adversary, by a factor of 0.587. All control variables hold a significance at the (p< 0.001) level. *Combatant death* have an IRR of 1.164 (16%) while the *population log* IRR is 1.391 (39%), and the *Islamic State* holds an IRR of 2.259176 (125%). Results of the third model from the 'disaggregated set' yields similar result to the one from the 'simple set'. However, the disaggregation of the contiguity variable does not indicate a difference between the type of contiguity. Rather, it is observed that the log-likelihood decreases while the AIC increases, suggesting that the disaggregation of the type of contiguity leads to a poorer model fit.

Discussion:

The empirical analysis shows an underlying pattern, allowing us to partially falsify the hypothesis implying that territories neighboring an area that is contested or controlled by the adversary are more likely to witness higher levels of fatal civilian violence than those that are surrounded by the same party (H1). When testing the hypothesis in an uncontrolled environment, the results points toward the inverse relationship expected by the theory. The comparison of the uncontrolled model with the controlled ones allows to identify potential trends of civilian violence in the three Afghan provinces. As the second model of the 'simple set' controls for combatant deaths and the population, the variable of interest loses its significance. The *combatant death* variable aiming to control for the incidence of combat yields significant results, this confirms the theoretical assumption that during combats, civilians face more risks (Eck & Hultman 2007). However, the variable does not distinguish between civilian violence as a collateral, or as an operational end, thus, it limits the ability to infer the intent of civilian victimization. The population control variable indicates that the more an area is populous, the higher the level of violence is expected. This contradict Lacina's (2006, p. 285) findings rejecting population size as a predictor of civil war severity. However, Lacina is not totally right, nor she is wrong, rather, I argue that the significant result of the population control might emerge from a spurious relationship. When adding the control for the IS-K violence, all the variables tested see a change in their significance. The *Combatant death* significance increases while the *Population log* significance decreases. I deduce that the change of significance is caused by the IS-K's terrorist repertoire of violence. The decrease of significance of the population control might indicate that the IS-K targeted areas with the largest population to impact the largest audience. As they did not control any territory, the IS-K needed to convince the audience that they are a credible contender capable to enforce violent policies. As the *Combatant death* significance increases when controlling for *Islamic State* violence, it corroborates that the IS-K tactics where more terrorist than the ones used by the Taliban. Thus, it supports Wood's (2010) explanation that insurgents with low capabilities are more prone to engage in civilian victimization. The *Total same side contiguity* become significant when implementing the complete model. The direction of the relationship respects the expectation of the hypothesis, supporting the claim that civilians in areas surrounded by territory occupied by the same party are less likely to be victim of violence. However, the hypothesis can not be fully supported as the data does not provide irrefutable evidence across all models. Although the direction aligns with the expectation of the theory, suggesting that a territory contiguous with the same party restricts the adversary's tactical incentives to project violence, the varying statistical significance across different models suggest that other factors might play a more important role. Nonetheless, the marginal significance of territorial contiguity disproves the assumption that irregular warfare should be defined by the absence of frontlines (Balcells, 2010, p. 296; Kalyvas 2005, p. 91).

Concerns regarding the research design:

While the investigation led to the identification of significant patterns, the research design is subject to limitations. First, the inherent challenge to collect micro-level data operationalizable with a derivation of the control-collaboration model limits the feasibility of such research. This hinders the replicability of the theory, this is exacerbated if one seeks to examine the varying level of contiguity in context of civil war as there are no data available directly informing on the territorial contiguity. Additionally, using the level civilian violence as the dependent variable limits the interpretability of the results. As it does not inform on the type of violence, it is hard to determine whether the violence was conducted selectively or indiscriminately. This is of the first importance as the investigation of the type of violence perpetrated would provide more explanatory power on the relevance of the LSG assumption to the theory. Furthermore, the provision of data informing between selective and indiscriminate violence would allow to integrate Schutte's (2017b) extension of the LSG. Instead of testing the loss of strength, the model could test the loss of accuracy gradient which seems to be a better fit for the theory as the IS-K showed that the capability to project indiscriminate violence is not totally restricted by the geographical factor. The last concern remains in the coding of contiguity. While the difference between contiguous and non-contiguous is straightforward, the 'disaggregated set' of models does not indicate a variation between the type of contiguity. I cannot guarantee that the absence of variation between types of contiguous districts is explained by the fact that contiguity should be taken as an absolute dichotomy. A new coding rule should be developed to investigate whether contiguity should be treated as a binary variable. Other tools are available to develop such theoretical ground, for instance the contiguity could be measured using the Geographic Information System to achieve a more precise coding rule. Lastly, the small size of the sample does not allow to robustly test the statistical model, thus a correction of this research should consider a larger sample than the one used in this analysis.

Conclusion and Policy Implications:

The aim of this thesis has been to examine the relationship between territorial contiguity and the level of civilian violence. I draw upon the civilian violence literature and mix it with the geostrategic literature. Building on the willingness & opportunity and the LSG framework I derive the hypothesis that territories surrounded by areas controlled by the same party are less likely to experience episodes of civilian violence than those adjacent to or surrounded by areas that are contested or controlled by opposing forces. To test the hypothesis, I create a dataset using the GED and Roggio's *Mapping of the Taliban control in Afghanistan*, focusing on three provinces of Afghanistan between 2017 and 2021. I use the ZINB regression to investigate the effect of the contiguity type on the count of civilian violence episode. The regression indicates no statistically significance when operated without controls. When controlling the model with the level of population, combatant death, and IS-K violence, I find evidence that districts surrounded by territories occupied by the same party are less likely to experience episodes of civilian violence than those adjacent to contested or enemy-controlled territories. I note above that the result should be interpreted carefully given that the novel aspect of this research design makes it far from being robust. Future quantitative research could develop a more appropriate way to measure contiguity. I suggest a reconceptualization of irregular warfare other than the benchmark of the absence of observable frontline, as I show that a frontline, as imperceptible as it is, still exists. Future policy implications of this research stress the need for measures safeguarding civilian located near the frontline. We face today a stark example of a territory surrounded by the adverse party in the Gaza strip, where the frontline is closing on civilian areas. This signals the need to urge international bodies and policymakers to implement immediate protective measures and conflict resolution strategies to avoid further endangerment of civilian lives and ensure the protection of vulnerable populations in conflict zones.

Bibliography:

Biddle, S. (2021). *Nonstate Warfare: The Military Methods of Guerillas, Warlords, and Militias*. Princeton: Princeton University Press. https://doi.org/10.1515/9780691216652

Bhavnani, R., Miodownik, D., & Choi, H. J. (2011). Three two tango: Territorial control and selective violence in Israel, the West Bank, and Gaza. *Journal of Conflict Resolution, 55(1)*, 133-158.

Balcells, L. (2010). Rivalry and revenge: Violence against civilians in conventional civil wars. *International Studies Quarterly*, *54*(2), 291-313.

Boehmer, C., Gartzke, E., & Nordstrom, T. (2004). Do intergovernmental organizations promote peace?. *World politics*, *57*(1), 1-38.

Boulding, K. E. (1962). *Conflict and defense : a general theory*. Harper & Brothers.

Brinkman, I. (2003). War and identity in Angola. Two case-studies. *Lusotopie*, *10*(1), 195-221.

Britannica, T. Editors of Encyclopaedia (2024, April 3). *Khorāsān*. *Encyclopedia Britannica*. https://www.britannica.com/place/Khorasan-historical-region-Asia

Carter, D. B. (2016). Provocation and the strategy of terrorist and guerrilla attacks. *International Organization*, *70*(1), 133-173.

Collins, E. with McGovern, M. (1999). Killing Rage. New York: Granta Books.

Davies, S., Pettersson, T., & Öberg, M. (2023). Organized violence 1989–2022, and the return of conflict between states. Journal of peace research, 60(4), 691-708.

Eck, K., & Hultman, L. (2007). One-Sided Violence Against Civilians in War: Insights from New Fatality Data. *Journal of Peace Research,* *44*(2), 233–246. https://doi.org/10.1177/0022343307075124

Eck, K. (2012). In data we trust? A comparison of UCDP GED and ACLED conflict events datasets. *Cooperation and Conflict, 47(1)*, 124-141.

Ellsberg, D. (1970). Revolutionary Judo: Working Notes on Vietnam No. 10. Santa Monica, *CA: RAND Corporation*. Retrieved from https://www.rand.org/pubs/documents/D19807.html.

Epps, V. (2012). Civilian casualties in modern warfare: The death of the collateral damage rule. *Ga. J. Int'l & Comp. L.*, *41*, 307.

European Asylum Support Office (2012, Jully) *Country of Origin Information report Afghanistan Taliban Strategies – Recruitment.* Retrieved from https://euaa.europa.eu/sites/default/files/publications/EASO_COI_Report_AFG_Taliban_Recruitment.pdf

Fearon, J. D. (1995). Rationalist explanations for war. *International organization*, *49*(3), 379-414.

Fearon, J. D., & Laitin, D. D. (2003). Ethnicity, Insurgency, and Civil War. *The American Political Science Review*, *97*(1), 75–90. https://doi.org/10.1017/S0003055403000534

Guevara, C. (1997). *Guerrilla Warfare: Che Guevara*. Rowman & Littlefield.

Degregori, C. (1998). 4 Harvesting Storms: Peasant Rondas and the Defeat of Sendero Luminoso in Ayacucho. In S. Stern (Ed.), *Shining and Other Paths: War and Society in Peru, 1980-1995* (pp. 128-157). New York, USA: Duke University Press. https://doi.org/10.1515/9780822398059-009

De la Calle L. 2017. Compliance versus constraints: a theory of rebel targeting in civil war. *Journal of Peace Resolution.* 54(3):427–41

Doãn Quang Khải (2022, April 30). *Vì Nhân Dân Quên Mình - We Fight for the People [First Recording] [video file].* Retrieved from https://www.youtube.com/watch?v=zDLb8FOMMmw

Högbladh, S. (2023). “UCDP GED Codebook version 23.1”, Department of Peace and Conflict Research, Uppsala University

Hultman, L. (2007). Battle Losses and Rebel Violence: Raising the Costs for Fighting. *Terrorism and Political Violence*, *19*(2), 205–222. https://doi.org/10.1080/09546550701246866

Hultman, L. (2012). Attacks on Civilians in Civil War: Targeting the Achilles Heel of Democratic Governments. *International Interactions*, *38*(2), 164–181. https://doi.org/10.1080/03050629.2012.657602

Humphreys, M., & Weinstein, J. M. (2006). Handling and manhandling civilians in civil war. *American Political Science Review*, *100*(3), 429-447.

Huntington, S. P. (1996). *The clash of civilizations?: the debate*. Foreign Affairs.

Ibrahimi, N., & Akbarzadeh, S. (2020). Intra-jihadist conflict and cooperation: Islamic State–Khorasan Province and the Taliban in Afghanistan. *Studies in Conflict & Terrorism*, *43*(12), 1086-1107.

International Centre for Counter-Terrorism .(n.d.). *ICCT Snapshot: Islamic State - Khorasan Province*. Retrieved from https://www.icct.nl/publication/icct-snapshot-islamic-state-khorasan-province

Islamic State group claims deadly attack on Afghanistan prison. (2020, August 3). Retrieved from https://www.bbc.com/news/world-asia-53633450

Jenkins, J. C., & Maher, T. V. (2016). What should we do about source selection in event data? Challenges, progress, and possible solutions. *International Journal of Sociology, 46(1)*, 42-57.

Kaldor, M. (2013). *New and Old Wars: Organised Violence in a Global Era* (2nd ed.). Wiley.

Kalyvas, S. N. (1999). Wanton and senseless? The logic of massacres in Algeria. *Rationality and society*, *11*(3), 243-285.

Kalyvas, S. N. (2006). *The logic of violence in civil war*. Cambridge University Press.

Kalyvas, S. N. (2012). Micro-level studies of violence in civil war: Refining and extending the control-collaboration model. *Terrorism and Political violence*, *24*(4), 658-668.

Kalyvas, S. N. (2012). Micro-level studies of violence in civil war: Refining and extending the control-collaboration model. *Terrorism and Political violence*, *24*(4), 658-668.

Kaplan, R. D. (1993). *Balkan ghosts : a journey through history*. St. Martin's Press.

Kermani, B. S. (2021, October 29). The Taliban's secretive war against IS. Retrieved from https://www.bbc.com/news/world-asia-59080871

Kaplan, R. D. (1993). *Balkan ghosts : a journey through history*. St. Martin's Press.

Lacina, B. (2006). Explaining the severity of civil wars. Journal of conflict resolution, 50(2), 276-289.

Licklider, R. (Ed.). (1993). *Stopping the killing: How civil wars end*. NYU Press.

Lieberman, H. R., Bathalon, G. P., Falco, C. M., Georgelis, J. H., Morgan, I., Niro, P., & Tharion, W. J. (2002). *The Fog of War: Documenting Cognitive Decrements Associated with the Stress of Combat*.

Manekin D. 2020. *Regular Soldiers, Irregular War: Violence and Restraint in the Second Intifada*. Ithaca, NY: Cornell Univ. Press

Mason, T. D., & Krane, D. A. (1989). The political economy of death squads: Toward a theory of the impact of state-sanctioned terror. *International Studies Quarterly*, *33*(2), 175-198.

Molendijk, T., & Kalkman, J. P. (2023). Towards a Soldier-Based View in Research on The Military: An Empathetically Critical Approach. *Social Sciences*, *12*(2), 51.

Mueller, J. (2000). The banality of" ethnic war". *International Security*, *25*(1), 42-70.

Petersen, R. D. 2001. Introduction (pp.1-31.). In R. D Petersen (Ed.) *Resistance and Rebellion: Lessons from Eastern Europe*. New York: Cambridge University Press.

Pierskalla JH, Hollenbach FM. 2013. Technology and collective action: the effect of cell phone coverage on political violence in Africa. *Am. Political Science Revue.* 107(2):207–24

Raleigh C and Hegre H (2009) *Introducing ACLED: An armed conflict location and event dataset, 2005.* In: Salehyan I, Rebels without Borders. Ithaca, NY: Cornell University Press.

Reiter, D. (2003). Exploring the bargaining model of war. *Perspectives on Politics*, *1*(1), 27-43.

Richardson, L. F. (1952). Contiguity and deadly quarrels: The local pacifying influence. *Journal of the Royal Statistical Society. Series A (General)*, *115*(2), 219-231.

Roggio, B. (n.d) *Mapping Taliban Control in Afghanistan: Map of Afghanistan's districts [dynamic map]*. Retrieved from https://www.longwarjournal.org/mapping-taliban-control-in-afghanistan

Roxborough, I. (1994). Clausewitz and the Sociology of War. *The British Journal of Sociology*, *45*(4), 619-636.

Salehyan, I., Siroky, D., & Wood, R. M. (2014). External rebel sponsorship and civilian abuse: A principal-agent analysis of wartime atrocities. *International Organization*, *68*(3), 633-661.

Sambanis, N. (2004). What is civil war? Conceptual and empirical complexities of an operational definition. *Journal of conflict resolution*, *48*(6), 814-858.

Sambanis, N., & Schulhofer-Wohl, J. (2019). Sovereignty rupture as a central concept in quantitative measures of civil war. *Journal of Conflict Resolution*, *63*(6), 1542-1578.

Schulhofer-Wohl, J. (2020). On-Side fighting in civil war: The logic of mortal alignment in Syria. *Rationality and Society*, *32*(4), 402-460.

Schwenkenbecher, A. (2014). Collateral Damage and the Principle of Due Care. *Journal of Military Ethics*, *13*(1), 94–105. https://doi.org/10.1080/15027570.2014.910015

Thaler K. 2012. Ideology and violence in civil wars: theory and evidence from Mozambique and Angola. Civil Wars 14(4):546–67

Schneider, Gerald, and Margit Bussmann. (2012) Accounting for the Dynamics of One-Sided Violence: Introducing KOSVED, Working paper, Universität Konstanz/Universität Greifswald.

Schneider, G., Bussmann, M., & Ruhe, C. (2012). The dynamics of mass killings: Testing time-series models of one-sided violence in the Bosnian civil war. *International Interactions*, *38*(4), 443-461.

Schutte, S. (2017a). Violence and civilian loyalties: Evidence from Afghanistan. *Journal of Conflict Resolution*, *61*(8), 1595-1625.

Schutte, S. (2017b). Geographic determinants of indiscriminate violence in civil wars. *Conflict management and peace science*, *34*(4), 380-405.

Shapiro, J. N., & Weidmann, N. B. (2015). Is the phone mightier than the sword? Cellphones and insurgent violence in Iraq. *International Organization*, *69*(2), 247-274.

Smith, S. (2001). General Templer and counter-insurgency in Malaya: Hearts and minds, intelligence, and propaganda. *Intelligence and National Security*, *16*(3), 60-78.

Snethlage, M.A., Geschke, J., Spehn, E.M., Ranipeta, A., Yoccoz, N.G., Körner, Ch., Jetz, W., Fischer, M. & Urbach, D. (2022a). A hierarchical inventory of the world's mountains for global comparative mountain science. *Nature Scientific Data*. https://doi.org/10.1038/s41597-022-01256-y .

Snethlage, M.A., Geschke, J., Spehn, E.M., Ranipeta, A., Yoccoz, N.G., Körner, Ch., Jetz, W., Fischer, M. & Urbach, D. (2022b). GMBA Mountain Inventory v2. *GMBA-EarthEnv*. https://doi.org/10.48601/earthenv-t9k2-1407 (2022).

Starr, H. (1978). "Opportunity" and "willingness' as ordering concepts in the study of war. *International interactions*, *4*(4), 363-387.

Strayer, J. R. (2011). *On the medieval origins of the modern state* (1st ed., Vol. 21, pp. xxviii–xxviii). Princeton University Press. https://doi.org/10.1515/9781400828579

Sundberg, R., & Melander, E. (2013). Introducing the UCDP georeferenced event dataset. *Journal of peace research*, *50*(4), 523-532.

Tollefsen, A. F., & Buhaug, H. (2015). Insurgency and inaccessibility. *International Studies Review, 17(1)*, 6-25.

Trinquier, R., Lee, D., & Fall, B. B. (1961). *Modern warfare : a French view of counterinsurgency*. Pall Mall Press.

United Nation Security Council (2020, May, 27) Letter dated 19 May 2020 from the Chair of the Security Council Committee established pursuant to resolution 1988 (2011) addressed to the President of the Security Council. Retrieved from https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2020_415_e.pdf

Valentino B. (2000). Final solutions: the causes of mass killing and genocide. Secur. Stud. 9(3):1–59

Valentino, B., Huth, P., & Balch-Lindsay, D. (2004). "Draining the sea": mass killing and guerrilla warfare. *International organization*, *58*(2), 375-407.

Valentino, B. A. (2014). Why we kill: The political science of political violence against civilians. *Annual Review of Political Science*, *17*, 89-103

Vargas, G. (2009). Urban irregular warfare and violence against civilians: Evidence from a Colombian city. *Terrorism and Political Violence*, *21*(1), 110-132.

Vasquez, J. A. (1995). Why Do Neighbors Fight? Proximity, Interaction, or Territoriality. *Journal of Peace Research*, *32*(3), 277–293. https://doi.org/10.1177/0022343395032003003

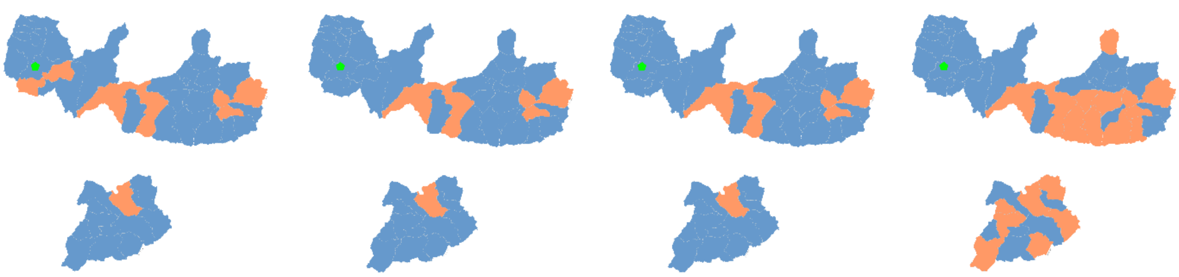
Wood, R. M. (2015). Understanding strategic motives for violence against civilians during civil conflict. In H. Krieger (Ed.), *Inducing Compliance with International Humanitarian Law: Lessons from the African Great Lakes Region* (pp. 13–43). chapter, Cambridge: Cambridge University Press.

World Bank. (2019, August 1). *Afghanistan: District Dashboard*. Retrieved from https://www.worldbank.org/en/data/interactive/2019/08/01/afghanistan-district-level-visualization

Ziemke, J. J. (2008). *From battles to massacres* (Doctoral dissertation, University of Wisconsin--Madison).

Appendix Table and Figures:

01/10/2017	28/11/2017	01/01/2018	01/05/2018



12/12/2018	08/07/2018	11/05/2021	18/05/2021

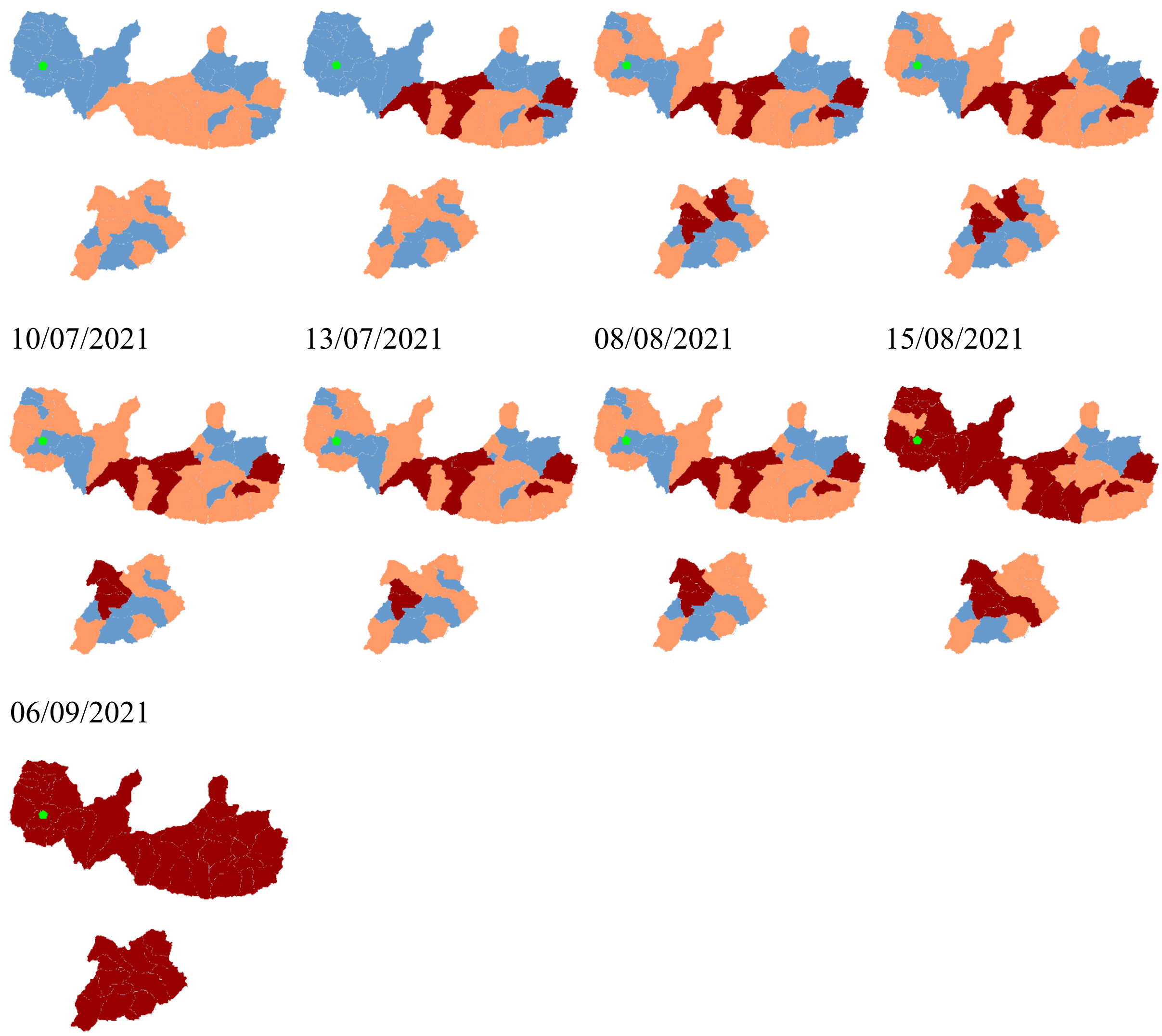
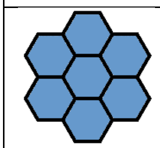
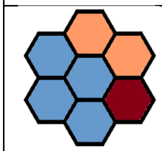
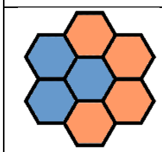
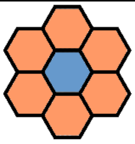
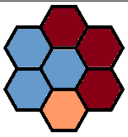
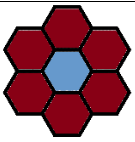
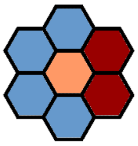
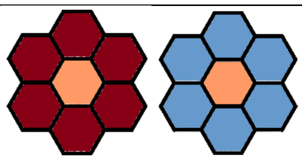
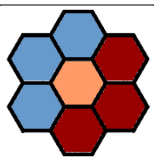


Figure 1. *Control shift in Kabul, Khost and Nangarhar (Nangarhar and Kabul are contiguous)*

Coding rule

Coding rule for contiguity

Scenario	Name
	1 =Area fully surrounded by territories controlled by the same warring party
	2= More than half of the area contiguous with territories controlled by the same warring party
	3= More than half of the area is contiguous with contested territories.

	4= Area fully surrounded by contested territories.
	5= More than half of the area is contiguous with territories controlled the adversary.
	6= Area fully surrounded by territories controlled by the adversary
	7= Contested only: More than half of the area is controlled by one of the warring parties
	8= Contested only: The area is fully surrounded by one of the warring party.
	9= Contested only: The share of contiguity between actors is even.

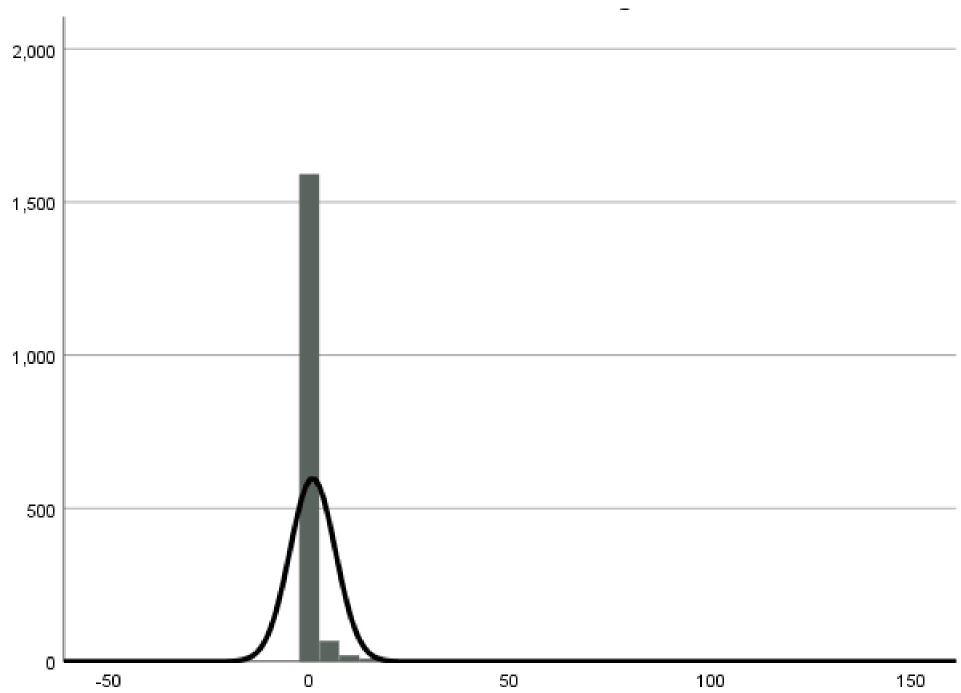


Figure 2 *Civilian death histogram with normal curve.*

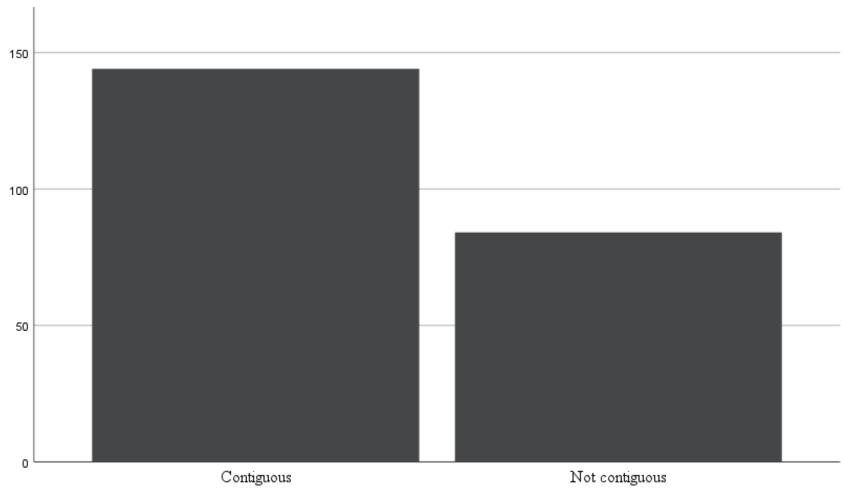


Figure 3. *Conflict event involving at least one civilian according to the contiguity type.*

Table 1*. Results from Negative Binominal and Zero-Inflated Negative Binominal model*

	NB	ZINB
	DV: Civilian Casualties	DV: Civilian Casualties
Total same side contiguity	-0.248*** (0.063)	-0.405* (0.202)
Combatant Death	0.006 (0.006)	0.148*** (0.038)
Population Log	0.577*** (0.032)	0.273* (0.112)
Islamic State	0.937*** (0.084)	0.850*** (0.191)
Constant	-6.881*** (0.428)	-2.397 (1.484)
Log Likelihood	-1587.109	-1085.127
Akaike Inf. Crit	3184.218	2192.254

*Note: (Robust standard errors in parentheses. Sig level: *p < 0.05, ** p < 0.01, *** p < 0.001)*

Table 2. *Results from Zero-Inflated Negative Binominal model: 'simple set'*

	ZINB		
	Model 1	Model 2	Model 3
	DV: Civilian Casualties	DV: Civilian Casualties	DV: Civilian Casualties
Total same side contiguity	0.330* (0.137)	-0.350 (0.197)	-0.405* (0.202)
Combatant Death		0.081** (0.029)	0.148*** (0.038)
Population Log		0.440*** (0.096)	0.273* (0.112)

Islamic State			0.850*** (0.191)
Constant	0.282* (0.137)	-5.249*** (1.282)	-2.397 (1.484)
Log Likelihood	-1213.248	-1115.253	-1085.127
Akaike Inf. Crit	2436.495	2248.506	2192.254

*Note: (Robust standard errors in parentheses. Sig level: *p < 0.05, ** p < 0.01, *** p < 0.001)*

Table 3. *Frequency statistic*

Contiguity type	Frequency
Full contiguity with the same party	84
Major contiguity with the same party	44
Major contiguity with contested district	63
Full contiguity with contested district	7
Major contiguity with the adversary	2
Contested: Major contiguity with one party	22
Contested: Full contiguity with one party	6
Total	228

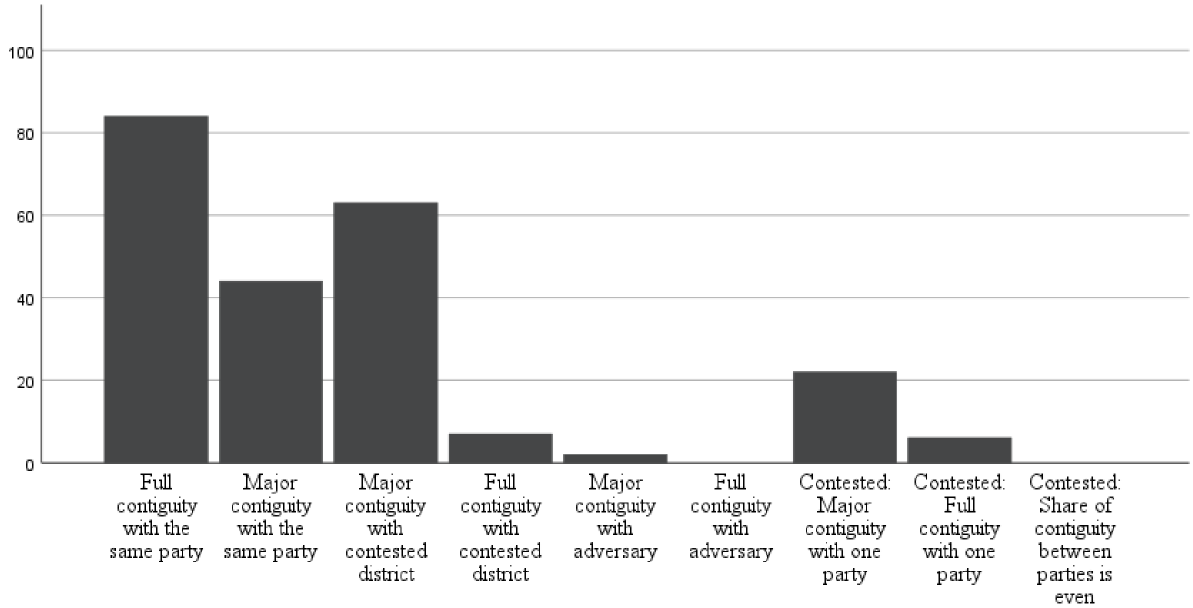


Figure 4. *Conflict event involving at least one civilian according to the contiguity type.*

Table 4. *Results from Zero-Inflated Negative Binominal model: 'disaggregated set'*

	ZINB		
	Model 1	Model 2	Model 3
	DV: Civilian Casualties	DV: Civilian Casualties	DV: Civilian Casualties
Total same side contiguity	0.319 (0.164)	-0.508* (0.232)	-0.535** (0.205)
Majority same side contiguity	0.110 (0.191)	-0.264 (0.177)	-0.263 (0.160)
Total contested territory contiguity	-0.037 (0.384)	0.198 (0.348)	0.200 (0.313)
Majority of adversary contiguity	-0.116 (0.687)	0.158 (0.643)	-0.183 (0.611)
Contested: major contiguity one of the parties	-0.226 (0.236)	0.095 (0.229)	0.090 (0.203)
Contested: Total contiguity with one party	-0.499 (0.402)	0.078 (0.403)	0.108 (0.354)

Combatant Death		0.089** (0.028)	0.152*** (0.037)
Population Log		0.502*** (0.104)	0.330*** (0.100)
Islamic State			0.815*** (0.178)
Constant	-0.476 (1.024)	-5.725*** (1.659)	-3.134* (1.568)
Log Likelihood	-1202.827	-1107.008	-1076.130
Akaike Inf. Crit	2435.653	2252.126	2194.260

*Note: (Robust standard errors in parentheses. Sig level: *p < 0.05, ** p < 0.01, *** p < 0.001)*

Statistics:

Statistics:

Frequencies:

```
FREQUENCIES VARIABLES=deaths_civilians
  /HISTOGRAM NORMAL
  /ORDER=ANALYSIS.
```

Statistics

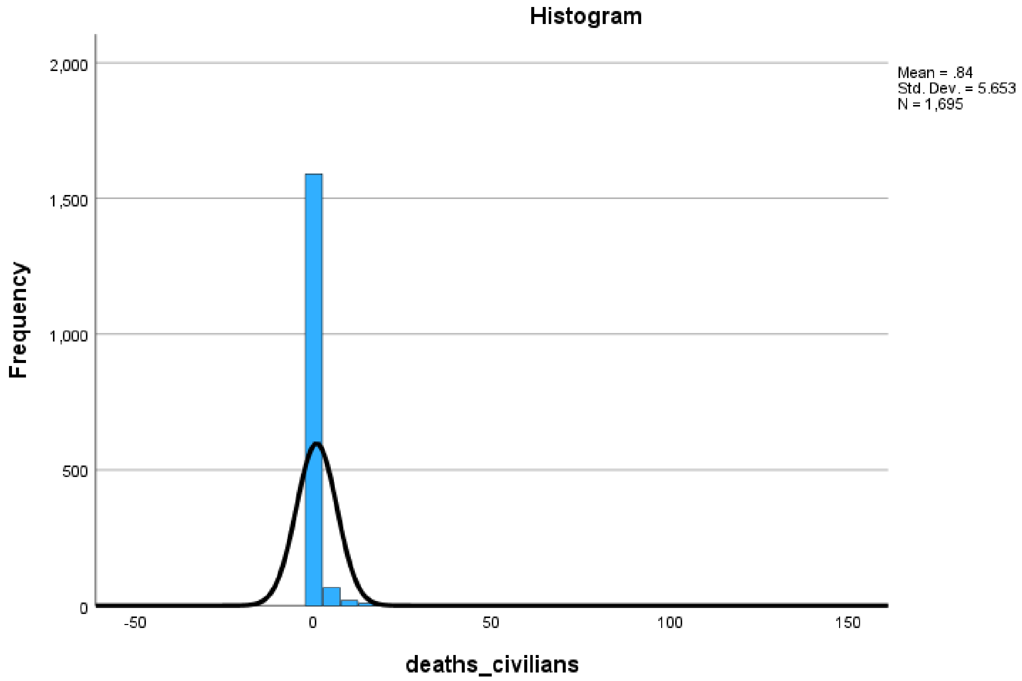
deaths_civilians

N	Valid	1695
	Missing	2

deaths_civilians

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1467	86.4	86.5	86.5
	1	79	4.7	4.7	91.2
	2	44	2.6	2.6	93.8

	3	20	1.2	1.2	95.0
	4	17	1.0	1.0	96.0
	5	15	.9	.9	96.9
	6	6	.4	.4	97.2
	7	8	.5	.5	97.7
	8	4	.2	.2	97.9
	9	2	.1	.1	98.1
	10	7	.4	.4	98.5
	11	3	.2	.2	98.6
	12	2	.1	.1	98.8
	13	1	.1	.1	98.8
	14	1	.1	.1	98.9
	15	2	.1	.1	99.0
	16	3	.2	.2	99.2
	17	2	.1	.1	99.3
	18	1	.1	.1	99.4
	19	1	.1	.1	99.4
	21	1	.1	.1	99.5
	23	1	.1	.1	99.5
	32	1	.1	.1	99.6
	34	1	.1	.1	99.6
	42	1	.1	.1	99.7
	65	1	.1	.1	99.8
	67	1	.1	.1	99.8
	85	1	.1	.1	99.9
	91	1	.1	.1	99.9
	141	1	.1	.1	100.0
	Total	1695	99.9	100.0	
Missing	System	2	.1		
Total		1697	100.0		



Poisson regression to evaluate whether the data is overdispersed

```
* Generalized Linear Models.
GENLIN deaths_civilians WITH contrast1simple CombatantDeath
Logofpopulation contrastonlyIS
  /MODEL contrast1simple CombatantDeath Logofpopulation
contrastonlyIS INTERCEPT=YES
 DISTRIBUTION=POISSON LINK=LOG
  /CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL
MAXITERATIONS=100 MAXSTEPHALVING=5
    PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012
ANALYSISTYPE=3(WALD) CILEVEL=95 CITYPE=WALD
    LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION
(EXPONENTIATED).
```

Model Information

Dependent Variable	deaths_civilians

Probability Distribution	Poisson
Link Function	Log

Case Processing Summary

	N	Percent
Included	1676	98.8%
Excluded	21	1.2%
Total	1697	100.0%

Continuous Variable Information

		N	Minimum	Maximum	Mean	Std. Deviation
Dependent Variable	deaths_civilians	1676	0	141	.84	5.684
Covariate	District Contiguity	1676	-1.00	1.00	-.5668	.82408
	CombatantDeath	1676	.00	150.00	3.9564	7.38784
	Logofpopulation	1676	9.27	15.16	11.6827	1.45953
	contrastonlyIS	1676	-1.00	1.00	-.9427	.33368

Goodness of Fit[a]

	Value	df	Value/df
Deviance	5515.584	1671	3.301
Scaled Deviance	5515.584	1671	
Pearson Chi-Square	18968.508	1671	11.352
Scaled Pearson Chi-Square	18968.508	1671	
Log Likelihood[b]	-3091.415		
Akaike's Information Criterion (AIC)	6192.829		
Finite Sample Corrected AIC (AICC)	6192.865		
Bayesian Information Criterion (BIC)	6219.950		

Consistent AIC (CAIC)	6224.950		

Dependent Variable: deaths_civilians
Model: (Intercept), District Contiguity, CombatantDeath, Logofpopulation, contrastonlyIS
a. Information criteria are in smaller-is-better form.
b. The full log likelihood function is displayed and used in computing information criteria.

Omnibus Test[a]

Likelihood Ratio Chi-Square	df	Sig.
2904.628	4	<.001

Dependent Variable: deaths_civilians
Model: (Intercept), District Contiguity, CombatantDeath, Logofpopulation, contrastonlyIS
a. Compares the fitted model against the intercept-only model.

Tests of Model Effects

Source	Type III Wald Chi-Square	df	Sig.
(Intercept)	817.136	1	<.001
District Contiguity	79.277	1	<.001
CombatantDeath	95.372	1	<.001
Logofpopulation	1106.165	1	<.001
contrastonlyIS	1018.705	1	<.001

Dependent Variable: deaths_civilians
Model: (Intercept), District Contiguity, CombatantDeath, Logofpopulation, contrastonlyIS

Parameter Estimates

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)	
			Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper
(Intercept)	-7.945	.2779	-8.489	-7.400	817.136	1	<.001	<.001	.000	.001
District Contiguity	-.304	.0342	-.371	-.237	79.277	1	<.001	.738	.690	.789
CombatantDeath	.022	.0022	.017	.026	95.372	1	<.001	1.022	1.018	1.027
Logofpopulation	.657	.0197	.618	.696	1106.165	1	<.001	1.929	1.855	2.005
contrastonlyIS	.969	.0304	.909	1.028	1018.705	1	<.001	2.635	2.483	2.796
(Scale)	1[a]									

Dependent Variable: deaths_civilians
Model: (Intercept), District Contiguity, CombatantDeath, Logofpopulation, contrastonlyIS

a. Fixed at the displayed value.

Negative Binominal Disagregated model.

```
* Generalized Linear Models.
GENLIN deaths_civilians WITH contrast1 contrast2 contrast4
contrast5 contrast7 contrast8
    CombatantDeath Logofpopulation contrastonlyIS
  /MODEL contrast1 contrast2 contrast4 contrast5 contrast7
contrast8 CombatantDeath Logofpopulation
    contrastonlyIS INTERCEPT=YES
 DISTRIBUTION=NEGBIN(1) LINK=LOG
  /CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL
MAXITERATIONS=100 MAXSTEPHALVING=5
    PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012
ANALYSISTYPE=3(WALD) CILEVEL=95 CITYPE=WALD
    LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION
(EXPONENTIATED).
```

Model Information

Dependent Variable	deaths_civilians
Probability Distribution	Negative binomial (1)
Link Function	Log

Case Processing Summary

	N	Percent
Included	1676	98.8%

Excluded	21	1.2%
Total	1697	100.0%

Continuous Variable Information

		N	Minimum	Maximum	Mean	Std. Deviation
Dependent Variable	deaths_civilians	1676	0	141	.84	5.684
Covariate	contrast1	1676	-1.00	1.00	-.5668	.82408
	contrast2	1676	-1.00	1.00	-.6993	.71506
	contrast4	1676	-1.00	1.00	-.8640	.50371
	contrast5	1676	-1.00	1.00	-.9761	.21724
	contrast7	1676	-1.00	1.00	-.8162	.57790
	contrast8	1676	-1.00	1.00	-.9308	.36567
	CombatantDeath	1676	.00	150.00	3.9564	7.38784
	Logofpopulation	1676	9.27	15.16	11.6827	1.45953
	contrastonlyIS	1676	-1.00	1.00	-.9427	.33368

Goodness of Fit[a]

	Value	df	Value/df
Deviance	2116.456	1666	1.270
Scaled Deviance	2116.456	1666	
Pearson Chi-Square	10845.864	1666	6.510
Scaled Pearson Chi-Square	10845.864	1666	
Log Likelihood[b]	-1565.835		
Akaike's Information Criterion (AIC)	3151.669		
Finite Sample Corrected AIC (AICC)	3151.801		
Bayesian Information Criterion (BIC)	3205.911		
Consistent AIC (CAIC)	3215.911		

Dependent Variable: deaths_civilians
Model: (Intercept), contrast1, contrast2, contrast4, contrast5, contrast7, contrast8, CombatantDeath, Logofpopulation, contrastonlyIS[a]
a. Information criteria are in smaller-is-better form.

b. The full log likelihood function is displayed and used in computing information criteria.

Omnibus Test[a]

Likelihood Ratio Chi-Square	df	Sig.
1120.344	9	<.001

Dependent Variable: deaths_civilians
Model: (Intercept), contrast1, contrast2, contrast4, contrast5, contrast7, contrast8, CombatantDeath, Logofpopulation, contrastonlyIS[a]
a. Compares the fitted model against the intercept-only model.

Tests of Model Effects

Source	Type III Wald Chi-Square	df	Sig.
(Intercept)	124.412	1	<.001
contrast1	1.057	1	.304
contrast2	31.502	1	<.001
contrast4	3.273	1	.070
contrast5	.151	1	.697
contrast7	20.210	1	<.001
contrast8	.354	1	.552
CombatantDeath	.942	1	.332
Logofpopulation	296.062	1	<.001
contrastonlyIS	127.597	1	<.001

Dependent Variable: deaths_civilians
Model: (Intercept), contrast1, contrast2, contrast4, contrast5, contrast7, contrast8, CombatantDeath, Logofpopulation, contrastonlyIS

Parameter Estimates

Parameter	B	Std. Error	95% Wald Confidence Interval Lower	Upper	Hypothesis Test Wald Chi-Square	df	Sig.	Exp(B)	95% Wald Confidence Interval for Exp(B) Lower	Upper
(Intercept)	-5.889	.5280	-6.924	-4.855	124.412	1	<.001	.003	.001	.008
contrast1	-.071	.0693	-.207	.065	1.057	1	.304	.931	.813	1.067
contrast2	.361	.0644	.235	.487	31.502	1	<.001	1.435	1.265	1.628
contrast4	.191	.1054	-.016	.397	3.273	1	.070	1.210	.984	1.488
contrast5	-.090	.2319	-.545	.364	.151	1	.697	.914	.580	1.440
contrast7	.364	.0810	.205	.523	20.210	1	<.001	1.439	1.228	1.687
contrast8	.087	.1456	-.199	.372	.354	1	.552	1.091	.820	1.451
CombatantDeath	.006	.0066	-.007	.019	.942	1	.332	1.006	.993	1.020
Logofpopulation	.561	.0326	.497	.625	296.062	1	<.001	1.752	1.644	1.868
contrastonlyIS	.973	.0861	.804	1.142	127.597	1	<.001	2.646	2.235	3.132
(Scale)	1[a]									
(Negative binomial)	1[a]									

Dependent Variable: deaths_civilians
Model: (Intercept), contrast1, contrast2, contrast4, contrast5, contrast7, contrast8, CombatantDeath, Logofpopulation, contrastonlyIS

a. Fixed at the displayed value.

Disagregated model: Zero Inflated Negative Binominal regression

No control:

```
STATS ZEROINFL MODELSOURCE=ESTIMATE DEPENDENT=deaths_civilians
COUNTMODEL=contrast1 contrast2
    contrast4 contrast5 contrast7 contrast8
SAMEREGRESSORS=YES
COUNTDIST=NEGBIN ZEROLINK=LOGIT
/OPTIONS STARTVALUES=GENLIN OPTMETHOD=BFGS MAXITER=1000
TOL=0.0000000001
/SAVE WORKSPACEACTION=CLEAR.
Classes and Methods for R originally developed in the
Political Science Computational Laboratory
Department of Political Science
Stanford University (2002-2015),
by and under the direction of Simon Jackman.
hurdle and zeroinfl functions by Achim Zeileis.
```

Summary

	Summary
Dependent Variable	deaths_civilians
Count Model Distribution	negbin
Zero-Inflation Link Model	logit
Count Model Offset	--NA--
Zero-Inflation Model Offst	--NA--
Missing Value Treatment	omit
Starting Value Method	genlin
Convergence	Yes

Number of Cases	1695
Log Likelihood	-1202.82628
Log Likelihood D. F.	15
AIC	2435.65257
Theta	0.0793
SE log(theta)	0.1322351135 86493
Output Dataset	--NA--
Computational Algorithm	bfgs
Number of Iterations	63
Maximum Number of Iterations	1000
Convergence Tolerance	1e-10
Model Estimation Date	Thu May 23 20:23:39 2024

Computations done by R package pscl

Count Model Coefficients

	Estimate	Std. Error	z Value	Significance
(Intercept)	-.476	1.024	-.465	.642
contrast1	.319	.164	1.939	.053
contrast2	.110	.191	.576	.565
contrast4	-.037	.384	-.096	.924
contrast5	-.116	.687	-.170	.865
contrast7	-.226	.236	-.959	.337
contrast8	-.499	.402	-1.239	.215
Log(theta)	-2.535	.132	-19.171	<.001

Dependent Variable: deaths_civilians

Zero-Inflation Model Coefficients

	Estimate	Std. Error	z Value	Significance
(Intercept)	-9.733	274.790	-.035	.972
contrast1	-7.040	274.775	-.026	.980
contrast2	-1.043	.756	-1.380	.168
contrast4	.268	.358	.748	.454
contrast5	-.233	.992	-.235	.814

contrast7	-1.006	1.006	-1.000	.317
contrast8	-.810	1.426	-.568	.570

Dependent Variable: deaths_civilians

Model 2:

```
STATS ZEROINFL MODELSOURCE=ESTIMATE DEPENDENT=deaths_civilians
COUNTMODEL=contrast1 contrast2
    contrast4 contrast5 contrast7 contrast8 CombatantDeath
Logofpopulation
SAMEREGRESSORS=YES
COUNTDIST=NEGBIN ZEROLINK=LOGIT
/OPTIONS STARTVALUES=GENLIN OPTMETHOD=BFGS MAXITER=1000
TOL=0.0000000001
/SAVE WORKSPACEACTION=CLEAR.
```

Summary

	Summary
Dependent Variable	deaths_civilians
Count Model Distribution	negbin
Zero-Inflation Link Model	logit
Count Model Offset	--NA--
Zero-Inflation Model Offst	--NA--
Missing Value Treatment	omit
Starting Value Method	genlin
Convergence	Yes
Number of Cases	1676
Log Likelihood	-1107.00815
Log Likelihood D. F.	19
AIC	2252.0163
Theta	0.1924
SE log(theta)	0.192902204121514
Output Dataset	--NA--
Computational Algorithm	bfgs
Number of Iterations	38
Maximum Number of Iterations	1000
Convergence Tolerance	1e-10

Model Estimation Date	Thu May 23 20:25:07 2024

Computations done by R package pscl

Count Model Coefficients

	Estimate	Std. Error	z Value	Significance
(Intercept)	-5.725	1.659	-3.450	<.001
contrast1	-.508	.232	-2.194	.028
contrast2	-.264	.177	-1.490	.136
contrast4	.198	.348	.571	.568
contrast5	.158	.643	.246	.806
contrast7	.095	.229	.414	.679
contrast8	.078	.403	.194	.846
CombatantDeath	.089	.028	3.147	.002
Logofpopulation	.502	.104	4.844	<.001
Log(theta)	-1.648	.193	-8.545	<.001

Dependent Variable: deaths_civilians

Zero-Inflation Model Coefficients

	Estimate	Std. Error	z Value	Significance
(Intercept)	4.505	2.693	1.673	.094
contrast1	-.567	.349	-1.626	.104
contrast2	-.779	.280	-2.780	.005
contrast4	.060	.293	.203	.839
contrast5	-.130	.542	-.240	.810
contrast7	-.408	.224	-1.820	.069
contrast8	-.432	.336	-1.288	.198
CombatantDeath	.257	.047	5.442	<.001
Logofpopulation	-.546	.228	-2.395	.017

Dependent Variable: deaths_civilians

Model 3:

```
STATS ZEROINFL MODELSOURCE=ESTIMATE DEPENDENT=deaths_civilians
COUNTMODEL=contrast1 contrast2
```

```
    contrast4 contrast5 contrast7 contrast8 CombatantDeath
Logofpopulation contrastonlyIS
SAMEREGRESSORS=YES
COUNTDIST=NEGBIN ZEROLINK=LOGIT
/OPTIONS STARTVALUES=GENLIN OPTMETHOD=BFGS MAXITER=1000
TOL=0.0000000001
/SAVE WORKSPACEACTION=CLEAR.
```

Summary

	Summary
Dependent Variable	deaths_civilians
Count Model Distribution	negbin
Zero-Inflation Link Model	logit
Count Model Offset	--NA--
Zero-Inflation Model Offst	--NA--
Missing Value Treatment	omit
Starting Value Method	genlin
Convergence	Yes
Number of Cases	1676
Log Likelihood	-1076.12978
Log Likelihood D. F.	21
AIC	2194.25956
Theta	0.3392
SE log(theta)	0.198843291695884
Output Dataset	--NA--
Computational Algorithm	bfgs
Number of Iterations	79
Maximum Number of Iterations	1000
Convergence Tolerance	1e-10
Model Estimation Date	Thu May 23 20:26:04 2024

Computations done by R package pscl

Count Model Coefficients

	Estimate	Std. Error	z Value	Significance
(Intercept)	-3.134	1.568	-1.998	.046

contrast1	-.535	.205	-2.613	.009
contrast2	-.263	.160	-1.638	.101
contrast4	.200	.313	.639	.523
contrast5	-.183	.611	-.300	.764
contrast7	.090	.203	.443	.657
contrast8	.108	.354	.306	.759
CombatantDeath	.152	.037	4.112	<.001
Logofpopulation	.330	.100	3.295	<.001
contrastonlyIS	.815	.178	4.572	<.001
Log(theta)	-1.081	.199	-5.437	<.001

Dependent Variable: deaths_civilians

Zero-Inflation Model Coefficients

	Estimate	Std. Error	z Value	Significance
(Intercept)	-5.927	1714.965	-.003	.997
contrast1	-.528	.233	-2.265	.024
contrast2	-.592	.191	-3.092	.002
contrast4	.041	.257	.160	.873
contrast5	.012	.626	.020	.984
contrast7	-.396	.188	-2.114	.034
contrast8	-.455	.286	-1.591	.112
CombatantDeath	.215	.040	5.420	<.001
Logofpopulation	-.357	.123	-2.916	.004
contrastonlyIS	-9.266	1714.965	-.005	.996

Dependent Variable: deaths_civilians