UNSAFE SPACE:
SPATIAL ANALYSIS OF THE INDONESIAN MASS KILLINGS OF 1965-1966
IN EAST JAVA

By

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ABSTRACT

This dissertation addresses the complex dynamics of the Indonesian Communist Purge in 1965-1966, a catastrophic event in human history marked by mass killings orchestrated by the Indonesian Army and allied local militias. Focusing on East Java, the study employs innovative research methodologies to dissect the distinct roles of these perpetrators and their impact on the scale of the purge. By measuring the influence of the army and militias at the local level through settlement proximity, this work finds that both entities significantly contributed to the purge, with the army playing a more decisive role, covering a broader geographical area. Exploring the broader context of mass violence, the dissertation delves into the deep-seated political and religious tensions between the *abangan* (who supported the PKI) and the *santri* (who opposed the PKI) communities. Employing distance-based proxies, the study quantifies the relationship between community connections and the extent of violence, emphasizing the crucial role of social networks in shaping the dominance or resistance of different groups during the killings. Additionally, the research sheds light on the multifaceted motivations driving military actors at different hierarchical levels, uncovering variations in killings among various *kodim* units. The study suggests that remoteness correlated with greater independence in decision-making, although data limitations hinder definitive conclusions regarding the influence of political and economic motivations. The investigations comprising this dissertation collectively contribute distinct perspectives on our understanding of the Indonesian Communist Purge and offer geographic insights for preventing future mass violence.

This dissertation is dedicated to
the love of my life.

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CHAPTER 1: UNTANGLING MASS KILLINGS
FROM A GEOGRAPHIC PERSPECTIVE

The inclination towards violence is deeply ingrained in human nature. This proclivity has evolved with technological advancement, leading to the alarming reality of mass killings in modern society (Waller, 2007). The Genocide Convention in 1948[1] brought attention to the growing problem of mass killings[2], which are characterized by two main components: 1) the targeting of a specific group, setting mass killings apart from general armed conflicts, and 2) the *deliberate* intent to eradicate the targeted group, distinguishing it from other forms of violent human endeavors such as the collateral damage in warfare (Esteban et al., 2015).

Understanding the root causes of mass killings and identifying responsible entities are important for ensuring justice for past victims and for preventing killings in the future. However, reaching a consensus about mass killings – what happened, how it happened, and who perpetrated what on whom – is challenging, fueling ongoing debates about accountability and responsibility[3]. Two principal approaches are employed in mass killing studies, structural and agency. The structural approach suggests that societal structures heavily influence and limit the choices of individuals

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[1] The Convention on the Prevention and Punishment of the Crime of Genocide (thereafter Genocide Convention of 1948). The first draft of the Convention defined genocide as acts carried out with the explicit purpose of destroying, "either entirely or partially, a national, ethnic, racial, religious, or political group". See FEIN, H. 1993a. Accounting for Genocide After 1945: Theories and Some Findings. *International Journal on Minority and Group Rights,* 1**,** 79-106.

[2] This dissertation will use the term 'mass killings' to denote genocide as defined in the first draft of the Genocide Convention of 1948. This adjustment is made considering subsequent revisions that omitted the reference to political groups from the definition. It's believed that the final definition's exclusion of political groups was because of pressure from the USSR.

[3] The denial or debate over historical mass killings has shaped nationalism and historical narratives in various countries, such as in Canada, Cambodia, Turkey, and Rwanda. See MILANOVIĆ, M. 2006. State Responsibility for Genocide. *European Journal of International Law,* 17**,** 553-604.,CHURCHILL, W. 1997. *A little matter of genocide: Holocaust and denial in the Americas 1492 to the present*, City Lights Books., and STRAIN, J. & KEYES, E. 2003. Accountability in the Aftermath of Rwanda's Genocide. *Accountability for atrocities: National and international responses.* Brill Nijhoff.

involved in mass violence, either as perpetrators or victims (Hinton, 2012). In contrast, the agency approach emphasizes the individual's capacity to make choices and resist even in extreme circumstances, acknowledging the decision-making roles of both perpetrators and victims in mass killing contexts (Totten and Parsons, 2013).

Integrating a geographic perspective adds a new dimension to the study of mass killings. This perspective involves a spatial examination of the killings, exploring how geographical factors affect their occurrence, dynamics, and repercussions. The geographic perspective aims to understand not only the 'who' and 'why' of mass killings but also the 'where' and 'how,' which are essential for a comprehensive understanding of these tragic events.

Geographic Perspective

Integrating insights from both structural and agency approaches, geography offers a unique lens for defining and understanding mass killings. For example, mass killings can be examined from a geographic perspective by focusing on the geographic concept of 'territory.' Territory, in human geography, is a form of spatial organization shaped by historical and geographical influences (Elden, 2013). From this vantage point, mass killings are seen as the process of creating an exclusive territory (Tyner and Rice, 2016). Notably, terms like "cleansing" that are often used in mass killing contexts, such as in the extermination of Jews by Nazi Germany (Hilberg, 2003), the mass deportations of ethnic minorities in the USSR (Pohl, 1999), or the efforts to create a "pure" Croatia in the occupied Yugoslavia (Berend, 2023)[4]*,* pivot around territorial claims rather than the direct targeting of victimized groups. These euphemisms masked a plan to transform a

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[4] The *Ustaše* was a Croatian fascist and ultranationalist organization active between 1929 and 1945. Its members went on to perpetrate The Holocaust in the Independent State of Croatia, killing hundreds of thousands of Serbs, Jews, Roma as well as Croatian political dissidents during World War II in Yugoslavia.

diverse space into a homogeneous one by eliminating the "undesirable" group (Gordon and Ram, 2016).

A few core topics discussed in political geography are also essential for understanding mass killings: the nation-state and modernity. The study of nation-states and nationalism in geography focuses on their spatial dimension, discusses the relationship between place and identity, and explores how the sense of belonging to a nation is tied to a specific space. As major empires collapsed in the early 20th century, the nation-state emerged as the prevailing model for structuring a sovereign country. Establishing the nation-state relies on the construction of a collective narrative, shared memories, and a historical trajectory that fosters a sense of community — this is nationalism in action (see Anderson, 2006). Nationalism serves as a cohesive force in the nation-state, bringing the population in the newly formed country together despite existing diverse ethnicity, race, religion, or political views (Scott, 2020). Nationalism also drives the state and its people to safeguard the interest and identity of this nation-state (Breuilly, 1993). When a particular group, often a minority one, is perceived as different[5] from this collective identity and an obstacle to the state's interest, the nation-state as a collective would be driven to eliminate this difference through various means including violence.

Modernity is another feature associated with the prominence of mass killings in the 20th century (Oakes, 1997). The study of modernity in geography emphasizes its spatial (both physical or abstract) impact, for example, the cultural and societal transformation due to modernity, and the spatial structure of the state power. Modernity reshaped the relationship between society and government, since the adoption of modern bureaucratic structures is aimed at establishing and

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[5] Othered as the "other", see STOKES, P. & GABRIEL, Y. 2010. Engaging with Genocide: The Challenge for Organization and Management Studies. *Organization,* 17**,** 461-480.

managing a planned, scientifically informed, and efficient society (Bauman, 1989). In contrast to traditional societies, where the social order relied on embedded and often informal institutions such as customs, practices, and interpersonal relationships, the functioning of a modern society relies on formal institutions, including bureaucracies, statutes, and courts. However, formal institutions' procedures may be at odds with existing informal practices and social bonds, and the state has to reconcile the conflicts between various communities (Mann, 1999)[6] which can increase the chances of conflicts between the government and communities and leave some communities (often minority or marginalized) more susceptible to the influence wielded by these institutions. Besides, when the state[7] seeks to exclude a marginalized group from the state's service, these groups often struggle to oppose the repressive power enabled by modern techniques, from extensive surveillance to systematic state-sponsored violence (Bauman, 1989). As a result, mass killings emerge as a possible consequence reflecting the inherent destructive tendencies that accompany modernity (Hinton, 2002, Horowitz, 1999).

In addition, geography can also provide critical insights about mass killings at a micro level. Since a striking characteristic of perpetrators in mass violence is their "ordinariness" (Browning, 1992), it is crucial to comprehend the mechanisms that drive ordinary people towards brutality, such as their personal perception about killings, their relationship with the victim's community, and their relationship with the government (Waller, 2007). Perpetrators often justify mass killings based on perceived threats from the "**others**" to their living spaces, i.e., the threat from "**them**" to "us", especially when lacking an emotional connection with "**them**"(Browning, 1995). "We" and "they" are both spatially connected, but the closeness of distance between "we" and "they"

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[6] Formal institutions usually exert their influence beyond the traditional boundaries of communities.
[7] Or any entity that can exert the power of the state, such as the military.

would also encourage the chance of violence. From a geographic perspective, mass killings aim to encroach on or erase the victim's living space[8]. Ironically, the fear of living space being stripped away by "them" is exactly what drives the perpetrators to kill (Tyner, 2017). In empirical study, archives such as personal diaries can help reconstruct the spatial trajectory of displaced victims, and locate the fear-inducing places for the victims (e.g.,Curtis et al., 2019, Kwan, 2008). This aids in understanding the significance of specific locations and the geographic context in which these tragic events unfolded.

Geographic Methodology

Data availability is always a challenge for quantitative mass killing research (Ball and Price, 2018, Goldstein, 1986). Geography with its diverse methodologies, offers different approaches to structuring knowledge and integrating information about mass killings, especially as data and archives become increasingly accessible through declassification and discovery (Finkel and Straus, 2012).

Mass killings are inherently a spatial process, which makes geography a powerful tool for depicting and understanding its dynamics and mechanisms (Figure 1-1). Though some mass killings start with a sudden event like a coup or a significant incident (e.g. "Night of Broken Glass" preceding the Holocaust[9]), the killings usually extend over months or years (O'Loughlin and Raleigh, 2008), allowing the power dynamics between political elites, their local accomplices, and victims to evolve, which would eventually reflect on the spatial pattern of persecution and resistance in different areas (O'Lear and Egbert, 2009). Furthermore, the power

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[8] An example is Lebensraum, see OAKES, T. & PRICE, P. L. 2008. *The Cultural Geography Reader*, Routledge.
[9] I.e. *Kristallnacht*, see HILBERG, R. 2003. *The Destruction of the European Jews*, Yale University Press.

dynamics between perpetrators and victims are shaped by the social, institutional, and cultural factors embedded within the local environment. Analyzing these factors adds another layer of complexity to the research on mass killings, but since these factors influence the power dynamics between perpetrators and victims, understanding these environmental factors is also a key to untangling the intricacies of mass killings (McDoom, 2013).

Environment	Human Society	Space
Social & Natural Environment Factors	Entities in the killings	Variety of Spatial Pattern
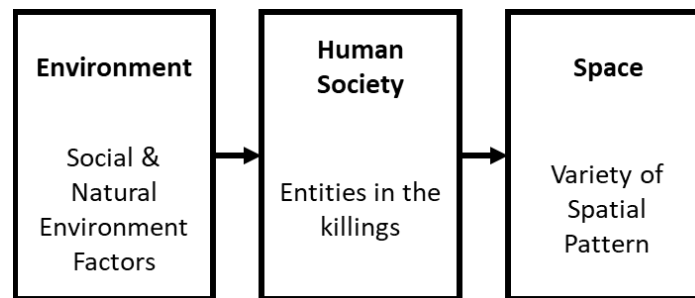
Figure 1-1 Formation of the spatial pattern of killings by environmental and societal factors.

Geospatial methods enable research at a more detailed geographic scale if relevant data are available (Raleigh, 2012). In contrast, non-spatial mass killing studies often focus on national-level institutions (Bauman, 1989), international relations (Esparza et al., 2009), and historical backgrounds (Weitz, 2015). Because national-level processes like nation-state formation and modernization are (some of the) fundamental causes of mass killings, national-level analysis can be satisfactory to address many research questions. However, the occurrence of killings is also conditioned by local socio-economic environmental factors which would be neglected in a national-level analysis (McDoom, 2005, Raleigh and Galster, 2015). Geospatial analysis not only can utilize subnational level data to investigate finer spatial patterns and processes, but can even disaggregate or reorganize the data beyond administrative boundaries to meet researchers' needs (McDoom, 2007).

Every dataset inherently possesses a spatial dimension, and geographical approaches can unveil features that non-spatial methods may overlook in mass killing studies. For example, geospatial techniques can identify the spatial relationships (such as the physical distance between two killings) and collective characteristics (such as spatial clusters of mass graves) of a set of observations. In addition to these spatial analysis methods, descriptive spatial techniques, from cartography to geo-visualization and geo-narratives, aid in documenting temporal-spatial attributes related to mass killing events. The spatial approach in turn enhances a deeper understanding of the victims' endurance and illuminates the spatial strategies of the perpetrators, such as how the perpetrators concentrated their actions during the killings (Curtis et al., 2019).

Fundamental Research Questions about Mass Killings

Identifying the responsibility for mass killings requires determining the roles of various actors involved in atrocities. Is the responsibility primarily with the state as a whole, or should specific political or military leaders take principal responsibility? Does responsibility extend to the soldiers and officers who may simply be following killing orders? Furthermore, the role of non-state actors such as militias cannot be overlooked.

In many instances of mass killings, the state should be held accountable for the atrocities committed under its authority (Giddens, 1986). The state's control over institutions and resources provides the means to orchestrate and carry out large-scale violence and makes organized resistance difficult. The state can also shape and enforce policies that foster exclusion, discrimination, and dehumanization of certain social groups, (thereby) cultivating a prejudiced social environment toward these targeted groups. The prejudiced social environment is not limited to state-led discrimination towards ethnic minorities, but also can be indicated by exclusionary ideology held by ruling elites, the absence of minorities among the elite population,

autocracy polity, past employment of genocidal policies, and the lack of openness of the state (Harff, 2003). Such conditions make it easier to justify and carry out acts of violence, even if the state does not issue direct orders of execution. However, individual accountability should also be considered. Aside from the top-level state leaders who directly give the order of killings, state-sponsored institutions, such as the military and secret police, are often seen as instruments in implementing mass killing plans. Should individual soldiers or officers bear the responsibility for killings? Or should the accountability of killing be limited to the top-level officers?

In addition to the state and its collaborators, non-state entities, such as militia and other paramilitary groups, can also play a crucial part in organizing and carrying out systematic violence against targeted victim groups. Often motivated by non-humanitarian ideologies and self-interest, militias' involvement of killing can vary from participation in massacres[10] (Smeulers and Hoex, 2010) to serving as auxiliary forces alongside the military. Unlike the military, the militia's relative autonomy (and lack of discipline) allows them to operate beyond legal and moral boundaries, amplifying the potential severity with which they may perpetrate violence. It is important to remember the operation of militias would not succeed without the acquiescence of the state, which makes the extent of militia responsibility a subject of debate (Staniland, 2015). Besides these organized groups, other civilians ("bystanders") who are not in the victim's group may also play a passive role in the killing. Fear, social pressure, and the desire to conform can influence individuals to turn a blind eye and remain silent. By failing to condemn the violence or to aid the victim's group's resistance, these bystanders ultimately facilitate the mass killing agenda of the perpetrators (Lake and Rothchild, 1996).

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[10] Known as acts of terror.

Meanwhile, it is crucial to recognize the existence of resistance (in any form) within society. Resistance is not only limited to the victim's group. It is important to recognize that not all individuals in the perpetrator groups wholeheartedly adhere to the ideology that drives mass atrocities. The compassionate mainstream media may indeed overestimate the number of sympathetic individuals within the perpetrator's group (Morton, 2011)[11], but there are always people in the perpetrator group who experience doubts, moral conflicts, or personal reservations that lead them to question or resist their group's involvement in the genocidal machinery. On the other hand, survivors of mass violence endure unimaginable horrors and profound losses, yet often exhibit remarkable resilience and resistance. This resilience can manifest on an individual level, but when survivors are organized, even informally, the bonds within their group can create a robust social network that counters the influence of the mass killing forces (McDoom, 2014). Depending on the presence and nature of these resistances, regional variations in the extent of atrocities may emerge, impacting the level of cooperation or active resistance against participation in acts of violence.

The preceding paragraphs delineate three pivotal aspects of mass killing events and suggest essential research questions: 1) Who is accountable for the killings—institutionalized perpetrators (like state and military actors) or civil-paramilitary entities? 2) Within an institutionalized perpetrator organization, should the responsibility for killings be confined to high-ranking officers, or should it extend to lower-ranking officers and soldiers? 3) Will the (spatial) connections within civil society impact the effectiveness of mass killing or resistance to it? In my empirical study, I take East Java in Indonesia as a case study to explore the answers to

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[11] Or check Florian Henckel von Donnersmarck's movie: *Das Leben der Anderen (2006).*

these questions in the context of the mass killings in Indonesia from a geographic lens.

Case Study: Mass Killings in Indonesia in 1965-1966

The Indonesian mass killings of 1965-66 were one of the most severe episodes of mass killing in the 20th century. This event began late in the night of September 30, 1965, when six high-ranking generals were kidnapped and murdered in Jakarta. Several young junior military officers who planned this action announced it was a preventative measure against a coup being plotted by these generals. These young military officers then proclaimed control of the national media and press in the name of the Revolutionary Council (Cribb et al., 2004). However, the Revolutionary Council was swiftly suppressed by Major General Suharto, who accused the PKI (*Partai Komunis Indonesia*, the Communist Party of Indonesia) of organizing the Revolutionary Council and orchestrating the murder of the six generals. Within a few days, a nationwide campaign against the PKI and its affiliated organizations started.

The campaign soon became a massive purge against the PKI and its sympathizers, which resulted in the killing of about 500,000 people in Indonesia, and the incarceration of even more in a few months. Most victims were PKI members and their sympathizers, while the perpetrators were the army and allied militia. Although almost 60 years have passed since the event, the incompleteness of data and the reluctance of local government to disclose information have left researchers with a huge knowledge deficit (Verdeja, 2012).

Most researchers today agree that the targets of this massacre were members of the Communist Party of Indonesia (PKI) and those affiliated with it. Since the late 1950s, the PKI became the world's largest non-governing communist party and was growing rapidly in Indonesia, and the PKI's growth was regarded as a threat by various domestic and international political powers. On

the local level, the potential land redistribution once PKI took power also made PKI less favored by major landlords. Although the PKI only gained a 15% share of the national vote in the national legislative election in 1955, it was hard for the other parties to ignore its rapid growth afterward[12]. The essential Atheism element in PKI's ideology was incompatible with the country's *Pancasila* principles (or the majority's Islamic beliefs), which emphasize "a divinity that is an ultimate unity." In addition, the US and other Western countries also considered communism in Indonesia as a major threat; they feared that Indonesia would become a communist country without intervention (Pauker, 1969). Considering that the number of ethnic Chinese in Indonesia killed was disproportionately high, early studies (and Indonesian official reports) tended to portray the killings as ethnic conflicts. There were indeed irrefutable cases of massacres that targeted Chinese people during the mass killings, creating a convenient equivalency between antisemitism and anti-Sinicism (Cribb and Coppel, 2009). But overall, ethnicity wasn't the primary motivation for the mass violence. On the island of Java, while the majority of victims were ethnically Javanese, Chinese inhabitants in Java were more likely to be PKI members or affiliates of the PKI. This affiliation, rather than ethnicity alone, was the primary driver of the mass killing of the ethnic Chinese people in Java (Cribb and Coppel, 2009).

The PKI was active all over Indonesia before the killings, both on Java Island and *daerah luar* (outer islands). The party was the most active and gained the highest local support in the following five provinces: Jawa Timur, Jawa Tengah, Aceh, Bali, and Kalimantan Barat (Chandra, 2017), all of which also suffered atrocities during the killings. Local support for the PKI varied substantially within these provinces. Higher local support implied the PKI might gain local

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[12] Major other parties then included NU (*Nahdlatul Ulama*), *Masyumi*, and PNI (Indonesian National Party).

protection against the killings, but research noted some of the *kabupaten* that had high-level support for the PKI experienced the most severe population loss. This pattern indicated that these places may draw the attention of perpetrators (Chandra, 2019).

There were two types of persecutors during the mass killings, but whose role was dominant is still under debate. The first type of persecutor was the Indonesian army, representing the power of the state. Because state power was behind nearly every single mass killing event during the 20th century, the appropriate question regarding the role of the army (and the state) might not be if they have participated in the killings or not, but "to what extent were the killings engineered and conducted by the state" (Melvin, 2017). Detailed archival analysis identified the army as the mastermind of the Indonesian mass killings (Anderson and McVey, 2009), and empirical evidence also suggests the state-controlled army played a vital role in mobilizing and directing the killings (Robinson, 2018). Furthermore, newly declassified documents in Aceh also proved concrete evidence about a chain of command connecting the military leadership to the killings (Melvin, 2017).

The other type of persecutors was the local militias. Their influence during the mass killings was centered around (and instigated by) *pesantren* (Islamic Boarding Schools), which were mostly funded and backed by Islamist parties such as the *Nahdlatul Ulama*. I identified 21 major *pesantren*[13] in East Java. Unlike the Holocaust or Khmer Rouge, where centralized power (the state and the army) played a decisive role, the mass killings in Indonesia did not appear to follow a planned procedure. In theory, a centralized force following the guidance of a certain clearly

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[13] There were hundreds of *pesantren* in the 1960s in East Java, and the 21 *pesantren* mentioned above were the major ones. See DHOFIER, Z. 1980. *The Pesantren Tradition: A Study of the Role of the Kyai in the Maintenance of the Traditional Ideology of Islam in Java*, The Australian National University (Australia).

illustrated ideology usually executes the order to kill 'for the greater good'; however, the killings in Indonesia looked like gratuitous slaughter, not only extremely coarse and brutal, but also primitive — the majority of the weapons used for the killings were machetes, clubs, or even rocks (Robinson, 2018).

Besides the perpetrators (the army and militias) who directly waved machetes towards their enemy, some local unarmed civilians also facilitated these killings. For example, many churches may have protected the PKI members and poor peasants in favor of the PKI, but there were also priests who provided lists of local PKI members to militias. The 1965 mass killings might have also been encouraged by the mysterious element embedded in local traditional Islamic culture. In local traditional beliefs, people could interact with, communicate with, and eradicate the devils to get rid of their influence (Geertz, 1960). Given that PKI members were frequently portrayed as the devil to their newborn country, local culture could certainly associate them with the imagined devil (Hinton, 2012), which made killings even easier. Last but not least, the local tradition of respecting and obeying the established hierarchy could worsen the killings (Vickers, 2013).

Leveraging extensive pre-mass violence era military maps and census data, the subsequent chapters (2, 3, and 4) systematically address individual research questions pertinent to the Indonesian case. East Java serves as the study area of this dissertation. Chapter 2 discusses the primary implementers of the killings and the responsibility that various kinds of perpetrators should shoulder. Chapter 3 shifts the focus to the local community's role, examining whether social bonds within the two groups (the perpetrators and the victims) facilitated or helped resist the killings. Moving forward to Chapter 4, a more in-depth exploration of the internal structure of the military (specifically the army) in East Java is undertaken, evaluating whether local

branches of the army should also bear some responsibility for the killings. The last chapter provides a brief conclusion.

CHAPTER 2: FOLLOWING KILLING ORDERS

— Re-examining the Roles of the Perpetrators in the Indonesian Communist Purge with Evidence from Disaggregated Geographic Analysis

Abstract

The Indonesian Communist Purge is regarded as one of the most egregious instances of mass violence in human history. This campaign targeted individuals affiliated with the Indonesian Communist Party and their so-called sympathizers, and the perpetrators included the Indonesian Army and local militias. In East Java, the army acted under orders from the Commander[14] in Surabaya (Leksana, 2021), while the local militias were directed by the *Nahdlatul Ulama* (NU) party which harbored deep-seated grievances against the Communist Party. While both the army and the militias were active perpetrators of the mass violence, their relative contributions have not been clearly articulated. This study aims to distinguish the distinct effects of these two groups of perpetrators on the scale of the purge and to determine which played the more pivotal role in the mass killings. To accomplish this objective, the research employs the distance between each settlement and the local army command or Islamic boarding school (backed by the NU) to measure the intensity of their respective influences at the local level. Furthermore, the study disaggregates *kecamatan* (subdistrict) level data to create a more precise unit of analysis, thereby enabling detection of the sub-research-unit-level factors that contributed to the purge. The findings reveal that both the army and the NU had a significant impact on the scale of the purge, with the former playing a more decisive role. The influence of both groups on local

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[14] Throughout the PKI purge in East Java, three commanders served consecutively: General Basuki Rahmat, General Soenarto Soemoprawiro, and General Soemitro Sastrodihardjo. Each of them had close ties to Suharto, who effectively led both the army and the state during the purge.

populations tended to decrease as the physical distance from them increased, although the army's reach covered a much broader area than that of the NU.

2.1 Introduction

The mass killings in Indonesia of 1965-1966 appear to have been initiated by an accidental event. On October 1st, 1965, multiple detachments of troops from various divisions of the Indonesian National Armed Force kidnapped and murdered six generals of the Indonesian Army while taking over strategic locations in Jakarta[15]. Major General Suharto quickly quelled the coup, and he was the only significant figure in the Indonesian army not targeted by the insurgents. Suharto swiftly accused the Indonesian Communist Party (PKI) of being the mastermind behind the coup (Anderson and McVey, 2009). A few days later, he and the army commenced a nationwide anti-PKI propaganda campaign that rapidly escalated to a countrywide anti-PKI purge, unparalleled in Indonesian history. From 1965 to 1968, over half a million people were executed, and many others were imprisoned in Indonesia (Kammen and Zakaria, 2012). Most of the purge victims were either PKI members or their alleged sympathizers. Following the purge, the PKI, previously the largest communist party in a non-communist country worldwide, was virtually eradicated from Indonesia, and Suharto subsequently became the president of a military government ruling Indonesia for the next three decades.

The immense death toll made it impossible for Suharto and his military government to deny the occurrence of the purge, but they did deny their dominant role in the killings and refused to admit their orchestration of the purge (Vickers, 2013). Instead, the military government's popular

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[15] Including radio station, etc.

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narrative emphasized the role of local militias and claimed that the killings were mainly an unforeseen outcome of spontaneous local conflicts between the PKI and various local militias (Robinson, 2018). The militias that participated in the violence were typically either backed by or a part of several nationwide political organizations, notably *Nahdlatul Ulama* and *Muhammadiyah*. These organizations had accumulated antagonism towards the PKI's atheistic doctrine and a fear of the PKI's potential land confiscation policy for decades before 1965 (Fealy and McGregor, 2010). Therefore, it is reasonable to conclude that their militias would take action against the PKI if given the opportunity.

However, both direct and indirect evidence indicates that the army played a significant role in the killings. For instance, reports on the killings often mentioned witnesses seeing trucks carrying troops to towns and villages where the PKI had been active in the past (Robinson, 2018). Additionally, the army's propaganda portrayed the PKI as the enemy of the country, which would have encouraged local militias to take up arms and defend the nation by eliminating its enemies (Kammen and Zakaria, 2012). It is challenging to determine which of the two groups, local militias, or the Indonesian army, played the dominant role in the killings because their actions were often entwined during the purge. The army not only encouraged local militias through its propaganda but also provided logistics and weapons to them (Kahin, 2015). Meanwhile, the local militias shared local intelligence with the army and sometimes acted as the army's hitmen for dirty jobs. Their violence was frequently instigated by the army (Robinson, 2018, Melvin, 2018).

Identifying which group dominated the purge and should take the primary responsibility for the killings is one of the pivotal research questions in the study of the Indonesian Communist Purge (McGregor et al., 2018) and is also essential in the study of mass violence in general (O'Lear and Egbert, 2009). This study focuses on East Java as the study area and employs spatial analysis

methods to explore this research question in a quantitative manner. Following this introduction (Section 1), Section 2 of this paper offers a comprehensive analysis and review of the two groups of perpetrators involved in the killings and how their actions influenced the spatial pattern of the killings' outcome. Section 3 delves into the data processing and Bayesian spatial methods utilized in this research. Section 4 presents the results of a series of different models based on varying study scopes, while Section 5 concludes with a brief discussion on the significance and limitations of this research.

2.2 Research Background

2.2.1 *Nahdlatul Ulama* and its Relationship with the PKI

Nahdlatul Ulama (NU), which translates to "Awakening of the learned ones", was established in 1926 by a group of Islamic scholars (*ulama*) with the objective of consolidating traditionalist Muslims in response to the perceived threat posed by modernists and communist adversaries (McGregor, 2009). The NU disseminated Islamic teachings through *pesantren* (Islamic boarding schools) to both genders and quickly gained popularity among the masses, particularly in rural regions (Pribadi, 2013). From the 1950s, the NU began to express its political interests and, after registering as a party, won 30% of the congress seats in the sole congressional election in Indonesia before the purge (Hindley, 1964, Chandra, 2017).

The PKI and its communist ideologies seemed to pose both political and religious threats to the NU. Therefore, it was not surprising that members of the NU held intolerant views of the PKI. Nonetheless, most NU leaders maintained a moderate and pragmatic stance towards the PKI. Although their leaders occasionally voiced their disdain for the PKI in public, it appeared that the

NU did not plan to take any radical action against the communists (Bush, 2009, McGregor, 2009).

The relationship between the NU and the PKI deteriorated after the 1955 congressional election. The PKI demonstrated its level of influence by winning the third-highest number of votes, surprisingly making it one of the four most powerful parties in the congress (the other three being the nationalist party PNI and two Islamist parties: the NU and the *Masyumi*). Two years later, during the local government election in Indonesia, the PKI demonstrated even more unprecedented growth, and its support base expanded significantly. During that period, the PKI gained power in various local government levels, particularly in East Java and Central Java, and launched campaigns to expropriate land from large landlords (aksi sepihak, see Kasdi, 2001). While NU members might not necessarily be wealthy landlords, many of their leaders (*ulama*) were. Furthermore, Sukarno's economic policies had caused some economic turbulence at that time, and the anxiety about the country's (and each party's) future further exacerbated the already strained relationship between the NU and the PKI.

Before the onset of the purge, a series of conflicts occurred between the NU-affiliated *Banser* (a militant wing of the *Ansor Youth Movement*, which was associated with the NU) and the PKI-affiliated *Barisan Tani Indonesia* (*BTI, Indonesian Peasants' Front*) in Java (Bush, 2009). Consequently, the distrust between the supporters of the two parties deepened to a new level.

2.2.2 *Pesantren* and their Role in the Purge

Islamic boarding schools, or *pesantren*, have played a vital role in Indonesian education since before the establishment of the public school system. The NU, Indonesia's largest Islamic organization, had been consolidating its supporters through these schools since its inception.

While some *pesantren* taught the synthesis tradition of Javanese Islam, most provided Islamic education based on the *Shariah* system (Dhofier, 1980). The majority of Islamic boarding schools were usually small, with only 10-25 students, but some, especially those in big coastal cities, were big and had a high standard of education (Dhofier, 1980, Koentjaraningrat, 1985). For example, many teachers in the major boarding schools might have studied abroad for many years in Mecca and would speak fluent Arabic. Therefore these major Islamic boarding schools attracted many students from a broader area across East Java (Ricklefs, 2007).

Ulama and *kyai* (esteemed religious leaders and teachers) in *pesantren*, tended to denounce the political, economic, and religious views of the PKI (Törnquist, 1984), perceiving the party as fundamentally immoral and its expansion detrimental to Indonesia's future (Fealy, 1998). Before the onset of the purge, these *pesantren* schools had already become a platform for sermons that vilified communism and the PKI (Fealy, 1998). In an environment where biased and discriminatory ideas were loaded into the educational curriculum, it is not difficult to imagine *pesantren* would influence their students to target certain groups as outsiders or enemies even after their graduation (Lange, 2011, Gurr, 2015). Furthermore, during the decade preceding the mass violence, Indonesia was facing economic hardship and a high unemployment rate (Cribb and Brown, 1995), and the disparity between educational expectations and reality would increase the likelihood of a *pesantren* graduate participating in the violence. Overall, I can expect the education provided by *pesantren* in Indonesian society to follow a similar pattern to what was observed in other mass killing events. For example, in Rwanda, mass violence was more prevalent in areas associated with greater proportions of educated individuals (Brehm, 2017).

During the purge, *pesantren* were used as training camps for militants, including members of local *Banser* branches and some ad-hoc killing squads. *Ulama* and *kyai* in *pesantren* even

distributed amulets to protect the killing squads from the bad luck associated with killing people (Fealy and McGregor, 2010). Some *ulama* and *kyai* participated in the killings or led killing squads, convinced that it was imperative to eliminate the influence of the PKI.

Major *pesantren* were both the stations where anti-PKI sentiments spread before the killings and the compounds where local militias were summoned during the massacre (Robinson, 2018). It is reasonable to believe that the killings were more likely to occur near a major *pesantren*, and there should be a spatial correlation between the killings and the location of *pesantren*. If so, the population change due to the purge would likely be negative in settlements close to *pesantren* and positive in settlements far away, as victims fled areas of violence to those where they would be protected.

It is worth remembering the NU and *pesantren* were not the only civil parties that encouraged the brutality of local militias during the purge. Besides the Indonesian army, other organizations, including *Muhammadiyah*, called for violence during the killings as well. *Muhammadiyah* issued a *fatwa* (legal opinion) referring to the extermination of PKI as a religious duty (Fein, 1993c), but its influence was largely focused in urban areas. In the rural areas, the NU and *pesantren* had an overwhelmingly dominant impact (Ricklefs, 2012).

2.2.3 The Army and their Role in the Purge

The Indonesian Army, which comprised the largest sector of the Indonesian National Armed Force, had a well-known hostility towards the PKI even before the killing of six generals on September 30, 1965 (Cribb, 2001a). The army had twelve regional military commands located across Indonesia, with its East Java headquarters situated in Surabaya. This regional command was further divided into three Military Resort Commands (*korem*), which were subdivided into

30 Military District Commands (*kodim*), each with jurisdiction over a regency (*kabupaten*) or a regency with its central independent city (*kota*) (Crouch, 2019, Leksana, 2021).

There is both direct and indirect evidence that implicates the army in the mass killings. Army trucks carrying troops and sometimes militants from the paramilitary organization *Banser* were frequently spotted in villages where PKI members were seeking refuge. Once caught, these PKI members were transported by the army to the local *kodim* headquarters before being executed and buried (Chandra, 2019). The army also provided weapons such as guns, knives, and machetes to local militias to facilitate the killings (Robinson, 2018). Even in locations where the army did not directly participate in the massacres, its presence and its capability of projecting troops was enough to embolden militias to act (Cribb, 2001b).

Indirect evidence further supports the army's essential role in the killings in an even more convincing way. For instance, provinces where troop commanders were loyal to Jakarta often began the annihilation immediately following Suharto's orders, with the scale of the killings being more extensive compared to provinces where commanders were less loyal. In some provinces where commanders were sympathetic to the PKI, killings barely occurred unless a more "trustworthy" commander was appointed later (Robinson, 2017).

The army's ability to project its power was limited both by the infrastructures like roads and trucks, and by their local leaders' willingness to kill. Thus, it is reasonable to assume that the army's influence on the killings decreased as the distance to its local commands increased (Chandra, 2019). In contrast to local militias, the army's projection of power was intended to be constrained by its jurisdictional boundaries. A *kodim* (local command) would typically move its

troops only within the regency in which it was located, whereas the provincial command in Surabaya (*kodam*) had the capacity to deploy troops throughout the entire province of East Java.

2.2.4 Hypotheses: Scope of Influence

Both *pesantren*-backed militias and troops loyal to the central command raised their machetes during the killings, but distinguishing their respective contributions in the killings is a challenging task (Cribb, 2002): Prior to September 30, 1965, the NU had established cordial relations with like-minded anti-communist army commanders, and local militias provided valuable intelligence to the army regarding the PKI's activities. The army, in turn, acted as the militias' protectors and provided training and funding to some of the militias.

Nevertheless, the geographical reach of the two types of perpetrators' influence may differ. Firstly, the scope of the perpetrator's impact was constrained by its mobility. In urban areas, the complex high-density environment posed a particular challenge for the PKI. Considering the PKI's activity was legal and open before the G30S event, the close proximity between PKI and its perpetrators, such as the army, NU, and *Muhammadiyah*, left PKI members vulnerable to attacks from their perpetrators (Hindley, 1964). In contrast, in rural areas, local militias had to travel several miles to infiltrate pro-PKI villages. However, the army, with the aid of modern vehicles, could reach and intimidate villages that were too remote for the militias to access on foot (Chandra, 2019).

Secondly, the organizational structure of the perpetrators also affected their sphere of influence. Compared to the army, the militias were locally organized, and the NU headquarters did not issue top-down directives regarding the killings (Fealy and McGregor, 2010, Fealy, 1998). The decentralized nature of the militias' operations curtailed the spatial extent of their influence.

Conversely, the army's operations were centralized, as all troops in East Java had to follow orders from the regional military command in Surabaya, which could direct troops to more distant locations if necessary.

Based on these considerations, my research will evaluate the following two hypotheses:

1.) Militias affiliated with or living in the vicinity of Islamic boarding schools (*pesantren*) were the dominant perpetrators on a local scale. As the distance to the boarding schools increased, the impact of the militias declined more quickly than that of the army. Within a certain radius of the boarding schools, the magnitude of the militias' impact might be greater than that of the army.

2.) The army was the dominant perpetrator on a broader scale. As the distance to the army's headquarters increased, the army's impact declined more slowly than that of the *pesantren*-supported militias. However, within a certain radius of the army's headquarters, the magnitude of the army's impact might be weaker than that of the militias.

2.3 Data and Methods

2.3.1 Research Area and Data

The Indonesian Communist Purge was a tragic event that impacted the entire archipelago, with East Java, Central Java, Aceh, and North Sumatra being the most affected provinces (Cribb, 2001a). For this study, I focused on East Java but aimed to provide insights not only for the mass killings in Indonesia but also for similar events worldwide.
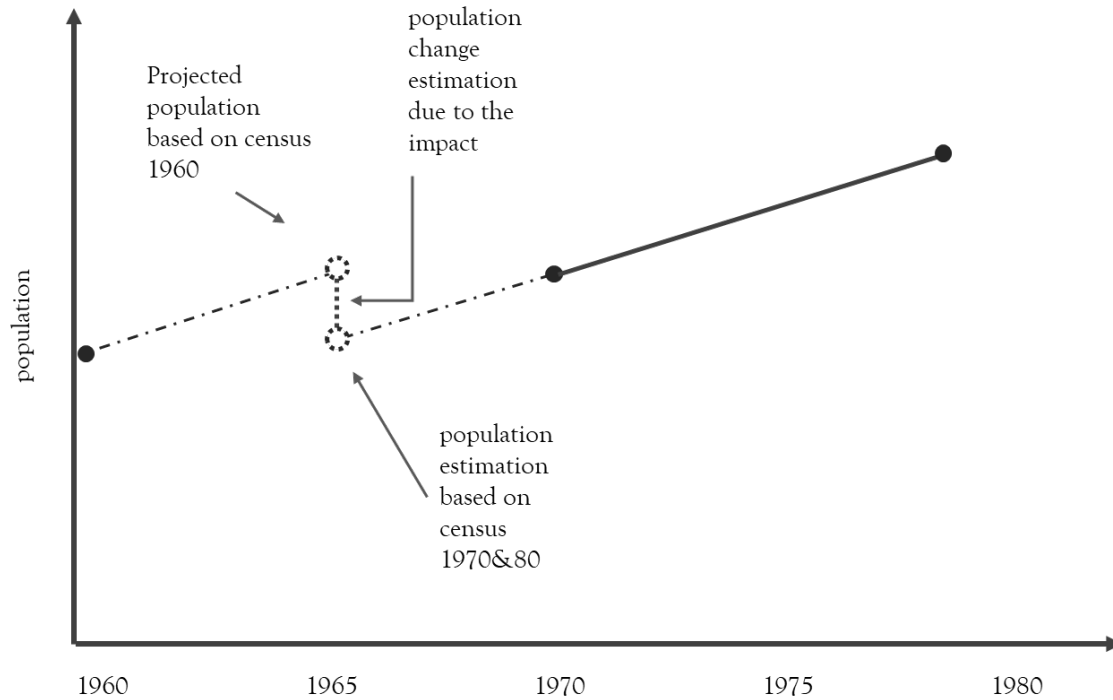
Figure 2-1 Estimation of population change due to the purge.
Source: (Chandra, 2017)

The scale of the purge is reflected in the local population changes that occurred during the event.

The killings in East Java persisted for one and a half years, with sporadic killings continuing in

Indonesia until 1968. In addition to the population being killed or incarcerated, potential victims

also sought refuge in safer places, causing population changes. In this research, I treat the

population change due to the purge as a one-time shock occurring in 1965 (Figure 2-1) and use

the population change estimates of Chandra that employed three census datasets to estimate the

population change at the *kecamatan* (subdistrict) level (Chandra, 2017). Similar methods have

been used to assess population loss due to mass killings (Rummel, 1998) and other catastrophes

(Holzer and Savage, 2013).

Figure 2-2 shows the estimated population change in each subdistrict due to the purge. The

negative population change was caused by incarceration, death, self-banishment, and emigration

out of fear, while the movement of potential victims seeking protection led to a positive change in some settlements.
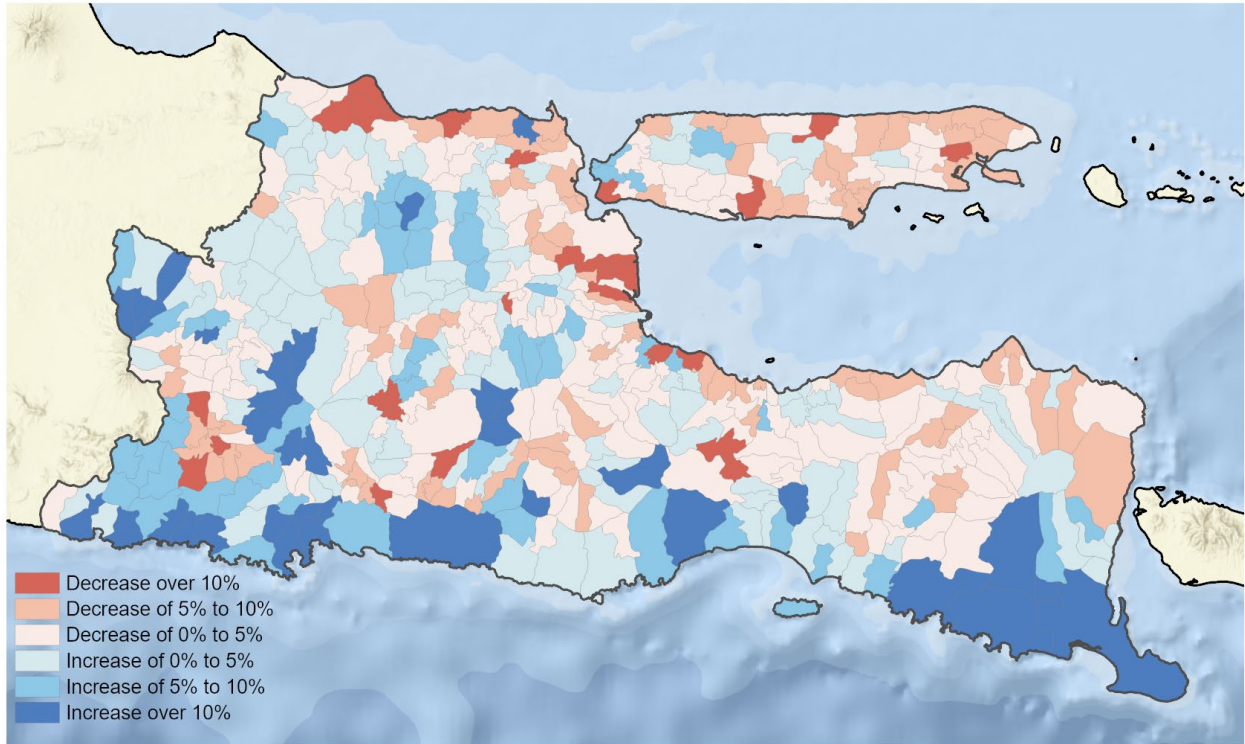
Figure 2-2 Estimated population change in each subdistrict.
(% of its pre-purge population)

To analyze these spatial population dynamics, in Figure 2-3, I present the method used to extract information on settlements from the large-scale maps printed by the Army Map Service in the 1950s (Army Map Service, 1954). The maps marked human settlements, including hamlets and kampungs in rural areas and built-up areas in urban areas, with orange color. I used image editing software (Adobe Photoshop) to extract the location and shape of settlements and then converted the dark part of the image to polygons in ArcGIS Pro. Each continuous black block was defined as a settlement, resulting in a total of 14,540 identified settlements in East Java.
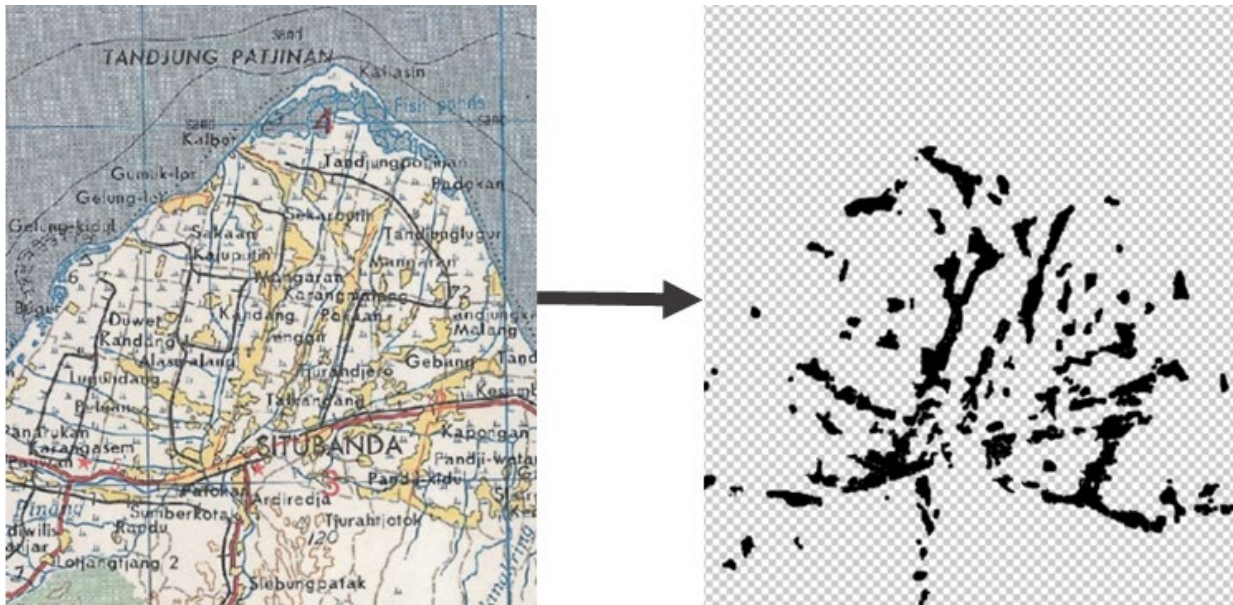
Figure 2-3 Original map and the method used for subtracting settlements.
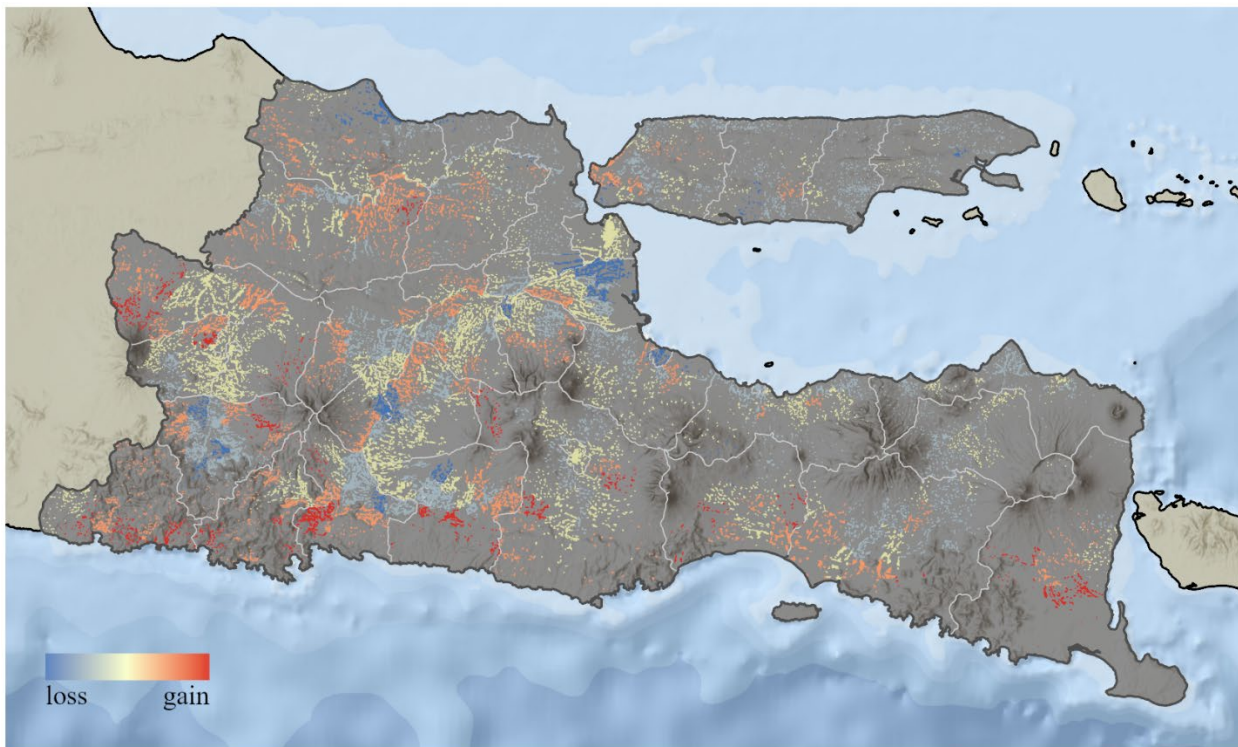
Figure 2-4 Dependent variable: estimated population change on settlements.
Note: value assigned to settlements (value: % of its pre-purge population). The value of the variable remains consistent across all the settlements in the same subdistrict.

In the next step, I assigned the subdistrict-level population change to the settlements in each subdistrict, as shown in Figure 2-4. Analyzing the killings at the settlement level provides several advantages over the subdistrict level. The intricate landscape of East Java gave rise to a diverse array of spatial configurations of the local settlements, which often reflects the ethnic composition, economic resources, and religious beliefs unique to that locality within a subdistrict (Hefner, 1993). By scrutinizing a finer size of spatial units, I can identify and account for internal variations that may have influenced population change during the purge, as well as independent variables that were only meaningful on a smaller geographic level. This enhances the precision and accuracy of our data model.

Moreover, this analysis relies on independent variables in the form of distances. Analyzing distance measurements based on the locations of each settlement improves the precision of the analysis compared to centroid-based measurements of larger spatial units. This method also reduces the weight of sparsely populated areas and increases the weight of densely populated areas, resulting in a more accurate and realistic analysis in a regression model.

2.3.2 Variables and Models

The following chart (Table 2-1) introduces the variables used in the analysis. In this research, the research units are settlements. The first variable KILLINGS measures the population change due to the purge in the subdistrict where the settlement was located. For the independent variables, if the data I have is on the subdistrict level, its settlement level value would be evaluated proportionally to the size of the settlement.

Variable	Description & Measurement	Statistics: mean	Expected Sign
KILLINGS	Population changes due to the mass killings, relative to the total population of the settlement	0.03%	Dependent
KODIM	Square root of the distance to local army headquarters kodim (from a settlement)	4.07[Note1]	+
PESANTREN	Square root of the distance to major Islamic Boarding School pesantren (from a settlement)	5.07[Note2]	+
ROAD	Road Access, accessibility to major roads*	15%[Note3]	-
DENSITY	Est' Population density on each settlement (`000)[1]	7914 /km^2	-
RICE	Percentage of arable rice fields in its vicinity	0.6	?
PLANT	Percentage of plantations in its vicinity	0.1	?
ETHNIC	Ethnic composition indicator, percentage of Madurese	24	?
SINO	Chinese, Index of presence of Chinese[2]	0.37	-
MADURA	Dummy: 1 if on Madura Island. 0 if not.	0.124 [note4]	-
AKSI	PKI substantial impact, recorded No. of land confiscation (aksi sepihak) before 1965	12	?

Table 2-1 Variables used in the analysis in Chapter 2.
Note:1) square root of the mean distance to local kodim (16.6km); 2) square root of the mean distance to local kodim (25.7km); 3) percentage of land in its vicinity covered by a 10km buffer around the major highway; 4) 12.4% of settlements were located on Madura Island.

The impact on population change from the two types of perpetrators will be modeled as a function of spatial location concerning a point source. The two variables that I am mainly concerned with are the distances from a settlement to the base of perpetrators (boarding schools or local army command). There were hundreds of Islamic boarding schools (PESANTREN) in East Java in the 1960s, from which I chose 39 influential ones supported by the NU (Dhofier, 1980). The KODIM variable here refers to the distance from a settlement to the kodim (Regional Military Command) whose jurisdiction covered the location of the settlement.

If the presence of the army and the boarding schools did encourage the killings, it is reasonable

to expect the population would be more likely to drop in those settlements close to the *kodim* and *pesantren* during the purge. As the distance to either *kodim* or *pesantren* increased, the loss of population would tend to be less, and some places may even record an increment of the population due to the in-flow of potential victims. Thus, I would expect the sign of their coefficients to be positive and the magnitude of coefficients would reflect the magnitude of influence from the army or the boarding schools.

I also include a set of controlling variables in the table. *MADURA* is a dummy variable referring to whether the settlement was on Madura Island or not. Madura Island is the large, populous island adjacent to Java Island in East Java, and there were four *kodim* on the island. Unlike on Java Island, the ethnic composition on Madura Island was almost exclusively Madurese, and the society there was also highly devoted to modernist Islam (Hudak, 1986). Although the entire Madura Island was under the strong influence of Islamist parties (the NU and the *Masyumi*) both in the rural and urban areas, only one *pesantren* was identified in the dataset I used. Therefore, I introduced the variable *MADURA* to mitigate the bias resulting from the absence of identified *pesantren*.

The variable *DENSITY* represents the estimated population density of settlements and is used to assess the local level of urbanization. This allows for better control over the influence of *Muhammadiyah* and other political organizations that predominantly operated in urban areas. Except for a few homeless individuals[16], all the population in East Java resided in a spectrum of human settlements, including villages, towns, and cities. Therefore, assuming a uniform

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[16] 0.2-0.5% according to the census data

population density among settlements within the same subdistrict[17], the density of settlements

can be calculated by dividing the population by the area of the settlement, with the area

determined by the extracted settlement polygons. The more urbanized settlements should have a

higher population density than rural settlements. *Pesantren* and the NU mainly cast their

influence in rural settlements, but I choose not to exclude urban settlements in this analysis

because many *pesantren* were located in the cities and exerted their influence on the densely

populated areas too.

Ethnic composition (*ETHNIC*) is depicted by the percentage of Madurese people. There were

mainly two ethnic groups in East Java: Madurese and Javanese, and they spoke different (but

easily mutually intelligible) languages and tended to have different religious practices. I

combined and interpolated information from an earlier census (Ministerie van Economische

Zaken en Klimaat, 1933) and a few maps about local languages to acquire the variable.

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[17] I do not have explicit information about the population allocation within a subdistrict.

Figure 2-5 Major roads in East Java.
Note: before the time of the mass killings, based on (Army Map Service, 1954)..

Other control variables used in my analysis include: 1, The accessibility from the major road

network (*ROAD*) is measured by the distance from the centroid of each settlement to the major

road. The road network (Figure 2-5) is extracted from a map in an historical map of Indonesia

(Cribb, 1999). An easier access to the settlement would facilitate the movement of perpetrators,

thus affecting the population being persecuted; 2, The variable *SINO* is the estimated Chinese

concentration. Chinese people were killed disproportionately during the purge, but their spatial

demographic information was limited. Since Chinese people mainly lived in the cities and

suburbs, the research considered the cities and towns where Chinese had been elected as mayors

as the centers of Chinese concentration, and interpolated the data to get an index of Chinese

presence (Cribb and Coppel, 2009); 3, The economy of rural areas in East Java was mostly

agriculture, and I used two variables *RICE* and *PLANT* to further control the local economic

structure; 4, Land confiscation records, (*AKSI*) indicating substantial PKI activities (Kasdi, 2001).

In the empirical study part, I employ Bayesian regression models and piecewise regression models to capture the magnitude of influence from the boarding schools and local army commands. Bayesian regression models allow me to leverage existing knowledge while retaining all useful information and provide the distribution of the coefficients (Wakefield and Morris, 2001). Piecewise regression will help us identify the change of coefficients as the distance to the source of influence varies. The statistical details and variable correlations of our models are presented in Table 2-1 and Table 2-2. The correlations between the controlling variables range from 0.02 to 0.43, indicating that multicollinearity is not a significant issue.

	Dependent	KODIM	PESANTREN	ROAD	DENSITY	RICE	PLANT	ETHNIC	CHIN
KODIM	0.313								
PESANTREN	-0.049	0.166							
ROAD	0.285	0.292	0.149						
DENSITY	-0.046	0.099	0.188	0.072					
RICE	-0.087	-0.219	-0.325	-0.272	-0.295				
PLANT	0.094	0.091	-0.01	0.095	0.091	-0.199			
ETHNIC	-0.3	0.022	0.374	-0.141	0.431	-0.185	-0.02		
CHIN	-0.179	-0.178	-0.044	-0.033	-0.218	0.117	-0.11	-0.17	
AKSI	-0.179	-0.219	-0.372	-0.182	-0.271	0.294	-0.033	-0.295	0.405

Table 2-2 Correlation of variables in the model.

2.4 Results

The guided democracy period of Indonesia's history favored the military, and this legacy continues to benefit the army even today (Vickers, 2013). In East Java, regional army commands (*kodim*) were usually placed close to the seat of each regency, where it gradually became surrounded by urban land uses as cities expanded (Cribb and Brown, 1995). In the 1960s, central cities were also the regional hubs of road networks, providing a locational advantage that enabled the army to deploy troops to any part of East Java with ease (Kammen and Zakaria, 2012). The following map (Figure 2-6, up) indicates the locations of *kodim* in East Java and the distances to the settlements under their jurisdictions. *Kodim* were evenly scattered across East Java, and 98% of the settlements were within a 30 km radius of their local *kodim*. Assuming trucks could travel at 40 km/h (25 miles/h) and the road conditions permitted, a sizable troop could reach almost any settlement in East Java from their respective *kodim* within 1 hour.

Although I can find pesantren in almost every regency in East Java, most of the big ones were situated in the western part of the province. Not being placed in a seat of regency would not be a disadvantage for a boarding school, but many pesantren located in major cities or other populous areas (Figure 2-6, B) to attract students across East Java (Dhofier, 1980). With a 30 km radius (approximately 6 hours walking) these major pesantren may cover 70% of the settlements in East Java. Notably, the rural but densely populated Madura Island had only one major pesantren, located in the extreme west.
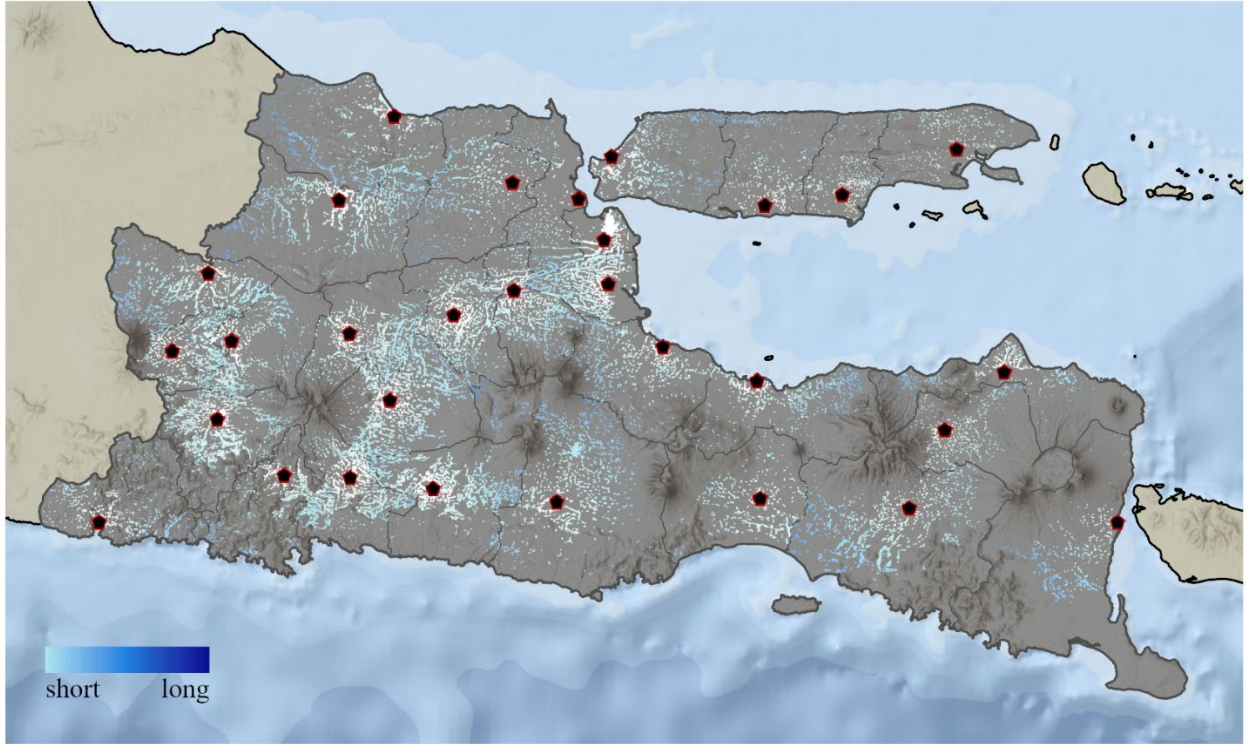
A. distance to the closest *kodim*

Figure 2-6 Settlements in East Java and distance to closest kodim *and* pesantren.

Figure 2-6 (cont'd)
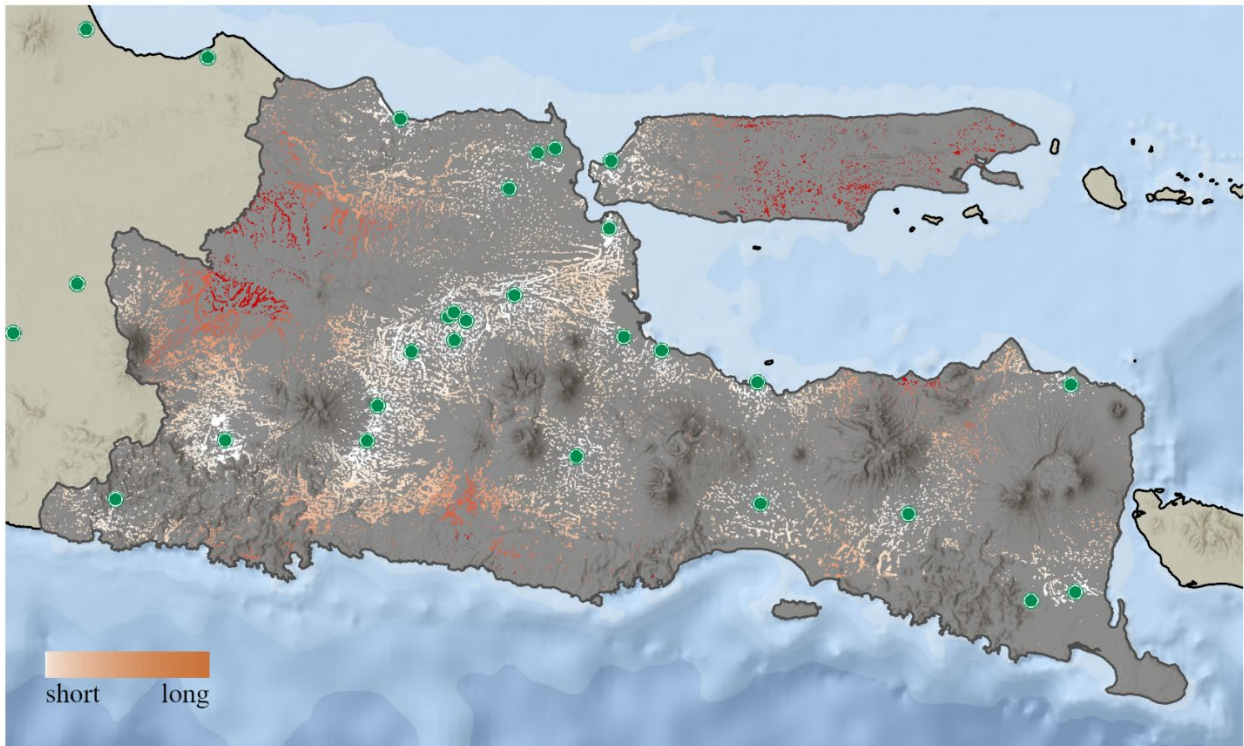
B. distance to the closest *pesantren*

Note: Kodim *(A) and* pesantren *(B).* Settlements in lighter color → close to a *pesantren*/*kodim*; darker color → distant from nearest *pesantren*/*kodim*

2.4.1 Prior Model

In Bayesian regression modeling, informative priors are established based on existing knowledge from various sources such as qualitative research, archives, and previous studies on similar topics (Chandra, 2017, Hammer, 2013, Jay, 1956). The prior of a Bayesian regression model should include the (estimated) coefficients of independent variables and their distribution.
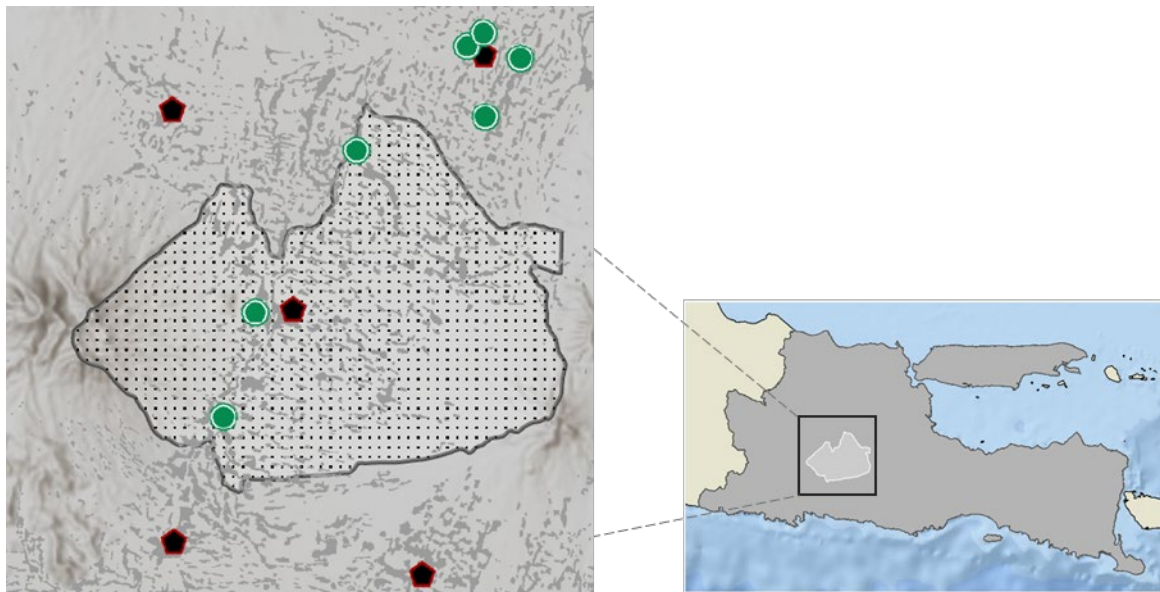
Figure 2-7 Kediri area in East Java.
Note: Kediri is the area covered by the prior model. The darker shade area is Kediri, including the kabupaten and kota; Locations of pesantren (round) and kodim (regular pentagon) are also marked.

Although the current evidence about the involvement of Islamic boarding schools and the army in the purge is not currently available for all the regencies in East Java, existing reports and studies have confirmed their roles in the killings in several regions in East Java. For example, in the *Kediri* region (*Kota Kediri* and *Kapubaten Kediri*), the long-standing social conflict, clashes in political views between different political entities, and the increasing influence from the fanatic Islamists had influenced many youth to arm themselves and participate in the violence

towards the others (Young, 1990). They also worked together with the army to ambush villages, leaving hundreds of corpses (Leksana, 2021).

VARIABLE	
KILLINGS	Dependent variable
(INTERCEPTS)	111.5317 ***
KODIM	0.95255 ***
PESANTREN	1.00362 ***
ROAD	1.01962 ***
DENSITY	-32.0851 ***
RICE	0.5194
PLANT	-0.07384
ETHNIC	NA
CHIN	-3.85631 ***
MADURA	NA
AKSI	0.04588
# OBSERVATIONS	708

Table 2-3 Ordinary Least Squares (OLS) estimates of prior model parameters for Bayesian regression.
*Note: *** indicates p<0.001*
Adjusted R^2: 0.5335

I took *Kediri* as the study region (Figure 2-7)to estimate the prior distribution of coefficients (Wakefield and Morris, 2001). The variables I used for this estimation are identical to the ones I will use for posterior estimation. The OLS result of the prior model can be found above in Table 2-3. The coefficients of the army and the boarding schools are roughly the same, at 0.952 and 1.003, respectively, and thus based on the information from the prior model, both kinds of perpetrators would have a similar impact on the killings.

2.4.2 Who Played the Fundamental Role during the Purge?

Similar to our prior model, I expect the coefficients of the variables of interest to be positive. If the coefficient of *kodim* variable is higher than that of *pesantren*, it implies the army played a more dominant role than the Islamic boarding schools overall and vice versa.

Since the correlation between the two variables (*kodim* and *pesantren*) is only 0.18, I can include both in the same model. **Model 0** only included these two variables (i.e., the impact of the army and the impact of the boarding schools) without controlling for any others. The results of this model are consistent with the prior: the coefficients of both variables are approximately the same, and the credit intervals of the variables have the sign I expected (Table 2-2). These findings indicate that the further a place was from a boarding school or the local army headquarters, the less likely the local residents were to suffer from the purge in the 1960s.

I include all the controlling variables mentioned in Table 2-1 in all the remaining models (1-9). Our first set of models is Model 1 to Model 3, in which I include all the settlements and variables in the models. Model 1 only detects the impact of the army, model 2 estimates the influence of boarding schools, while model 3 includes both variables of interest.

Model #	0	1	2	3	4	5	6	7	8	9
(intercept)	-8.3	-3.3	2.4	1.3	-1.5	1.7	1.1	2.3	9	1.2
	(-8.6, -8, 1)	(-4.4, -2.1)	(1.2, 3.7)	(0.2, 2.5)	(-3, -0.1)	(0.2, 3.1)	(-0.3, 2.5)	(-0.3, 5.1)	(6.4, 11.6)	(-1.5, 3.7)
KODIM	1.4	1.2		1.3	1.3		1.2	1.6		1.5
	(1.4, 1.5)	(1.2, 1.3)		(1.2, 1.3)	(1.2, 1.3)		(1.2, 1.3)	(1.4, 1.7)		(1.4, 1.7)
PESANTREN	1.4		-0.1	-0.2		0.3	0.1		0.5	0.5
	(1.4, 1.5)		(-0.1, -0.1)	(-0.2, -0.1)		(0.2, 0.3)	(0, 0.1)		(0.4, 0.6)	(0.4, 0.6)
ROAD		1	1.4	1.1	1	1.1	1	0.3	0.4	0.2
		(1, 1.1)	(1.3, 1.5)	(1, 1.1)	(0.9, 1.1)	(1, 1.2)	(0.9, 1)	(0.1, 0.4)	(0.3, 0.6)	(0, 0.3)
DENSITY		-1.1	-1.2	-1.2	-1.3	-1	-1.3	-1.5	-2.2	-1.7
		(-1.4, -0.8)	(-1.5, -0.9)	(-1.4, -0.9)	(-1.7, -1)	(-1.4, -0.7)	(-1.6, -0.9)	(-2.1, -0.8)	(-2.8, -1.5)	(-2.3, -1)
RICE		-0.1	-0.6	-0.2	-0.6	-1	-0.6	-2.4	-2.8	-2.2
		(-0.3, 0.1)	(-0.8, -0.4)	(-0.4, -0.1)	(-0.8, -0.4)	(-1.2, -0.8)	(-0.8, -0.4)	(-2.8, -2)	(-3.1, -2.4)	(-2.6, -1.8)
PLANT		2.8	3.2	2.5	2.1	2.4	2	-2.3	-1.8	-2.9
		(2.1, 3.5)	(2.5, 4)	(1.8, 3.2)	(1.4, 2.9)	(1.6, 3.2)	(1.2, 2.7)	(-3.7, -1.1)	(-3, -0.5)	(-4.2, -1.6)
ETHNIC		3.5	3.3	-3.8	3	2.8	-3.4	0.2	0.1	-0.1
		(3.3, 3.6)	(3.1, 3.5)	(-3.9, -3.6)	(2.8, 3.2)	(2.6, 3)	(-3.6, -3.2)	(-0.1, 0.5)	(-0.2, 0.5)	(-0.4, 0.2)
CHIN		-1.7	-2	-1.6	-1.7	-2	-1.7	0.2	0	-0.1
		(-1.8, -1.5)	(-2.1, -1.8)	(-1.7, -1.4)	(-1.9, -1.5)	(-2.1, -1.8)	(-1.9, -1.5)	(-0.1, 0.5)	(-0.3, 0.4)	(-0.5, 0.2)
*MADURA**		-1.8	-1.8	-1.2						
		(-2, -1.6)	(-2, -1.6)	(-1.4, -1)						
AKSI		-0.3	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2
		(-0.3, -0.3)	(-0.4, -0.4)	(-0.4, -0.3)	(-0.3, -0.3)	(-0.3, -0.3)	(-0.3, -0.3)	(-0.3, -0.2)	(-0.3, -0.2)	(-0.2, -0.1)
Sigma	6.3	5.8	6	5.8	6.1	6.2	6	5.5	5.6	5.4
	(6, 2.6.3)	(5.8, 5.9)	(6, 6)	(5.8, 5.8)	(6, 6.1)	(6.1, 6.2)	(6, 6.1)	(5.4, 5.5)	(5.5, 5.7)	(5.4, 5.5)
N	14540	14540	14540	14540	11572	11572	11572	3089	3089	3089

Table 2-4 Posterior coefficient estimates from Bayesian regression models.
Note: a. The listed coefficients represent the posterior mean, with 95% equal-tailed credible intervals in parentheses;
b. Independent variable(s) of interest donated with bold font were natural logarithm transformed;
* Models 4-9 exclude observations not on the island of Java.

Our hypothesis about the army's involvement in the killings is well supported in the models. The coefficients of *kodim* (army headquarters) in both Models 1 and 2 are positive (and so are their credible intervals). However, the coefficients of *pesantren* (boarding schools) are negative, which means this set of models does not provide enough support to prove the boarding schools' involvement in the purge. A possible reason is, the *pesantren* that I include in this study may not represent the complete picture of the influence of Islamic Boarding Schools in East Java, especially considering the highly religious Madura Island only has one boarding school in the analysis.

2.4.3 Results of Rural East Java

In addition to the previously discussed limitations of the first set of models, another issue was the inability to account for other perpetrators aside from the army and NU-backed militias. *Muhammadiyah*, a modernist Islamist political organization, also had involvement in the killings during the purge in East Java through their loyal militias, but they did not exert their influence via boarding schools (Hefner, 1993). Since I do not know the location and magnitude of their influence, it is difficult to account for their impact in our analysis. However, it is known that *Muhammadiyah*'s influence was primarily focused in the urban areas (Dhofier, 1980, Pribadi, 2013). Therefore, in models 4-6, I limit the study area to rural regions to exclude their potential impact.

Figure 2-8 Geographic extent of study areas in models 4-6.
Note: Designated urban area and Madura Island in models 4-6 covered by shadow, excluded in the regression

Models 4-6 only consider non-urban settlements on Java Island, reducing the number of settlements from 14,540 to 11,572. The urban areas defined here refer to all the *Kota* (regency-level city) administrations, as well as the space within 5 km of each regency seat's centroid (Figure 2-8). By selecting data in this manner, our model can concentrate on rural areas, where the social, cultural, and economic features of settlements were simpler and comparable compared with urban areas, which enhances the effectiveness of our control variables. The local economy in our study rural area was primarily based on subsistence agriculture and plantations (Elson, 1984). The population there was predominantly either Javanese or Madurese, and traditionalist Islam was the dominant religion (Geertz, 1960).

Models 4-6 have similar structures to the first set of models (Models 1-3), with Model 4 and Model 5 only including *KODIM* or *PESANTREN* (Islamic boarding schools), respectively. Model 6 incorporates both variables of interest and control variables (Table 2-4). After urban areas were excluded from the models, both coefficients of the variable of interest became marginally higher compared to Models 1-3 (see Models 4-6, Table 2-4). This implies that the impacts of the army and boarding schools were both more substantial in rural areas during the purge, with both playing active roles. Nevertheless, *KODIM*'s (the army) coefficient remains considerably higher than *PESANTREN*'s (boarding schools), indicating that the army had a far more significant role in the purge.

2.4.4 Findings from Areas with Confirmed Information

Not all the Islamic boarding schools (*pesantren*) and army troops were involved in the purge and instigated the killings. While some *pesantren* gained a notorious reputation for their role in the purge, others were not immersed in the nationwide anti-PKI sentiment before the massacre (Fealy, 1998). Meanwhile, although all *kodim* in East Java were under the command of Jakarta and Surabaya, their obedience varied in different subdistricts. While most local commanders blindly followed the killing orders from Surabaya, some officers and soldiers may have resisted the killing of innocent civilians.

While there is direct evidence, such as witness reports and firsthand archives (McGregor, 2009), indicating killings in several regions of East Java, there were also many areas where direct proof of killings is lacking, despite the population loss during the period of killings (Chandra, 2017). The lack of evidence might simply be because the evidence was not recorded or has not been collected yet, as first-hand archives and witness reports about the purge are still largely

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fragmentary and incomplete. However, I can identify a list of the possible places where both the

army and the boarding schools joined or even led the killings.
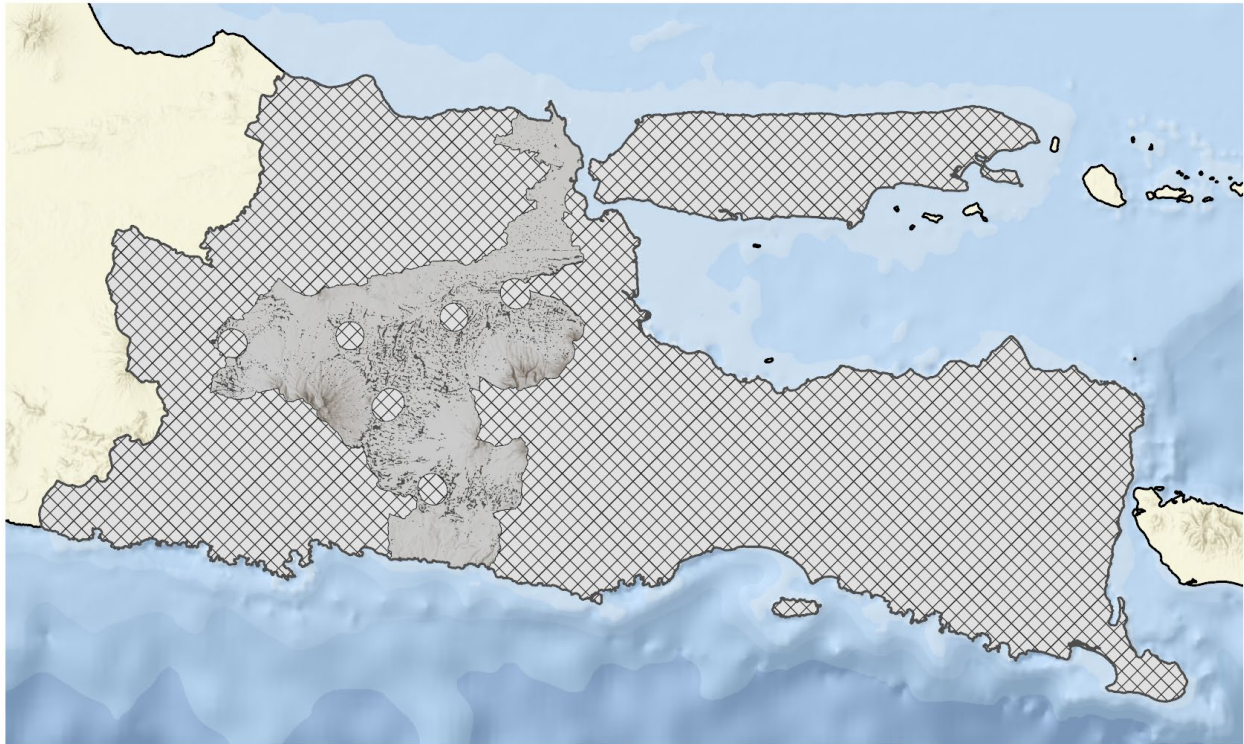
Figure 2-9 Geographic extent of study areas in models 7-9.
*Note: Non-shaded Areas represent locations where influence of both military commands (*kodim*)*
*and Islamic boarding schools (*pesantren*) is evident, corresponding to the study area for Models*
7-9. Settlements within shaded areas were excluded from the analysis.

Models 7-9 only contain the rural area of regencies where local Islamic boarding schools'

influence and involvement are evidenced by qualitative records (Mehr, 2009). These regencies

include Kediri, Jombang, Madiun, and their adjacent regencies (see Figure 2-9). Besides, the

army was also involved in the killings in these places (Kammen and Zakaria, 2012). The

configurations of Models 7-9 are similar to Models 4-6, but Models 7-9 only cover 3089

settlements.

In Models 7-9, the coefficients of both *pesantren* and *kodim* are positive. Compared with Models 4-6, both coefficients of the variables of interest have increased. The coefficients of the Islamic boarding schools increase to 0.5 from 0.1, although they are still lower than the army's coefficients. It confirms the *pesantren's* active involvement in the purge in these areas. Since the magnitudes of the coefficients of interests are higher, it further implies many local army commands (as well as *pesantren*) that were not included in models 7-9 (but in models 4-6) did not devote themselves to the killings as much.

2.4.5 Piecewise Model

The last piece of our analysis examines the magnitude of coefficients at different distances from the source of influence using a piecewise Bayesian model. To ensure a smoother transition of coefficients, the analysis uses a moving window instead of dividing the data into sections. The study area is limited to settlements in the rural regions of Java Island, which is consistent with Models 4-6. The table presented below (Table 2-5) outlines the four sets of piecewise regressions in this analysis.

Sets of Regressions #	Variable Of Interest	Variable In the Model	Moving Window Based on Distance to … (window size)	Control Variables	Number of Regressions in the Set
U1	Army headquarters (*kodim*)	Only *kodim*	*kodim (20km)*	Included	45*
U2	Islamic boarding schools (*pesantren*)	Only *pesantren*	*pesantren (20km)*	Included	45
B1	Army headquarters (*kodim*)	Both *kodim* and *pesantren*	*kodim (20km)*	Included	45
B2	Islamic boarding schools (*pesantren*)	Both *kodim* and *pesantren*	*pesantren (20km)*	Included	45

Table 2-5 Configuration of four sets of piecewise models.
* The analysis utilizes a moving window technique, where a series of regressions are performed across the study area. Each regression covers a 20km window, with sequential windows shifted by 1km. This results in 45 overlapping 20km regression windows computed for the entire region.

Let us take regression set U1 as an example. In this regression set, the local army headquarters (*kodim*) is the variable I am interested in. In the first Bayesian regression, I put settlements whose distance to a *kodim* is between 0-20 km and get the coefficient and its credible intervals. The prior used in the first regression is the same as the one I used in models 0-9.

Then I use the result of the first regression as the prior for the second Bayesian regression. Here I only include settlements whose distance to a *kodim* is 1-21 km in the second regression. Next, I include only settlements whose distance to a *kodim* is 2-22 km. This process is repeated until I obtain the regression results for settlements located 45-66 km from the *kodim*. The other three sets of piecewise regressions follow a similar procedure, except the variables of interest are different. In regression set U2, the variable of interest is *pesantren*. For regression sets B1 and B2, both *kodim* and *pesantren* are included in the regressions, with the selection of regression segments being determined by the distance from either *kodim* or *pesantren*, respectively.

Figure 2-10 illustrates the magnitudes of the coefficients of interest and their credible intervals at various distances (moving windows) of the four piecewise regression sets. The x-axis indicates the location of the start point (distance to *kodim*/*pesantren*) of the moving window, while the y-axis indicates the magnitude of the coefficient. For regression set U1 and U2 (Figure 2-10, left), I find that the coefficients of both variables exhibit a declining trend as the distance from the source of influence increases. The impact from the army also declined much slower than the boarding schools as the distance to the army's headquarters or boarding schools increased. However, the army's influence on the killings seems to surpass the Islamic boarding schools' influence in all the locations.
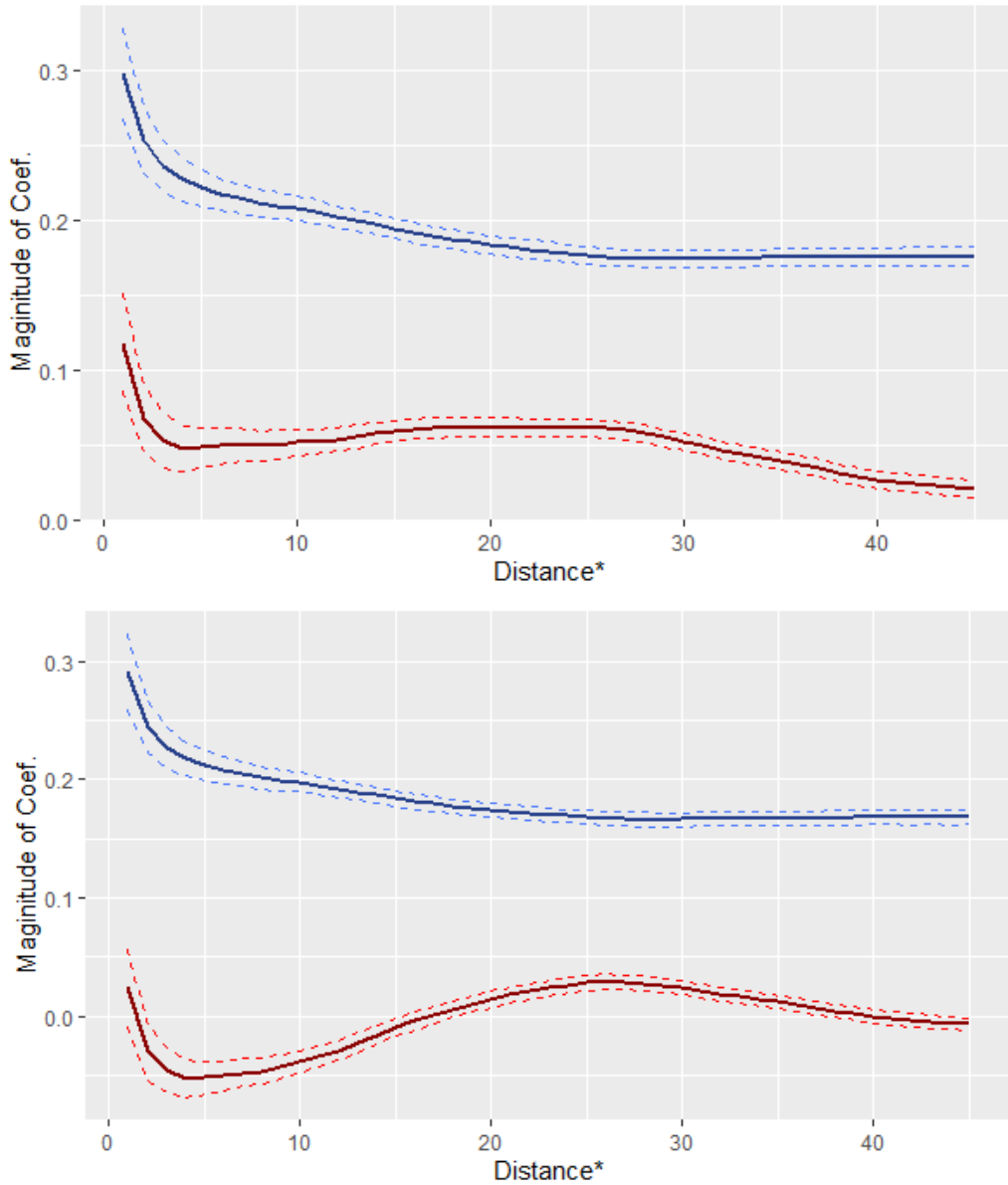
Figure 2-10 Coefficients of key variables by the distance to the source of influence.
A: Coefficient of kodim *(blue) and* pesantren *(red) in the regression sets U1 and U2,*
B: Coefficient of kodim *(blue) and* pesantren *(red) in the regression sets B1 and B2.*
* Distance label indicating the distance between the start point of a 20km range to the source of
*influence (*kodim *or* pesantren*)*

When I include both *kodim* and *pesantren* in the same model (model B1 and B2, see Figure 2-10B), the result turns out to be similar to U1 and U2. The curve of *kodim* coefficients is quite indistinguishable from U1 in Figure 2-10, but the *pesantren* coefficient fluctuates as the distance from settlements to the closest *pesantren* increases. There may be a complex interaction between *kodim* and *pesantren* in the *pesantren* models, which reduced the demonstrated contribution of boarding schools in the killings.

2.5 Conclusion and Discussion

Literatures and other documentation about the Indonesian Communist Purge provide a harrowing but powerful perspective to comprehend why mass violence is often dubbed "the crime of crimes". The staggering death toll of five hundred thousand people signifies the occurrence of five hundred thousand murders, and the unjustified incarceration of one million individuals implies a million instances of kidnapping. Moreover, the accompanying crimes, such as robberies, rapes, threats, tortures, assaults, and hate crimes, are uncountable.

Digging into the perpetrators' actions would not bring justice to the victims who were ruthlessly murdered. However, delving into the perpetrators' fanaticism, lack of empathy, and apathy concerning their roles as cogs of Leviathan's slaughtering machine, can reveal similar patterns in our present-day society.

In East Java, there were mainly two kinds of perpetrators. The army's troops were assembled in local military commands, while the militias were under the guidance of NU, who disseminated its influence mainly through Islamic boarding schools in East Java. Therefore, it is reasonable to assume that the army's power and the NU's influence on a settlement would gradually decline as

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the distance to the settlement increased. Thus, a place's distances to *kodim* and *pesantren* became two proxies that measured the impact of the army and the NU. The research also estimates the population change caused by the purge in each subdistrict, with the population change serving as an indicator of the local magnitude of killings.

By comparing the local population change with the impact of the army and Islamic boarding schools, this research intends to confirm and compare their influence on the killings. The final findings are in agreement with a part of our hypotheses in section 3. Both the *kodim* and *pesantren* had a significant impact on the magnitude of the purge in rural areas of Java Island, but the troops from *kodim* seemed to play a much more destructive role than militias trained in the boarding schools.

The analysis also suggests the Islamic boarding schools seemed to have a persistent impact on the killings, especially on the settlements located 25-50 km away from a boarding school (as evidenced by piecewise model set B2). However, their impact on the settlements close by was overshadowed by that of the army. In addition, the army's scope of influence covered a much larger space, and the magnitude of the army's influence declined relatively slower with distance.

It is essential to interpret the meaning of influence in this research appropriately. In terms of the number of killings, it was likely that militias and ordinary civilians surpassed the army's kill count. In the 1960s, the number of army personnel who stayed in East Java would be less than 35,000 if its total population's proportion of military personnel was the same as today. The number of local militias and ordinary people who held strong resentment for the PKI and were ready to take action, would have been much higher than 35,000. Witness reports even record that many ad hoc killing squads were made up of the PKI member's neighbors (Aidit, 1964a). If the

army could be described as a few vultures targeting their prey from miles away, thousands of hyenas growing up in their neighborhood must have posed a more immediate threat to the PKI members even before the killings started.

The role of the army during the Indonesian Communist Purge was akin to that of a supervisor in a slaughter factory, with the local militias and amateur killing squads playing the role of workers. Although the army may have been better at killing and their mission was pivotal, their influence on the killings was indirect. The NU, with the army's indulgence, found themselves in a position of advantage when it came to resolving their long-standing conflict with the PKI. Once the decision was made to use the machete as a solution, there was no going back. In the later stages of the purge, when the army felt their goal of killing had been accomplished, they found it was already too late to urge the militia to put their weapons away (Cribb, 2001b, Pohlman, 2014).

This study has several important limitations related to the data and models employed. One major limitation arises from my approach of aggregating data. For instance, the values of the dependent variable within the same subdistrict (*kecamatan*) were uniform, which would introduce potential spatial autocorrelation issues. Taking Model 3 as an example, the Global Moran's I index for this model was 0.11, suggesting the residuals had significant but not severe spatial autocorrelation (Fischer and Getis, 2010). While this autocorrelation would not introduce bias to the estimation of the interested coefficients, it could lead to underestimates in the range of credible coefficient intervals. Another limitation stems from the deviation between the aggregated subdistrict-level variables used in this study and the unobservable settlement-level real variables, especially the dependent variable. Using subdistrict-level variable for settlement-level analysis would underestimate the variation of the models' actual residuals and coefficients, but given the substantial sample size, this underestimation would be unlikely to significantly impact the

conclusion regarding the role of the army and the militia prospectively. However, addressing this underestimation and other errors stemming from aggregated variables in this research would enhance the robustness of the conclusions.

The study also neglected the regional variations in the strength of the army or militia (such as the size of troops in different locations). The research assumed the army command (*kodim*) had similar patterns of operation and adherence to orders from the provincial command. However, in reality, not all the district commands (*kodim*) would follow orders thoroughly, which may affect the result of the purge. I will discuss this in a future chapter. In contrast to the military, *pesantren* would exhibit greater variability in terms of local influence and attitudes toward the PKI. These variations can have diverse effects on the purge. Future research would be needed to uncover more valuable materials and depict this difference quantitatively.

The pivotal role of the army (and other state-sponsored forces) has been widely discussed in studies of mass violence. However, the scarcity of quantitative evidence is attributed to data limitations and challenges in scholarly engagement with military entities in authoritarian regimes. Future research should seek indirect evidence to discern the roles played by different actors and should also explore effective methods for extracting quantifiable information from gradually declassified archives. While research has emphasized the pivotal and direct role of the state, the socio-cultural context that shaped the environment for mass violence should not be disregarded, and the potential of state-sponsored power in preventing mass violence also deserves attention too.

In conclusion, while this research has shed light on the complex interplay of different kinds of perpetrators during the Indonesian anti-communist purge, there remain uncharted territories and

challenges in understanding the full scope of this tragic historical event of the same kind. Future

investigations, drawing from interdisciplinary perspectives and harnessing emerging data

sources, will play a pivotal role in deepening our comprehension of this dark chapter in history

and, hopefully, contribute to preventing such atrocities in the future.

CHAPTER 3: DOES UNITY MAKE STRENGTH?

— Spatial Analysis of the Role of Local Community Organization in East Java during the Indonesian Mass Killings of 1965-1966

Abstract

Although previous studies have demonstrated that violence from 1965 to 1966 in Indonesia was largely instigated by the army, the Indonesian mass killings also signified the eruption of long-term distrust and conflict between the supporters of PKI (*Partai Komunis Indonesia*, the Communist Party of Indonesia) and those of the other political parties. In East Java, PKI supporters tended to follow a syncretistic approach to religion (those people were referred to as the *abangan*), while their perpetrators were mainly, but not exclusively, members of politico-religious organizations adhering to a more orthodox practice (who were identified as the *santri*). Similar to other genocidal events, pre-existing social networks and solidarity among *santri* perpetrators should be a crucial factor in determining their advantage during the mass violence to their *abangan* neighbors. Conversely, in the places where the *abangan* community conferred an organizational advantage, they should also succeed in consolidating and resisting the mass violence. While these phenomena have been explored in numerous qualitative studies, gauging the size of potential perpetrator groups and the solidarity remained a challenging task in East Java. This research used distance-based proxies and simulation-based approaches to estimate intra-community solidarity and its relationship with the killings. The result found the social connection within the *santri* and *abangan* communities were both related to the result of the killings as expected, but when control variables were included the solidarity within the perpetrator community seemed to have a more significant connection with the killings.

3.1 Introduction

Many years later, as he faced the shooting camera, Anwar Congo was to remember that distant afternoon when he strangled a defenseless communist member.

"Why did I have to kill them? I had to... My conscience told me they had to be killed." (Oppenheimer et al., 2012). Former militia leader Anwar's belief that killing could be justified for the greater good was a haunting reminder of the deep-seated divisions that existed in Indonesian society even before the mass killings. These divisions persisted since the Dutch East India era, marked by frequent armed conflicts among various religious and political groups (Ricklefs, 2008). Conflicts continued even after Indonesia gained independence in 1945 (Cribb and Brown, 1995), since the independence gave a more convenient excuse to various religious-political groups to carry out violence: these groups would use the label "enemy of the nation" to falsely accuse any innocent community and organization who seemed to wield influence in ways that didn't align with their preferences within the country (Melvin, 2018). As tensions simmered within society, any minor spark had the potential to ignite nationwide violence (Sudjatmiko, 1992).

Theories about mass killings emphasize the role of external entities and national-level mechanisms, such as the involvement of the military (Dutton et al., 2005), an exclusive ideology paradigm (Bloxham, 2005), and a strategic blueprint of an autocratic regime (Fein, 1993a) in igniting mass violence between a perpetrator group and victim group (Straus, 2015a). However, pre-existing societal tensions between groups may also act as a catalyst or precursor to large-scale atrocities. Longstanding grievances between two groups can fester for decades, slowly

escalating into deep-rooted resentment and contaminating the seeds of animosity (Verdeja, 2012, Fein, 1993b). When this resentment reaches a boiling point, it can erupt into open disputes, armed confrontations, and even warfare (Staub, 2000, Staub, 2013). Eventually, when decades of unsolved conflicts converged, the condition became ripe for the onset of mass killings (Straus, 2012).

Tumultuous societal context, often accompanied by societal conflicts, economic downturns, labor strikes, riots, and famine, embedded the fertile ground of mass killings (Zartman, 2010, Levene, 2005). Nevertheless, such an environment would also create opportunities for communities to unite, thrive, and strengthen their internal cohesion and connections, particularly when their trust in authorities eroded (Colletta and Cullen, 2000). Yet, the internal connection within a community may have diverse effects on mass killings: intra-community networks may increase the prominence of agitated leaders who would instigate mass violence against their perceived adversaries (McDoom, 2014), while social networks among potential victims would assist in their organization and resistance to mass violence (Valentino et al., 2004).

This chapter will take East Java during the Indonesian mass killings of 1965-66 as an example to investigate the impact of social connections on mass violence. In the 1960s, rural East Java was still predominantly a simple agricultural society mainly inhabited mainly by two distinct cultural-political groups, the *abangan* and the *santri* (Lyon, 1970). Tensions between these two groups often erupted into conflicts, and during the mass killings, victims and civil perpetrators were often associated with these two groups, respectively. To evaluate the relationship between social connectivity and mass killings, this study will examine each group's prevalence in each subdistrict and the intra-community connectivity of both groups. Since there is no existing data to measure these features, this paper will use a spatial-configuration-based proxy variable to

represent the connectivity of local *abangan* and *santri* communities. Besides, before exploring this research question, it is essential to confirm whether the (pre-existing) societal tension indeed played a role in the killings.

The remainder of this chapter will focus on these questions and be structured into six sections. The next section will discuss how Islam spread across East Java. Section 3 will review the interaction between communities and its impact on mass violence. Research questions and hypotheses to be addressed in the empirical study will be elaborated in Section 4. Section 5 will explore the method used to calculate community connectivity. In Section 6, the hypotheses will be tested using a regression model. Finally, Section 7 will conclude the paper and discuss its limitations.

3.2 Background: Islamization and Social Conflict on Java Island

3.2.1 Islam and its Spatial Configuration in East Java

Indonesian intellectuals often label the period of Indonesian history before the introduction of Islam as the "classical period", a time when the predominant religions on Java Island were Buddhism and Hinduism[18] (Setiadi, 2021). Islam arrived in Java only a few centuries ago, but by the time that the mass killings started, over 90% of East Java's population were recognized as Muslim (Jones, 1976). Nevertheless, the spread of Islam did not occur uniformly across the

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[18] These religions were adopted by kingdoms spread across Java Island, with the exception of certain sparsely populated and remote southern areas, where animism was still popular. The practices Hinduism and Buddhism were also blended with local animism traditions. See KOENTJARANINGRAT 1985. *Javanese Culture,* Singapore ; New York, Oxford University Press.

island, resulting in considerable regional variation of the presence of Islam (Setiadi, 2021). The

following paragraphs will analyze the history and spatial patterns of Islamization in East Java.
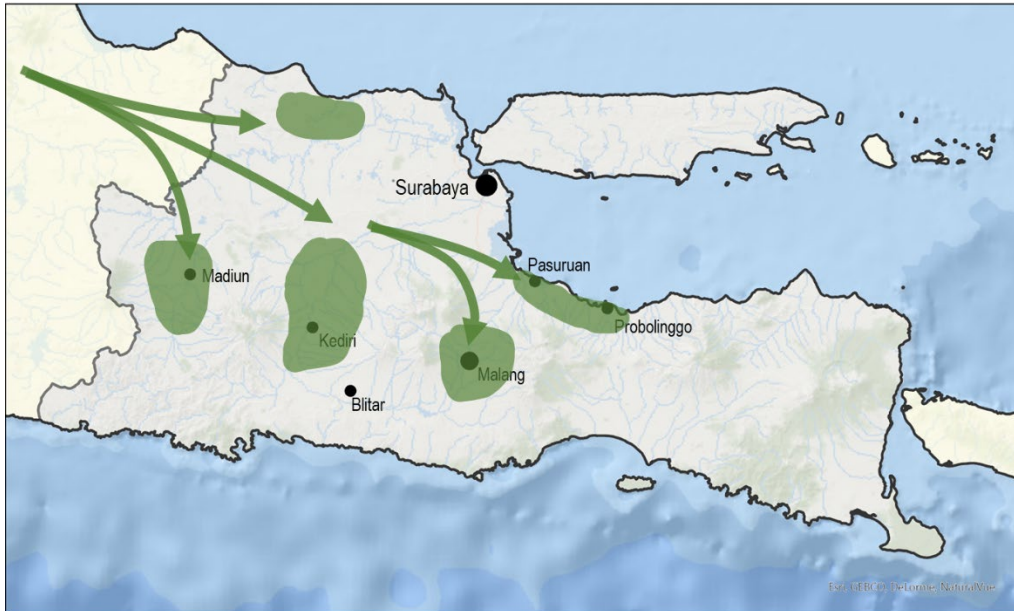
Figure 3-1 Trade routes and the spread of Islam in East Java.
Map remake based on (Cribb, 1999).

Islam was first introduced to the Hindu kingdoms of Java Island in the 13th century by Muslim

Indian and Arab merchants (mainly from Gujarat). Some local business people chose to convert

to Islam to strengthen their ties with these merchants (Koentjaraningrat, 1985). In the beginning,

Islam's influence was mostly limited to the coastal commercial cities located in the *pasisir*

region[19] of the modern-day Central and West Java provinces (Seino, 1988), but it gradually

spread along major trade routes (Figure 3-1) over the next few centuries (Wertheim, 1959). Later

on, local Javanese regimes, such as the Demak Sultanate and the subsequent Mataram Sultanate,

adopted Islam as their state religion to counter the Hindu-Buddhist influence of the remnant

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[19] *Pasisir* refers to the northern coastal region of East Java and Central Java.

Majapahit Empire and the regimes on the Sino-Indo Peninsula[20] (Setiadi, 2021). The official recognition and promotion of Islam helped it flourish in East Java, where the local people found it was easy to convert since the *adat* [21] principle widely adopted by the Muslim society allowed the local people to retain their traditional customs and beliefs while embracing the Islam faith (Muhaimin, 2006), and these people who adopted this syncretic practice were later referred to as the *abangan* (Geertz, 1960)[22].

Subsequently, some of the first-generation local believers' descendants had the opportunity to undertake pilgrimages to Islamic cultural centers such as Mecca and Cairo and study Islam in-depth. Upon their return, they brought more orthodox practices and beliefs with them, leading to subsequent waves of Islamic influence (Koentjaraningrat, 1985). East Java experienced two main waves of orthodox Islamic influence. The first wave occurred in the 17th century when the traditional Islamic schools of thought, particularly the *Shafi'i* school of practice, were introduced (Woodward, 2010). The second wave of Islamization in Java began to spread in the 19th-20th century, through scholars trained at *al-Azhar* (in Cairo) who brought back Indonesia the philosophy of Islamic reformists (*tajdid* [23]), especially *Muhammad Abduh* and his colleagues (Amir and Rahman, 2021). Followers of orthodox Islam in Java identify themselves as the *Agami Islam Santri* or simply the *santri*. Although both waves were considered orthodox, their

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[20] Those regimes adopted Hindu or Buddhism as their state religion.

[21] "The word *adat* is derived from Arabic *adat* meaning custom. It generally refers to the result of long-standing convention, either deliberately adopted or the result of unconscious adaptation to circumstances, that has been followed where practical considerations have been uppermost. See MUHAIMIN, A. G. 2006. *The Islamic Traditions of Cirebon: Ibadat and Adat among Javanese Muslims: Ibadat and Adat among Javanese Muslims*, ANU Press.

[22] *Abangan* is usually an exonym. Term referring to *the abangan* used in other literatures include Javanese Islam, *kejawen* ("Javanism"), or *agama Jawa* ("Javanese religion"). See HEFNER, R. W. 1987. Islamizing Java? Religion and Politics in Rural East Java. *Journal of Asian Studies,* 46**,** 533-554. Despite assertions that *the abangan* should not be considered as Muslim (see AZRA, A. 2006. *Islam in the Indonesian World: An Account of Institutional Formation*, Mizan Pustaka.), in this chapter we will consider both the *abangan* and the *santri* (to be mentioned later) as Muslim.

[23] Arab word for renewal, referring to the revival of Islam.

teachings and emphasis on religious practice differed. The traditionalists were followers of the first wave of orthodox Islamization, while the modernists were followers of the second wave (Palmier, 1954)**.**

Since the censuses used in this study categorized both *abangan* and *santri* as Muslim (Jones, 1976), I could not extract the information about the proportion of each group in a given place from the provided data. However, the general spatial pattern of religious practice in East Java in the mid-1960s reflected the region's centuries-long history of different waves of Islamization. The dissemination of orthodox Islam in East Java followed the same pattern as the spread of syncretic Islam practice centuries ago: it extended along the trade routes and proliferated from the north coast to the south (Cribb, 1999). Furthermore, the expansion of sugar plantations during the Dutch colonial rule pushed *abangan* Javanese to migrate to upland areas, while leaving the lowlands to more devout religious groups who immigrated to these areas (Hefner, 1987). As a result, the plain area along the trade route near the *Solo* River and the *Brantas* River, as well as the northern coastal area (*pasisir*) including Madura Island, had a higher presence of the *santri* group. Within the *santri* group, the modernists mainly lived in major cities[24], while traditionalists settled (Lyon, 1970) in small towns, rural areas, as well as cities. While more people in the north accepted the orthodox Islam practice, the *abangan* community, who persisted in syncretism practices, remained prominent in the southwest part of the province near the heartland of Java culture[25] (Robson, 1987). Since the orthodox Islam was spread slowly over generations, sometimes a *santri* and an *abangan* family may find they shared the same

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[24] Modernists had a stronger presence in Central Java and outer island. See AMIR, A. N. & RAHMAN, T. A. 2021. The Influence of Muhammad Abduh in Indonesia. *International Journal Ihya' 'Ulum al-Din,* 23**,** 27-59., but in East Java it was limited in major cities.
[25] It mainly included the area around Yogyakarta and Surakarta.

grandfather in their genealogy book. These connections through kinship ensured the proximity of *santri* and *abangan* communities, despite their difference in religion and political views (Hüsken, 1989). As a result, although *abangan* and *santri* communities usually did not live together, their neighborhoods were not completely segregated. In the most entrenched *santri* area, small *abangan* neighborhoods may still exist, while small *santri* neighborhoods can also be found in a primarily *abangan* settlement (Elson, 1984).

The census also identified some remote mountainous subdistricts with the population (no more than 5% in any subdistrict) that still preserved pre-Islamization period Hindu-Buddhist priestly tradition (Hefner, 1983, Hefner, 1987). Other non-Muslim practices, such as Christianity and Confucianism, were only practiced in cities by a small fraction of the local population. Since the vast majority of the population in East Java were Muslim, my analysis will focus on the tensions between the *abangan* and the *santri* groups, and their internal intra-group connectivity.

3.2.2 Disagreement and Conflicts in East Java

In the decades leading up to the mass killings, East Java witnessed recurrent instances of grassroots unrest between the *abangan* and the *santri* groups (see Figure 3-2). The violence might take the form of collective lynching of a single person (Nordholt, 2002) or clashes between groups spearheaded by local strongmen, thereby highlighting the deep-seated social divide embedded in East Java society. East Java society was characterized by the division between the *abangan* and the *santri* cultural-religious groups (Ricklefs, 2007). The public lives of these two groups were practically segregated, reflecting not only their contrasting religious views but also significant divergences in economic status, cultural practices, and relationships with political parties.
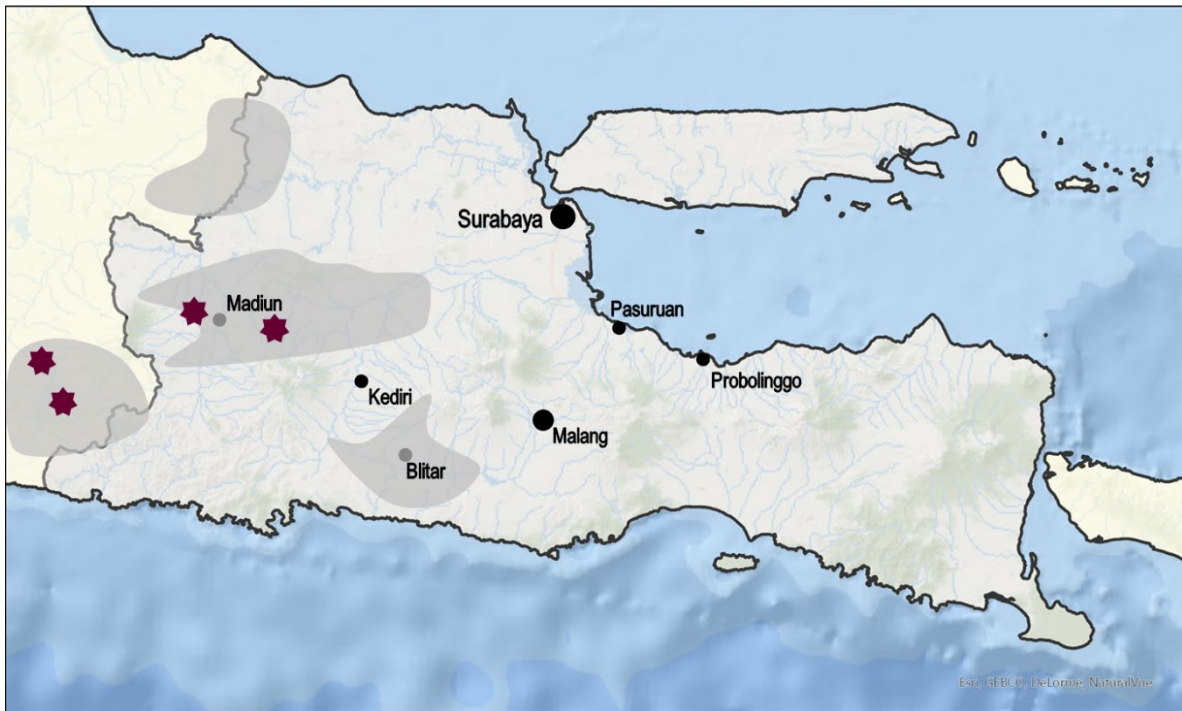
Figure 3-2 Armed conflicts (1945-1964) in East Java, illustrating the divide between the abangan *and the* santri.
Map adapted from (Cribb, 1999)

Religion: The *abangan* community tended to perceive the religious practices of the *santri* as "foreign" and resented the *santri*'s thriftiness, despite that the *santri* were usually wealthier but saving money only for future costly pilgrimages to Mecca. On the other hand, many *santri* followers viewed the syncretistic Islam practiced by the *abangan* as merely a cult (Geertz, 1960, Koentjaraningrat, 1985).

	< 0.5 ha	0.6-1	1-2	2-5	5-10	10-20	> 20
Irrigated land	933,615	464,532	167,565	409,54	4,369	577	93
Non-irrigated land	2,278,143	393,332	237,814	111,394	13,968	1,748	421

Table 3-1 Number and type of rice field parcels in East Java, summarized by area in 1960.
Source: Agrarian Reform, Indonesia (Hindley, 1964, Djarwonagoro, 1960).

Land and relation with the communist party: Socio-economic inequalities were exacerbated in East Java due to population pressure and the vast disparities of wealth (mainly land)

distribution: As an agricultural province with over 65% of the population working in planting, East Java faced significant pressure from its population density of over 500 people/sq km[26] (Biro Pusat Statistic, 1962). This figure was even higher than that of any industrialized European country, including the Netherlands, the colonial ruler of Java Island. In addition, land ownership in East Java was always highly fragmented (Table 3-1), which further encouraged land annexation and concentration. While one hectare of farmland was considered the minimum size to be self-sufficient for a peasant's household, over 80% of farms in the region fell short of this size, rendering them insufficient for a household's self-sufficiency (Lyon, 1970). Consequently, peasants were forced to sell their land and become tenant farmers or migrate to cities. This outcome further deepened the divide between the wealthy and peasants, and thereby intensified the already significant social disparities (Elson, 1984).

The *santri* typically enjoyed greater affluence than their *abangan* counterparts, although being a *santri* did not necessarily translate to owning large amounts of land (Hefner, 1987). Rather, it was the *santri* community's leaders, including the *ulama* and *kyai*[27], who generally possessed large landholdings (McGregor, 2009). This made the *ulama* and *kyai* particularly vulnerable to the perceived threat posed by the communist doctrine of land reform, which aimed to seize land from large landlords and redistribute it to poor peasants (Aidit, 1963, Aidit, 1964b). In contrast, the idea of land reform found favor among the *abangan* community, even among those who were not directly involved with the PKI or PKI's affiliated mass organizations such as BTI[28] (Hearman, 2018). The *abangan* community's traditional system of land inheritance ensured that

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[26] Calculated based on the 1961 census.
[27] *Ulama*: Islamic religious scholars; *Kyai*: respected religious leaders and educators.
[28] BTI is short for *Barisan Tani Indonesia*, Peasants Front of Indonesia.

members of a given village shared roughly equal portions of farmland (Palmer, 1967). This system, coupled with their economically disadvantaged status, suggested *abangan*'s higher level of alignment with the PKI's wealth equality principle, or at the very least, less resentment. Naturally, there were wealthy *abangan* individuals who owned large landholdings and would be affected by the potential communist land reform; however, by the mid-1960s, after the PKI's rapid expansion over a few decades, these well-off *abangan* members might have already pledged their loyalty to the party's manifesto and become committed PKI cadres (Hindley, 1964).

Economic transition and the PKI: Indonesian society's modernization in the 20th century also intensified the tension between the *abangan* and the *santri* communities. Residing in proximity to major cities, the *santri* communities were better situated to take advantage of the emerging urban infrastructure and economic opportunities (Hefner, 1983, Hefner, 1993). On the other hand, the *abangan* community largely lived in rural areas farther away from urban centers, making it more difficult for them to benefit from the development of an urbanizing and modernizing country (Ricklefs, 2007). Moreover, because of their religious education, the *santri* community exhibited higher literacy level than the *abangan* (Hindley, 1964), providing them with an additional advantage in adapting to Indonesia's changing social and economic landscape.

3.2.3 The Destruction of the Fragile Balance

Although the aforementioned evidence sheds light on the long-standing rifts in East Javanese society, it does not explain the sudden outbreak of violence after the G30S[29] incident. Indeed, after the Indonesia declared its independence[30], East Java had already experienced significant societal unrest, manifesting as armed clashes between various interest groups and parties (Cribb et al., 2004, Fealy and McGregor, 2010). One stark example was the Madiun Affair in 1948 (Hellwig and Tagliacozzo, 2009), during which the PKI was responsible for the deaths of hundreds of dedicated *santri* political figures amid an uprising[31] (the uprising then was suppressed by the military).

Yet, during the period from 1949 to 1964, armed conflicts among different interest groups became much less frequent. One reason for the prevailing tranquility before the purge was that various groups and the political parties representing their interests managed to set aside their disagreements and collaborate toward a shared national goal: During the war for independence, the PKI, NU, and PNI, along with their substantial support bases, unified around a shared political agenda of establishing a new republic and nurturing the fledgling state. This collaboration continued even after the Dutch departure in 1949, and ushered in a period of relative peace lasting around fifteen years, during which no major destructive conflict occurred between the PKI (and their *abangan* supporters) and the Islamist parties (and their *santri*

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[29] As mentioned in the previous chapter, the Thirtieth of September Movement (*Gerakan 30 September*, abbreviated as G30S) began as a coup initiated by the PKI but was later exploited by Suharto as an excuse for initiating widespread mass killings towards the PKI.
[30] The Dutch government recognized Indonesia's independence on 27 December 1949
[31] PKI-affiliated forces attempted to take over the local government and killed possibly hundreds of Islamist parties' leaders and supporters.

followers) (see: Kong and Woods, 2016) underscoring their commitment to a united and sovereign nation (Mortimer, 2006).

Another reason for the prevailing tranquility before the killings was the relatively stable domestic socioeconomic environment. Mass violence events typically arise during turbulent times. In times of widespread uncertainty about the future, individuals with diminished hope were more likely to rationalize their involvement in violence and become perpetrators[32]. Luckily, the Indonesian economy, while suffering from Sukarno's import substitution policies, achieved considerable advancements in social welfare, education, and other public infrastructures. These achievements reduced the likelihood of conflicts in East Java, with occasional uprisings being the exception (Ricklefs, 1993).

The army's[33] presence in local areas was another crucial factor in preventing the outbreak of mass violence (Figure 3-3, left). Following Indonesia's independence, the Indonesian army established local commands at almost every administrative level, encompassing provinces, sub-provinces, regencies, and even subdistricts[34]. Additionally, the military maintained control over several lucrative industrial sectors under Suharto's guided democracy (Crouch, 2019). These factors not only rendered the army capable but also motivated them to preserve their privileged

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[32] Studies have found unmarried males are the most common profile of perpetrators: see FUJII, L. A. 2009. *Killing Neighbors: Webs of Violence in Rwanda,* Ithaca, Cornell University Press..

[33] Army in Indonesia has the overwhelmingly position compared to other military branches in Indonesia Military Force (TNI).

[34] *koramil*, abbr. for *komando rayon militer* (military district command), were set in each *kecamatan*.

social status by upholding the existing social balances among political archenemies (Cribb, 2001a)[35].
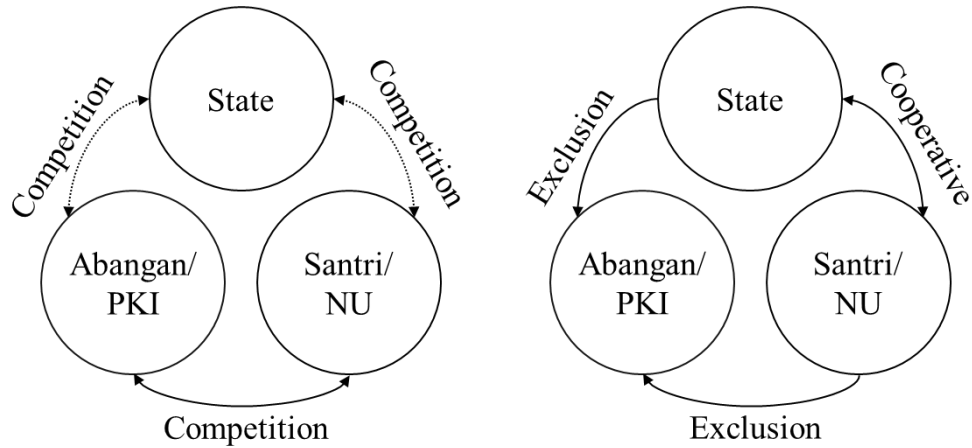
Figure 3-3 The balance of power before and after the G30S event.
Left: relation between the santri*, the* abangan*, and the state before the G30S event*
Right: relation between the santri*, the* abangan*, and the state after the G30S event.*

Nonetheless, the rapid expansion of the PKI gradually upset the balance of power between the *abangan* and *the santri* communities, especially as this expansion became more evident. Within a span of only three years between 1957 and 1959, the PKI recruited over one million members throughout the country and secured over 30% of local council seats in the 1957 local election (Hindley, 1964). While the PKI enjoyed growing popularity among the majority and had the support of the *abangan* community, it faced a notable absence of backing from high-ranking political figures and army commanders. Besides, in contrast to the extensive province-wide

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[35] The army's strength and capability was also restrained by Sukarno, who was "a master of the art of playing his subordinates off against each other, and no one in palace circles had the luxury of knowing precisely where he or she stood in the political constellation from day to day." See CRIBB, R. 2001b. Military Strategy in the Indonesian Revolution: Nasution's Concept of Total People's War in Theory and Practice. *War & Society,* 19**,** 143-154..

network of the *santri* ulama connected by kinship ties, the *abangan* community was

comparatively less connected[36].

Oct. 1 1965	**Morning**: Six top Indonesian Army generals and one aide were abducted and murdered before dawn. By 7:15 am, the 'Revolutionary Council' declared control of the country via radio. **Afternoon**: Suharto asserted control over the army and accuses the Revolutionary Council of attempting to seize power from Sukarno by 7 pm.
Oct. 5	The generals were buried, and propaganda against the Army and its affiliated left-wing groups spread widely in the media[note].
Oct. 8	PKI offices in Jakarta and other cities were burnt down
Oct. 18	The mass murder of people associated with the PKI erupted across the country.
Dec. 12	President Sukarno attempted to counter manipulated news regarding the communists but was unsuccessful.
Mar. 12 1966	Sukarno signed the presidential decree called *Supersemar*. Suharto's followers claimed it contained an agreement to transfer power from Sukarno to Suharto.

Table 3-2 Timeline of the mass killings of 1965-66.
Source: (Marching, 2017)
Note: It was reported that the six generals and one aide had been mutilated and sexually abused by the women of Gerwani *(Gerakan Wanita Indonesia, or the Indonesian Women's Movement)*

The equilibrium of local power dynamics in East Java was completely disrupted by the G30S

incident. Following the failed coup (see Table 3-2), the military assumed control of the state

government and initiated a premeditated anti-PKI campaign (Anderson and McVey, 2009). This

marked a departure from Sukarno's strategy of maintaining a balance of power (Figure 3-3,

right). Consequently, the PKI and their *abangan* supporters found themselves confronted by

opposition from both the anti-PKI military (and the government) and the NU (*Nahdlatul*

Ulama)[37] supported by the *santri* community at the same time (Sudjatmiko, 1992).

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[36] For example, in the 1963 East Java governor election, the PKI's candidate, Satrio Sastrodiredjo, lost to an army-backed candidate Mochamad Wijono, who had an anti-PKI attitude. Besides, most army commanders held anti-PKI positions, and *santri* scholars who usually had a strong local influence, were also anti-PKI and connected through the network of the NU (*Nahdlatul Ulama*).
[37] *Nahdlatul Ulama* (Revival of the Ulama), a major Islamic party in Indonesia (see my prior chapter)

With the power dynamics in upheaval, the longstanding animosity between the *abangan* and the *santri* communities easily escalated into widespread violence across Java Island (Cribb, 2001a). This violence primarily targeted the PKI and PKI's affiliated organizations, the vast majority of which consisted of *abangan*.

As mentioned above, the animosity between the *santri* and *the abangan* communities was already well known before the killings, and the *santri* militants, backed by the NU, indeed committed numerous atrocities against the unarmed *abangan* community during the killings. If the hypothesis that pre-existing social tension (between the *abangan* and the *santri*) constituted a contributing factor to the mass killings, it would be reasonable to anticipate a positive correlation between the pre-existing tension and the magnitude of the killings. Moreover, if indeed social tension existed and influenced the extent of the killings, this would lend credence to inquiries about the role of intra-community connection in the violence. I will elaborate this research question in section 3.4, while the forthcoming section will delve into the intricate examination of the influence of social connections on the scale of the killings.

3.3 Solidarity and Mass Violence

Perpetrator's perspective

While economic (Hirshleifer, 2001), cultural (e.g. Hinton, 2005), and ideological elements (Harff, 2003) have provided satisfactory explanations for the cause of mass killings, implementing the killing orders on such a massive scale required the organizing of a large number of people . Although the antagonism towards the PKI was universal and prevalent in the *santri* community, most of the *santri* community was not directly involved in the killings

(McDoom, 2005, Kammen and McGregor, 2012). This feature of Indonesian mass killings paralleled with the patterns observed in other mass killing events: only a tiny proportion of the community involved in the perpetration would execute the killing orders, while the other members might facilitate, support, or just not attempt to prevent the killings from happening (McDoom, 2005, Browning, 1992).

What made some community members prominent in the killings during the mass violence? Research highlighted the role of 'leaders' in the community, a few strongmen who may possess extremely violent personalities to carry out the killings (Lemkin and Jacobs, 2012). Still, it seemed improbable that a small number of unconnected violent strongmen could inspire the enthusiasm of participating in mass violence throughout Indonesia. In the preceding chapter, I discussed the pivotal role played by the army (although most killings were not executed by them), but it should also be important to underscore the networks and organization of the grassroots perpetrators (often militants) who actually carried out the killings: a formidable force only materialized when individuals eager about violence were connected and organized, especially considering their adversaries also possessed the means to resist and retaliate (Robinson, 2018). Social networks and connections not only provided institutional and psychological support to the violent perpetrators (McDoom, 2013), apart from the connection among the most enthusiastic killing leaders, local networks within the perpetrator group also facilitated the recruitment of collaborators by drawing attention to potential candidates who may be interested in killing (Fujii, 2009). Furthermore, these social connections and local networks would assist perpetrators in pinpointing "the others" (see Hedström and Swedberg, 1998), those who would eventually become victims of the killings.

It seems implausible that social connections to encourage mass murder would be established within a short period of time through a few meetings. Rather, these connections among perpetrators must have existed prior to the killings. Kinship was a typical bond among perpetrators (Wood, 2008). For instance, researchers examined the biographical data of 172 Salafi jihadists, and found that 75% of the terrorists had either pre-existing social ties with other members or followed their relatives to join the terrorist organization. The members of the jihadist group were even encouraged to marry their comrades' sisters and daughters to solidify these political relationships through kinship ties (Sageman, 2004). This Salafist example would also apply to other mass killing perpetrators. During the Rwandan Genocide in 1994, most perpetrators were found sharing households or villages with fellow perpetrators (Straus, 2012, Mamdani, 2020). In addition, prior to World War II, kinship or kin-like relationships based on intimate ties helped the Nazis gain local support and recruit new members (Waddy, 2001). While the previously mentioned social, religious, and cultural conflicts might give perpetrators reasons to hate and target the victim group, pre-existing social connections held the perpetrators together with their leaders, enabling the effective execution of killings (Fujii, 2009).

3.3.1 Victims' Solidarity and inter-Community Connection

The only thing necessary for the triumph of evil is for good men to do nothing.
                                                            ---John Stuart Mill

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Just as John Stuart Mill, the renowned English economist, once noted, organized perpetrators did not necessarily require fervent mass support to carry out killings; "negative support" sufficed. This referred to the victims' inability to defend themselves or escape, the absence of organized

opposition from domestic or international sources, and the reluctance in the society to take personal risks to protect others (Valentino, 2005). While hatred, discrimination, and negative stereotyping directed at powerless victims in a society may not be enough on their own to provoke extermination, widespread attitudes of this kind may be sufficient to block effective opposition to the potential extermination (Fealy and McGregor, 2010).

Just as perpetrators would bond, stories also proved that solidarity among potential victims can resist killings (Törnquist, 1984, McDoom, 2014). However, quantitative evidence about the effect of social connections on the victims' resistance was hard to find, possibly due to survivorship bias: if the solidarity of victims successfully prevented them from being killed or displaced, they would not be recognized as victims (Braun, 2019)[38]. Besides, records also indicated that victims who were killed in mass killings tended to be socially and spatially connected. For instance, during the Holocaust in Italy, Nazi perpetrators specifically targeted victims who were connected by families, and those who were spatially and temporally close to Jews were also at higher risk (Le Noc et al., 2020).

In addition to the bond and connection within the potential victim group, intergroup social connections would play another crucial role in mitigating the risk of mass killings. Firstly, stronger communication and connections within a society (not limited to the connection between two groups) in general, often reduce the likelihood of violence (Lake and Rothchild, 1996). Connections between ordinary people were built upon mutual trust, responsibility, and credit, which require the adherence to certain healthy social norms of the communities. The cost of

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[38] This cited example might be an exception, since it actually has variables about Jewish evacuation, although the evacuation here refers to the effort of the third parties.

participating in violence, on the other hand, would break these connections, and once broken, these connections would require significant effort to rebuild (Fujii, 2009, Bloxham, 2008). For instance, marriage formed a powerful non-blood bond between two individuals and often signified their responsibility for the spouse and children, and thus it would reduce their likelihood of participating in violence towards the other groups. Studies conducted in Rwanda found that married individuals were less likely to participate in the killings (Sampson et al., 2006). This effect can also be observed at the community level: Communities with lower marriage rates tend to experience higher crime rates (Sampson and Groves, 1989, Morenoff et al., 2001).

Secondly, inter-group connections offered a platform for information exchange between two communities, enabling the restoration of trust and discouraging prejudice, stereotypes, and discrimination (Allport, 1979). For instance, in India, local villages that had established formal intergroup associations between Hindus and Muslims experienced less collective violence between the two groups (Varshney, 2001). In the aftermath of a mass killing event, surviving victims often describe the perpetrators as coming from a distant group. Even in cases where the perpetrators lived in a village within an hour's walking distance, perpetrators were still perceived by the victims as "attackers coming from afar" (Fujii, 2009). This suggested that communication and connection between perpetrators and victims before the killings were often at a minimal level.

3.3.2 Solidarity in East Java

The Santri

In East Java, it was common for households that shared the same religious beliefs to reside in close proximity to one another, although it was common to find a few *santri* neighborhoods or households in an *abangan* settlement[39] (Jay, 1969). Religious rituals and gatherings tightly bonded *santri* neighborhoods (local communities) together. The *santri* neighborhoods, referred to as *kauman*, usually revolved around a mosque and religious school(s), and larger *santri* villages may also have *pesantren* (Islamic boarding schools) for advanced students from a wider area. Mosques and schools served as a place for the *santri* community to come together, communicate, and hold religious ceremonies, where adult *santri* men congregated every Friday at noon for the sermon from local *kyai* and *ulama* (Geertz, 1960). In some villages, some young *santri* were particularly devout and would even gather every afternoon for evening prayers (McGregor, 2009). In East Java, the line between religious celebrations and political rallies was often indistinct, with the mosques and schools becoming the nexus for demonstrating the political solidarity of the *santri* community. It is also worth noting that the internal connections of the *santri* communities extended beyond local villages: The two national *santri* organizations, *Nahdlatul Ulama* and *Masyumi*, linked the *santri* community nationwide (Fealy and McGregor, 2010).

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[39] Settlement: A continuous, distinguishable area on a map where people live and form communities, varying in size from cities to villages. Neighborhood: Small, homogeneous living clusters within a settlement. In the empirical section of this paper, a neighborhood is defined as a 100m x 100m square area within a settlement and is treated as a cell in the cell-swapping process.

The Abangan

In comparison to the more organized *santri* community, *abangan* local communities appeared less cohesive and relatively indifferent to other *abangan* communities beyond the radius of their daily routines (Palmer, 1967, Jay, 1956). Although the *abangan* community also had shrines, their rituals were less formal and limited to a small group of relatives and friends, typically gathering around a shrine for a *selametan*[40] ritual once a week (Figure 3-4), which involved dinner, chatting, and worship (Koentjaraningrat, 1985). This implied that the *abangan* community had a compact and tightly knit circle, with members having a closer and more intimate relationship with each other.

Figure 3-4 Selametan *ritual by* abangan *Javanese.*
Source: (Anonymous, 1907)

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[40] A type of communal feast.

In a typical *abangan* village, approximately half of the households constituted the kernel families of the village, having lived there for generations and making important collective decisions, such as the allocation of farmland. This way of land distribution fostered a close-knit connection within the local *abangan* community. Moreover, *the abangan* communities also practiced a *gotong royong* (mutual assistance) principle that further reinforced the bonds between individuals within the community (Hindley, 1964, Geertz, 1989, Hellwig and Tagliacozzo, 2009).

Contrary to the *santri*, the *abangan* lacked a national organization to represent and unite them as the *NU* and *Masyumi* did for the *santri* (Hefner, 1987). The PKI and especially its mass organization BTI (Peasants Front of Indonesia) to some extent served this unifying function for the *abangan*. Despite the fact that *abangan* religious practices were not related to either communism or Marxism, as I have mentioned, their peasant identity, socioeconomic disadvantages, and secular orientation (Törnquist, 1984) made them an appealing ally for the PKI, and their elites were incorporated into the PKI's ranks.

Between the Santri and the Abangan

The profound differences in religion, wealth, and education between the *santri* and the *abangan* communities suggested their inter-connection was weak (Lyon, 1970). Conflicts and disagreements exacerbated these differences, further impeding any potential meaningful bonds between these two groups. In the central and southern areas of East Java, it was common to find a small number of *santri* households living close to *abangan* neighborhoods. However, even if the size of the local *santri* community was only a fraction of the neighboring *abangan* one, the *kyai* and *ulama* of the *santri* community often dissuaded their followers from participating in their *abangan* neighbor's 'occult' ceremonies (Geertz, 1960). On the other hand, in villages

where the *santri* community was dominant, *abangan* households would have to reduce the size and frequency of their gatherings or cancel their otherwise remarkable feasts (Ricklefs, 2007). This intolerance towards the religious practices of the other community closed the door to mutual understanding between the *santri* and *the abangan* communities. In the decades before 1965, this insulation between communities gradually fueled mistrust and discontent, culminating in hatred in what were once peaceful East Java villages (Hassner, 2003).

3.4 Research Objectives

The goal of this research is to detect the impact of intra-community connections on the result of the mass killings, but before I delved into this topic, I had to confirm that the (potential) tension between communities did have a role in the killings as I discussed in section 3.2. Thus, my first research objective was to investigate and confirm the correlation between social tension and the killings. Before 1965, there was observed animosity between the *santri* and the *abangan* communities, while during the mass killings, the NU-backed *santri* militias committed numerous atrocities against the unarmed *abangan* communities. If social conflict was indeed one of the factors that led to the mass killings, I should expect a correlation between the extent of tension/conflicts (preceding the killings) and the magnitude of killings. The research hypothesis related to this objective is as follows:

H1: Places with higher levels of social tension would experience a more significant loss of population during the killings, and vice versa.

If the hypothesis mentioned above could be confirmed, the subsequent research inquiry would focus on the influence of social connections in shaping the outcome of the mass killings. Since

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the connection between the perpetrator and victim' 'groups was virtually nonexistent, this inter-group social bond will not be considered in my analysis. As outlined in this section, I expected the connection within the perpetrator's group to encourage violence, while the connection within the victim's group to resist it. To be specific, I will test the following pair of hypotheses:

H2: Strong intra-group connections within the **santri** *group (perpetrator's group) would be positively associated with population loss during the mass violence.*

H3: Strong intra-group connections within the **abangan** *group (victim's group) would be negatively associated with population loss during the mass violence.*

The *abangan* and the *santri* communities would display differing levels of internal connectivity within diverse geographic regions. In the following section, I examined the interconnections among the *abangan* and the *santri* communities in East Java using a method that simulated the spatial arrangement of these neighborhoods.

3.5 Connectivity Calculation

3.5.1 Islamization and Social Tension: Proportion of *Santri* Population

In order to investigate the impact of social bonds on the outcome of the mass killings, this paper required to estimate the population of both the *abangan* and the *santri* in each subdistrict. However, accurate estimation presented a challenge, as both groups identified themselves as Muslims in Indonesia's census data (Biro Pusat Statistic, 1962).

Moreover, relying exclusively on religious statistics, even if they are available, can lead to a biased understanding of religious demographics. This bias often arises from the absence of a universally applicable standard for determining an individual's religious affiliation. Statistics often hinge on self-reported figures furnished by various religious organizations, each employing their unique criteria to determine their members' affiliations (Sopher, 1967). Consequently, I adopted several alternative methods to gauge the proportions of the *santri* and the *abangan* populations in each subdistrict.

Two procedures helped determine the proportion of the *santri* (or *abangan*) population without reliable census data. First, the spread of Islamization throughout the region occurred primarily along the trading routes and northern coastal areas. Consequently, areas in proximity to these routes and coasts were generally dominated by the *santri* community, while mountain ranges tended to be strongholds of the *abangan* community (see part 3.2). Second, the 1957 local council election in East Java provided insight into the cultural and religious identities of local voters. There were four major parties in East Java during this election: two Islamist parties, *Nahdlatul Ulama* (NU) and *Masyumi*, the communist party PKI and the nationalist party PNI (Robinson, 2018). Voters tended to support parties that aligned with their cultural-religious identity, making it unlikely that a significant proportion of *abangan* voters would support *Nahdlatul Ulama* or *Masyumi*. These Islamist parties were mainly supported by the *santri*. Thus, voting patterns could serve as a useful indicator to determine the local proportion of *the abangan* and *the santri* groups.

However, the available voting data were aggregated to the regency (*kabupaten*) level, with each *kabupaten* containing around 5-12 *kecamatan*, the research unit in this study. This necessitated the interpolation of data to the *kecamatan* level to gauge the *santri* proportion more precisely. I

interpolated the support rate for Islamist parties as an indicator of the local *santri* presence. First, I put the regency-level data at the centroid of each regency and applied a simple IDW (inverse distance weighted) interpolation to yield the *santri* proportion across the entire area. Then I designated the centroid of the settled area within each *kecamatan* as the representative value for that subdistrict. The results indicate that the proportion of *the santri* in each subdistrict varied from 10% to 90%.

3.5.2 Spatial Metric for the Connectivity between two Settlements

This research established an innovative distance-based spatial connectivity metric to gauge the social connection (or social bond, solidarity) within the *abangan* and the *santri* groups. While there were ongoing interactions between the two groups due to their remaining kinship ties (Hüsken, 1989), I would abstain from measuring inter-group connectivity due to the limited overall connection between the two groups.

There were several reasons behind utilizing physical distance as a metric for measuring the connectivity between neighborhoods. First, studies suggested that proximity plays a critical role in shaping acquaintanceship (Cox, 1969, Cox, 1998) and is a determining factor in establishing friendship (Preciado et al., 2012). Close geographic proximity enables effective communication and influence, particularly in an agrarian society. People who talk together vote together (Pattie and Johnston, 2000). Individuals who live close tend to engage in discussions and conversations with one another, and with sufficient communication, people with similar cultural-religious backgrounds tend to share political perspectives and form a united front to realize their agenda. Second, while the industrialization and introduction of new technologies was rapid in major Indonesian urban areas, modern communication tools such as vehicles and telephones were

scarce in the daily life of rural Java (Hüsken, 1989). Therefore, the social interactions of the Javanese people were highly sensitive to spatial distance as people primarily relied on non-motorized travel to interact and communicate (Fujii, 2009).

In this study, I considered a distance of 30km between two neighborhoods as the maximum distance that compassed regular interaction and meaningful connectivity. Given that most people and settlements were located near crop fields and plantations on the flat plains of East Java, I also disregarded the impact of terrain complexity when computing connectivity between two neighborhoods.

3.5.3 Extract Settlements and Estimate the *Abangan* and the *Santri* Population

Figure 3-5 A clip of the map from the Army Map Service and the extracted settlements.
Note: the demonstration area represents a subdistrict (kecamatan) in East Java

Similar to the previous chapter, I extracted location and shape data of settlements (Figure 3-5) in East Java from the U.S. Army Map Service maps published in the 1950s (Army Map Service, 1954). Each contiguous built-up area on these maps was identified as a settlement, and I recognized 17,480 settlements spreading across 490 subdistricts. The number of settlements per subdistrict (*kecamatan* or *kota*) ranged from 2 to 40, consistent with the estimated number of

range of settlements[41] proposed in previous studies: a typical *kecamatan* was expected to contain around 15 *desa* (or *kelurahan* in some provinces), and each *desa* further composed of 2-7 settlements (Soemardjan, 1962).

I assigned settlements on the map to a 100m ×100m grid (Figure 3-6) with each cell on the grid representing a homogeneous neighborhood of either the *abangan* or the *santri*. The homogeneity of each cell served as a convenient approximation of the actual spatial configuration of East Java in 1965. By comparing the number of cells with the total population in East Java during the 1960s, I estimated that each cell (10,000 m^2) would house around 30-100 people (6-20 households, see Table 3-3). This population size would be small enough to ensure reasonable homogeneity while being sizable enough to facilitate efficient calculations.

Figure 3-6 Location of settlements in East Java.

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[41] Hamlets

3.5.4 Locate the *Abangan* and the *Santri* Neighborhoods

Based on the estimation of the *santri* and the *abangan* population discussed in the previous section, I was able to approximate the number of *abangan* or *santri* neighborhoods (100×100 sqm cells) present in each subdistrict. For example, assuming that 23% of a subdistrict's population were *santri*, and the subdistrict contained 35 cells, I would expect 7 (approximately 35×23%) to be *santri* neighborhoods, while the remaining 28 cells should be *abangan*.

	The *abangan* cells (neighborhood)	The *santri* cells (neighborhood)	All cells (neighborhood regardless group)
Average # per subdistrict (*kecamatan*)	267.4	442.2	689.6
Average calculated level of connectivity^	2.20	3.17	NA
Average estimated population each unit	60.8	68.6	63.8

Table 3-3 Statistics of cells and settlements in rural East Java on Java Island.
Note: Settlements on Madura Island were excluded from the analysis
^: simulated result

Accurately pinpointing the geographical locations of *santri* and *abangan* cells (neighborhoods) in history posed a challenge due to the unavailability of precise data. Nevertheless, the enduring conflicts between these two groups, the history of the formation of their identities, and the remaining kinship ties between them suggested certain spatial configuration patterns. First, it is important to recognize that the locations of the cells of each group cannot be assumed to be randomly distributed within the settlements, since the public life of these two groups was largely segregated. *Abangan* tended to live close to the other *abangan*, and vice versa. Second, the spatial configuration of these two groups' residences would not be fully segregated, since the adoption of the *santri* practice was a gradual process over centuries in East Java. In settlements

(villages) predominantly inhabited by *abangan* residents, there would also be *santri* households

emerging over time, although they typically often formed their own separate neighborhoods

(Koentjaraningrat, 1967b). Conversely, when most villagers in a settlement were *santri*, there

would also be remaining *abangan* people who had not adopted the orthodox *santri* belief yet.

| Moran's I = | 0 (random) | 0.3 | 0.5 | 0.7 | 0.9 |
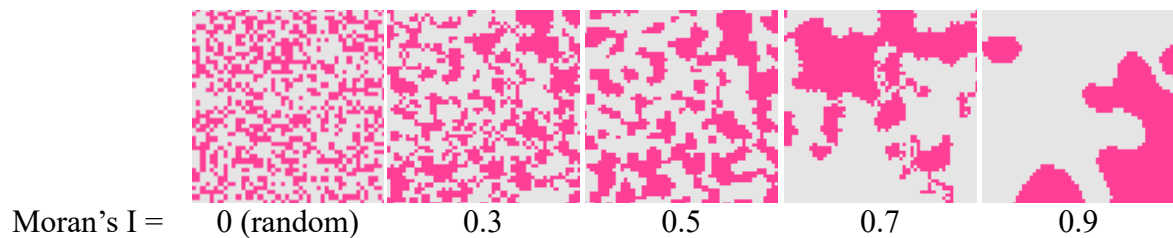
Figure 3-7 Illustration of the spatial arrangement in a simulated square settlement.
Note: in this demo case, pink cells (representing santri *neighborhood) comprise 40% of the total area, while grey (representing* abangan*) 60%. From left to right, the panel illustrates increasing levels of spatial autocorrelation as measured by Moran's I, ranging 0 to 0.9. A higher Moran's I value indicate greater spatial segregation between the two groups (the* abangan *and the* santri *communities).*

I employed a cell-swapping approach to simulate the *santri* and the *abangan* cells' spatial

configuration as the pattern discussed in the preceding paragraph. The extent to which each

group clustered while remaining separated from each other was measured using spatial

autocorrelation. Through the cell-swapping approach, I could simulate the spatial configuration

of these two groups while achieving the desired level of autocorrelation. Moran's I is a widely

used statistic for assessing spatial autocorrelation (Moran, 1950), where a value of 0 represents

no autocorrelation, and 1 full autocorrelation. After comparing the spatial configuration of the

two groups in different scenarios with various Moran's I (see Figure 3-7), I decided to use a

targeted level of 0.3 as for spatial autocorrelation in this research.

The figures below (Figure 3-8) illustrated the outcome of the cell-swapping process in a single

subdistrict in East Java. The figure on the left showcased the spatial arrangement before the cell-

swapping took place. In this arrangement, the number of black cells (representing *santri*) and grey cells (*abangan*) were estimated based on the calculations outlined in previous sections in part 5. However, the locations of these two cell types were randomly distributed in the settlements. The figure on the right depicted the result following the cell-swapping procedure, in which the subdistrict (*kecamatan*)'s Moran's I achieved 0.3.

a.   b.

■ the *santri* cells   ▢ the *abangan* cells   ▢ non-settlement areas
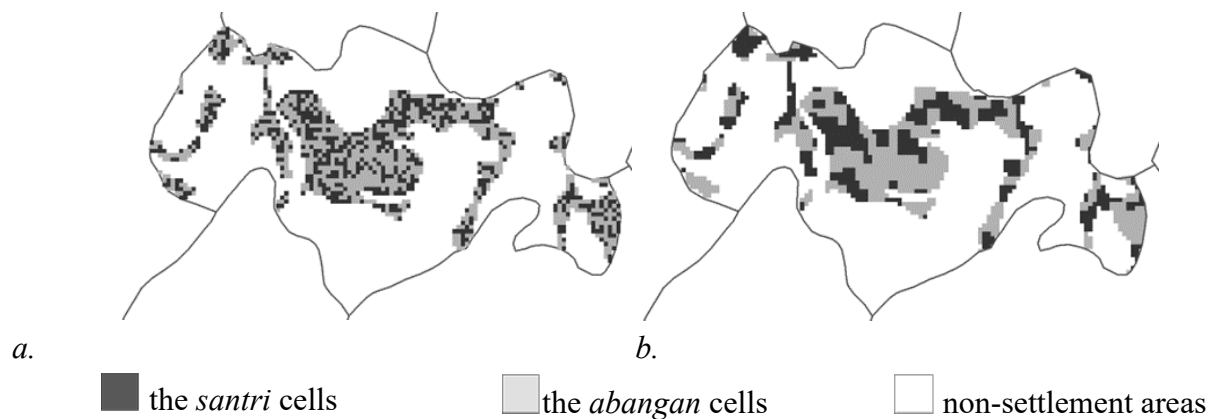
Figure 3-8 Spatial configuration of the santri *and the* abangan *in a subdistrict.*
a. (left) the santri *and the* abangan *cells are randomly located before cell swapping;*
b. (right) the santri *and the* abangan *cells are segregated after simulated cell swapping*
*Note: the demonstrative area represents a subdistrict (*kecamatan*) in East Java*

The following steps will use a 5×5 square-shaped settlement to illustrate the details of this method. **Step 1 Setup**: Randomly assigned a proportion of cells as the *santri* (neighborhoods) with a label of '1', while the remainder as the *abangan* with the label '-1'. There were also cells outside the settlement, and they were labeled as '0'. The proportion of *santri* (or *abangan*) cells was determined by the calculation mentioned in the first section of part 5. In the example settlement here (Figure 3-9 *a*), 20% of the cells (5 cells) were *santri* (the rest *abangan*), and their locations were randomly assigned.

Step 2 Focal Sum: Computed the focal sum statistic for each cell (ESRI, 2022) based on their labels. The focal sum of a particular cell (denoted as X) was the sum of the values of the eight surrounding cells (excluding X). Figure 3-9 *b* illustrated the computed focal values.
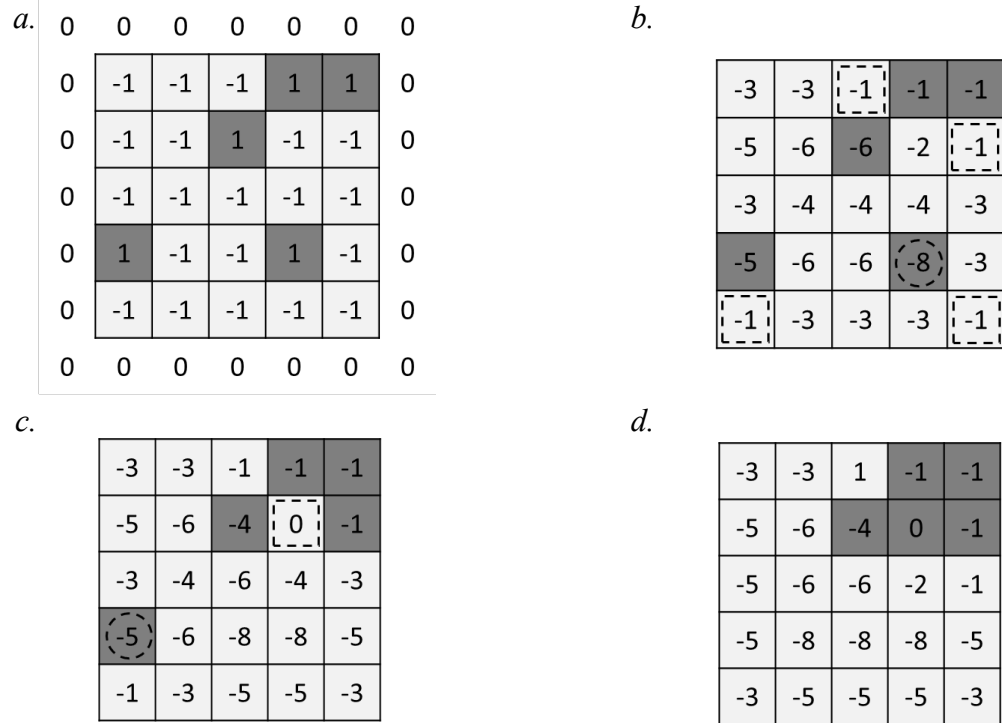
Figure 3-9 Steps of cell swapping.
Note: dark grey as santri*, light grey as* abangan

Step 3 Identify: The object of cell-swapping was to cluster the cells of the same type. If the cells were indeed clustered according to their category (label), cells containing negative values would have relatively lower focal sums and cells containing positive values would have relatively higher focal sums. Figure 3-9 *b* circled the cells that deviated the most from expected values: the *santri* cell with the lowest value (-8), and the *abangan* cell(s) with the highest value (-1, there were four of them).
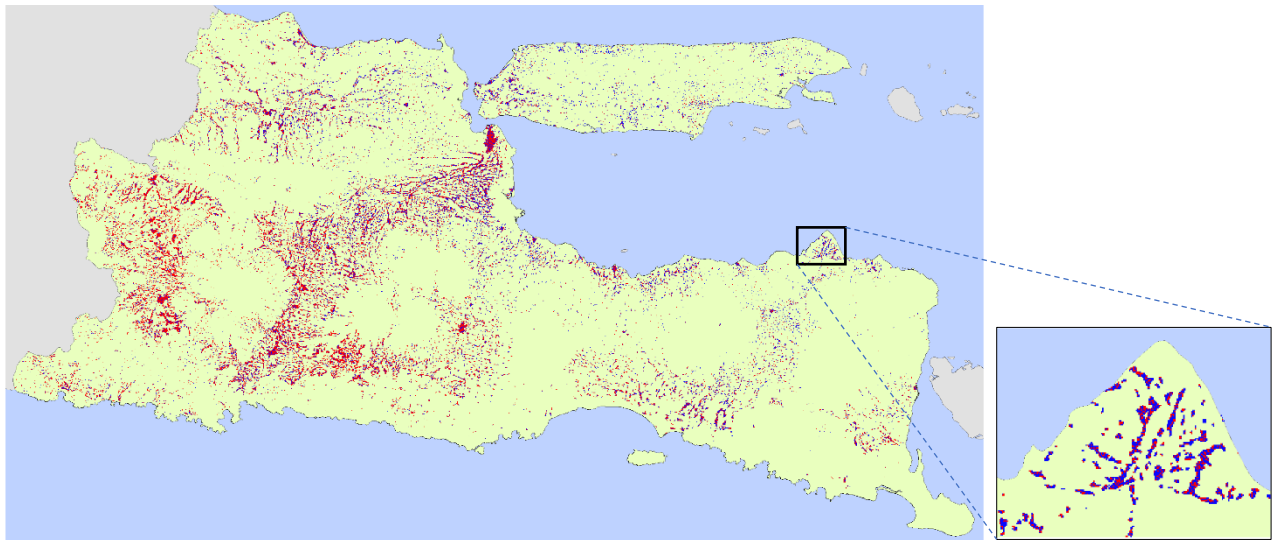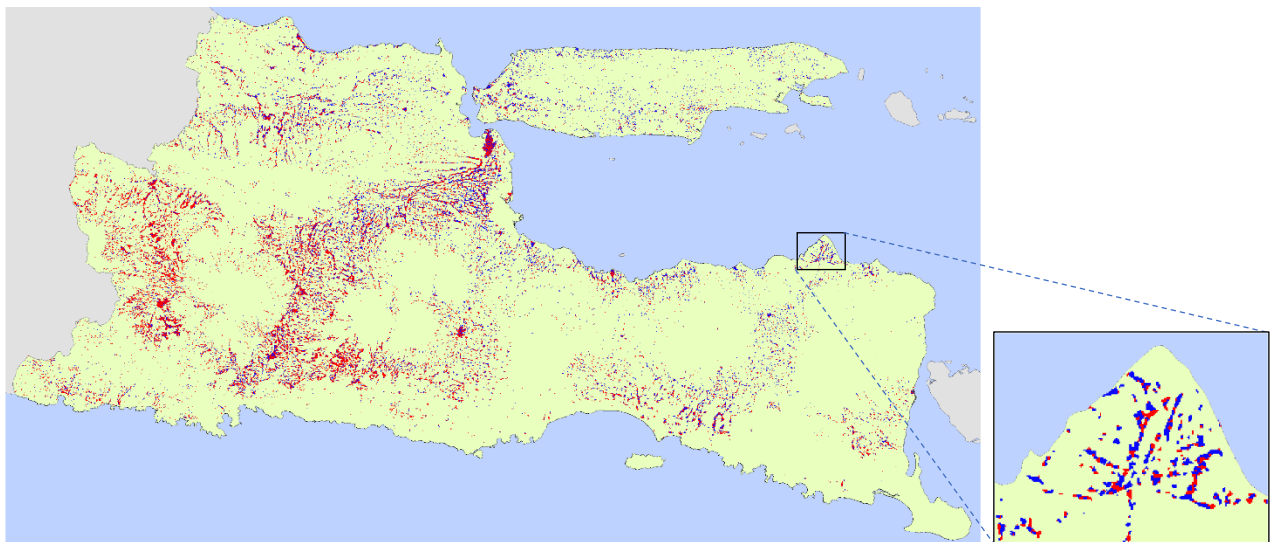
Figure 3-10 The santri *and the* abangan *cells in East Java before and after cell swapping.*
a: the santri *and the* abangan *cells are randomly located before cell swapping.*
b: the santri *and the* abangan *cells are segregated after simulated cell swapping.*
Note: santri *cells are blue,* abangan *red.*

Step 4 Swap: Then swapped the *santri* cells with focal sum -8 with any of the four *abangan* cells

that had the focal sum -1. The result was shown in Figure 3-9 c.

Step 5 Repeat: Repeated steps 2-4, until the Moran's I of this pattern reached the desired value or until swapping could not increase the Moran's I (Figure 3-9 d). By repeating this process over all the subdistricts, a simulated spatial configuration of the *santri* and the *abangan* cells in East Java would appear. The following figures (Figure 3-10) demonstrated the spatial configuration of the two types of cells in East Java before and after cell swapping.

3.5.5 Connectivity Calculation

As the physical distance between two cells (neighborhoods) increased, their connectivity decreased. This phenomenon suggested that the magnitude of connectivity between two neighborhoods of the same group would be expressed as a function of the distance separating them. A longer distance means lower connectivity, and vice versa. Therefore, the shape of the function would resemble a declining curve. Such a curve may take various forms, including convex, concave, linear, uniform, or Gaussian (Figure 3-11). In this research, I chose to use a concave curve. A concave function signifies that neighborhood connectivity tends to remain high and gradually decreases over a short distance, but the rate of decline would increase as distance increases. I also set a threshold of 30km as the distance beyond which the connectivity between two cells would be considered to have no meaningful significance[42]. This distance aligns with the threshold established in the previous chapter and roughly represents a 6-hour walking distance.

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[42] The threshold also serves to minimize computational requirements.
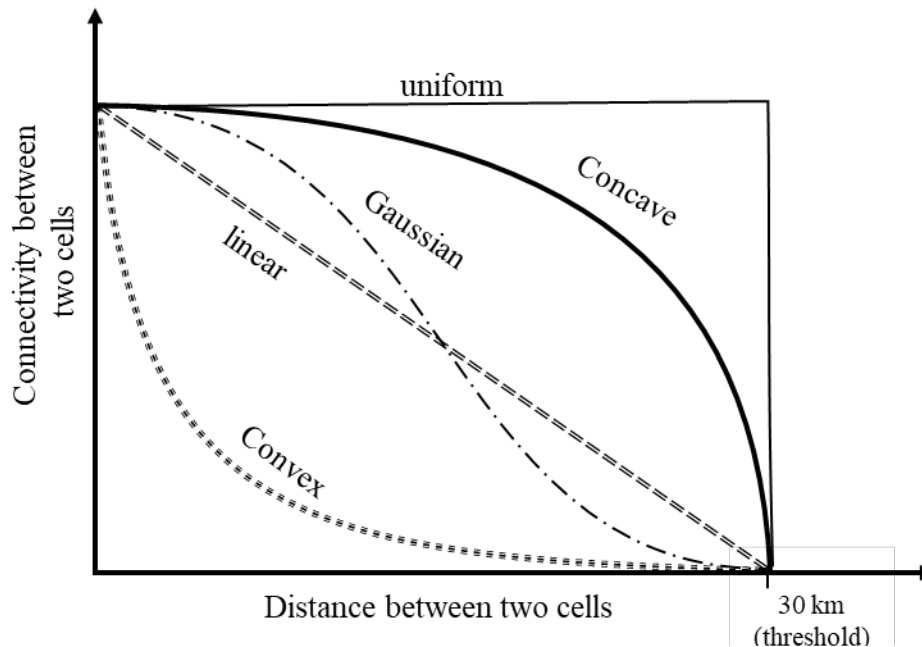
Figure 3-11 Relation between distance and connectivity based on various curve.
Note: concave curve highlighted

The total connectivity of a (*santri* or *abangan*) cell Y was calculated by aggregating the

connectivity between cell Y and all the other cells of the same group located within the threshold

distance (representing a meaningful connection). The study's focus, however, is the *abangan* (or

the *santri*) cells' connectivity at the subdistrict level. Therefore, I calculated the average total

connectivity of all the *abangan* (or the *santri*) in each subdistrict, and this metric was employed

to represent the internal connectivity of the respective group[43]. The results indicated that the

internal connectivity of the *santri* and *abangan* cells (neighborhoods) within each subdistrict

exhibited correlations but also displayed variations between subdistricts. The following maps

depict the calculated intra-connectivity of each subdistrict in East Java (Figure 3-12).

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[43] To facilitate computation, we also explored a kernel density approach, as detailed in Appendix I.
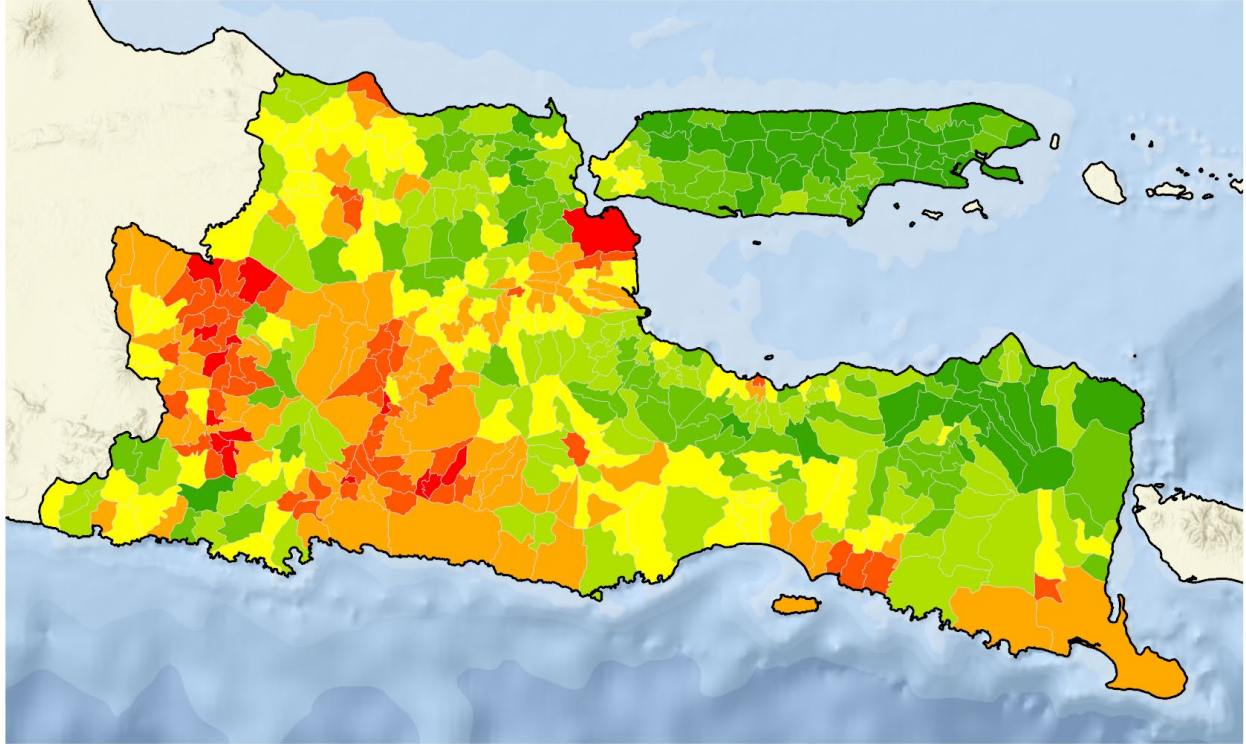
a.

Figure 3-12 Calculated connectivity of the abangan *and the* santri *groups.*
a: intra-connectivity of the abangan *community, b: intra-connectivity of the* santri *community*
Red means more intense connectivity while green means less intense.

Figure 3-12 (cont'd)
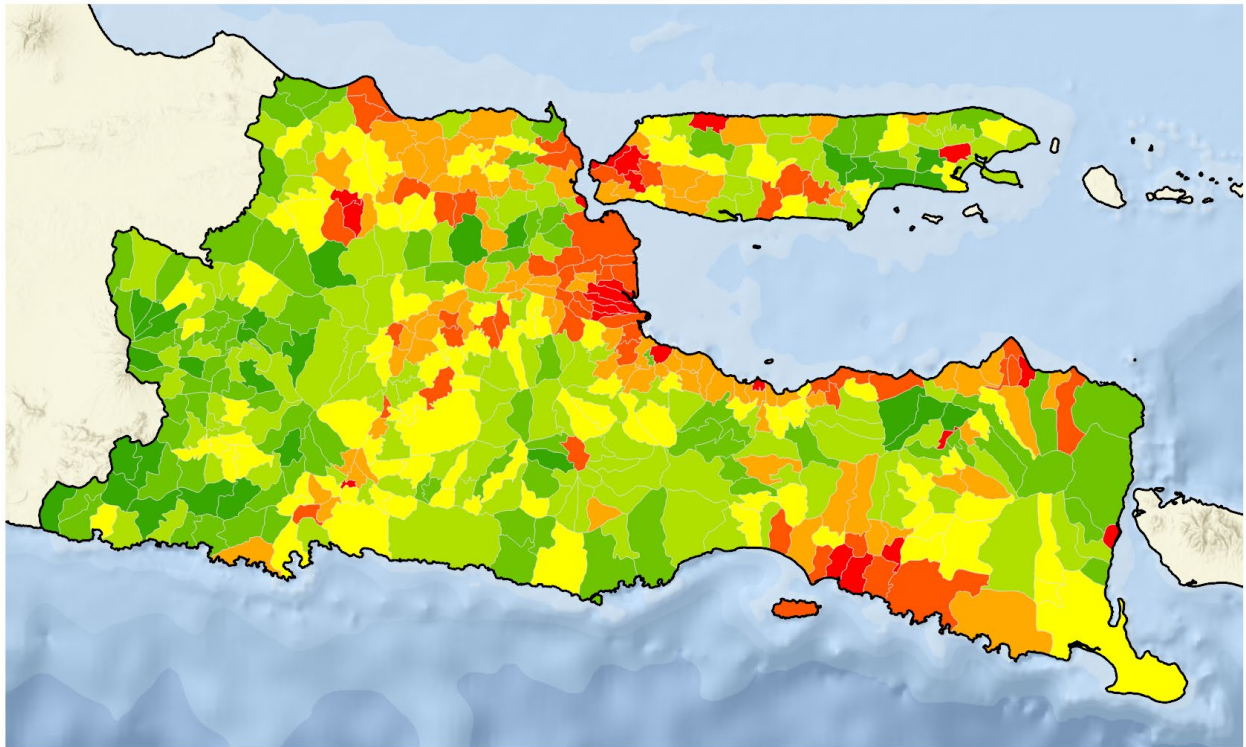
b.

3.6 Data Description and Empirical Study

3.6.1 Dependent and Independent Variables

The empirical part of this study aims to test the research hypotheses proposed in section 3.4. The first hypothesis posited that social tension between the *abangan* and the *santri* communities influenced the severity of the killings, such that a higher potential for tension resulted in more intense mass killings. The second and third hypotheses were based on the first hypothesis, and further postulated that the degree of internal connectivity within each community (i.e., the *santri* or the *abangan*) impacted the killings: greater intra-connectivity among perpetrators led to more intense killings, while greater intra-connectivity among victims to fewer killings.

The following table (Table 3-4) depicts the data used in the OLS regressions later. The dependent variable, *Pop_Change*, treated population change caused by the purge as a one-time shock[44], and tracked the estimated population change in each subdistrict due to the mass killings in 1965-1966 to measure the magnitude of the killings (Chandra, 2017). It was the same dependent variable used in the last chapter, except the research unit was at the subdistrict level.

[44] See chapter 2 for details.

Category	Variable	Description & Measurement	Mean	Expected Sign
Dependent Variable	*Pop_Change*	*Magnitude of killings, % of population change (of the local* kecamatan*)*	0.03%	NA
Islamizati on/conflict related…	*Path_Islam*	*Influence from historical Islam route measured by the distance towards traditional trade route*	144.22	-
	Vote_Islam	*Share of vote in 1953 for Islamist parties (NU and Masyumi)*	0.4412	-
	Ethnicity	*proportion of the ethnicity who are more likely to be santri (% madurese)*	*0.3047*	-
Solidarity related…	*Con_abangan*	*Measured connectivity between the abangan*	0 (standardized)	+
	Con_santri	*Measured connectivity between the santri*	0 (standardized)	-
Control	*Elevation*	*Average elevation of the* kecamatan *(km)*	0.2263	NA
	Pop_density	*Population density of the* kecamatan *('000 per sq km)*	0.6681	NA
	Road_access	*Accessibility by the local of troops, measured by proportion of area covered by 10km buffer*	0.1686	NA
	Pesantren	*Influence from boarding schools, measured by distance to the closest pesantren (km)*	25.37426	NA
	Military	*Influence from the military, measured by distance to the closest kodim headquarters (km)*	15.52267	NA
	Madura	*1:* kecamatan *on Madura Island; 0: not*	0.1183673	NA

Table 3-4 Variables used in the analysis in Chapter 3.

Our study incorporated two sets of independent variables. The first set assessed the potential pre-existing social conflict between the *santri* and the *abangan* groups, with the aim of demonstrating that pre-existing intergroup tension could influence the results of the killings. This

research aimed also to serve as the foundation for our subsequent research inquiry. During the time of the killings, the primary source of social conflict in rural East Java lay in the division between the two major cultural-religious affiliations, *abangan* and *santri*. However, there was no direct variable to quantitatively measure the level of potential tension. As a result, I employed three proxies in this set to gauge the relative strength of the *santri* group in each subdistrict (*kecamatan*). I hypothesized that the greater the influence that the *santri* group had in a subdistrict, the more likely the local subdistrict's population change during mass killings to be negative.

The first proxy, *Path_Islam* measured the travel time toward the northern coast and traditional trading routes, the historical paths for the spread of *santri* beliefs (Figure 3-1). A greater distance from these routes suggested a lower likelihood of the community being *santri*-dominated. Therefore, I expected the sign of this variable to be positive. The second proxy, *Vote_Islam* represents the share of voters for the two Islamist parties in the local subdistrict: *Nahdlatul Ulama* (the NU) and *Masyumi* during in the 1957 local council election. Despite the fact that this figure could overestimate the strength of the *santri* group due to the *abangan*'s lower interest in politics, higher support for the Islamist parties still indicated a higher presence of the *santri* group, particularly the politically active segment. Therefore, I expected a negative sign for this variable. Finally, *ethnicity* represented the percentage of ethnic Madurese in the local population, who were almost entirely traditional orthodoxy *santri* population. This figure may underestimate the strength of *santri* group, because the *santri* population included a significant proportion of pious Javanese as well. The Madurese themselves also had sub-groups like *klebun* and *blater* who were not *santri*, but the total proportion of these sub-groups within the Madurese population were relatively small (Pribadi, 2015). I anticipated a negative sign for this variable. The original

geographic unit of measurement for the vote and ethnicity data was at the regency level and I

interpolated it to obtain subdistrict-level estimates. These proxies each had their weaknesses, as

each captured only a single aspect of the pre-existing tension between the *santri* and the

abangan. However, when combined, they offered a more comprehensive understanding of the

intertwined nature of these pre-existing conflicts (Table 3-5).

Proxy	Name	Weakness	Features detected, and their relationship with the *santri*
History	*Path_islam*	Simplification of historical dynamics	Spatial trend of orthodoxy Islam spreading, earlier contact meant stronger *santri* power
Politic affiliation	*Vote_islam*	Aggregated data, (may) overestimate proportion of *santri*	Higher Islamist party support meant higher *santri* presence
Ethnicity	*Ethnicity*	Aggregated data, underestimate proportion of *santri,* may indicate pure ethnic conflict	Madurese were almost all *santri*

Table 3-5 Characteristics of the three proxies describing presence of the santri *and the* abangan*.*

The second set of variables gauged the internal connectivity of the two communities.

Specifically, *Con_abangan* referred to the spatial connectivity within the *abangan* (victim)

group. Drawing on the arguments outlined in section 3.3, I anticipated a positive sign for this

variable because stronger connectivity within the victim's group would enhance their ability to

resist the killings. *Con_santri* captured the connectivity of the *santri* community, where most

militant perpetrators came from. I expected a negative sign for this variable because greater

connectivity among the perpetrators would make it easier for them to organize and carry out the

killing.

3.6.2 Control Variables

I also included a few control variables in my analysis to account for potential confounding factors. The control variables aimed to address the following key aspects: 1.) Eliminating alternative explanations for the observed connectivity in settlements. 2.) Accounting for factors that could potentially influence the perpetrator's capacity for violence, which may also be interconnected with settlement connectivity. 3.) Isolating the influence of other strong underlying factors contributing to the incidents of killings, aside from the connections. The first three control variables depicted the elevation, population density, and accessibility to major roads of the research subdistrict's settlements. The elevation data represented the average elevation of the settlements in the subdistrict, and I got the data from NASA's Earthdata website (NASA, 2023). The population density was the ratio between population and area of the subdistrict. The accessibility was the percentage of the subdistrict's area covered by a 30 km buffer around the paved road at the time of the mass killings. These variables were intrinsically connected to the connectivity of communities I assessed (also see the correlations between variables in Table 3-6), since connection between communities tended to be lower when settlements were more sparsely distributed. This sparsely distributed spatial figure of human settlements would be a characteristic often found in mountainous, remote, and less densely populated areas. In the meantime, these factors exerted direct influences on the killings as well. Better accessibility to the major roads facilitated easier access for perpetrators to reach villages, exacerbating the killings (Chandra, 2019). Conversely, elevated terrain and sparse population density signaled that perpetrators needed to exert greater effort to access the villages where potential victims lived, resulting in a reduced impact of mass killings in those areas. Additionally, the combination of higher elevation and limited access to major roads made these villages appealing to individuals

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in search of sanctuary, potentially leading to an influx of people during the period of mass killings.

I also included two variables depicting the direct impact of the two major kinds of perpetrators in line with what I discussed in the preceding chapters. The variable *military* represented the influence stemming from the local army, while *pesantren* portrayed the persecution carried out by Islamist militants who tended to have a strong presence around the Islamic boarding schools[45] (detailed description in Table 3-4). Although not directly linked to community connectivity, these variables captured crucial aspects of the interaction between different perpetrator types and victims, significantly boosting our model's explanatory capacity. Table 3-6 presented the partial correlation of all the variables used in this study. In the subsequent section, I will proceed to estimate the regression models and assess our hypotheses.

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[45] *Pesantren* means Islamic boarding school. As we discussed in the previous chapter, while it is unfair to assume *pesantren* were directly linked to the killings, *pesantren* in East Java do point to areas that could potentially fostered militant violence to a greater extent.

	Pop_Change	Path_Islam	Vote_Islam	Ethnicity	Con_abangan	Con_santri	Elevation	Pop_density	Road_access	Pesantren	Military
Pop_Change	1										
Path_Islam	0.1928	1									
Vote_Islam	-0.277	0.0296	1								
Ethnicity	-0.215	0.2393	0.7527	1							
Con_abangan	0.0122	-0.148	-0.683	-0.571	1						
Con_santri	-0.204	-0.041	0.3201	0.1515	0.1919	1					
Elevation	0.1694	0.2454	-0.189	0.0257	-0.141	-0.398	1				
Pop_density	-0.197	-0.116	-0.133	-0.100	0.4519	0.2753	-0.203	1			
Road_access	-0.300	-0.119	0.0800	0.0673	0.2312	0.3885	-0.343	0.5185	1		
Pesantren	-0.019	-0.019	0.2700	0.4058	-0.315	-0.203	-0.015	-0.176	-0.128	1	
Military	0.3636	0.1069	0.0643	0.0856	-0.283	-0.200	0.3793	-0.379	-0.367	0.1425	1

Table 3-6 Correlation between model variables.

3.6.3 Empirical Results 1.1 – 1.3

Models 1.1 through 1.3 investigated how potential pre-existing social conflicts between the

santri and the *abangan* communities influenced the severity of the violence. Given the absence

of direct measures of social conflict in East Java, I used three proxies to gauge the proportion of

the *santri* and *the abangan* groups. The first model (1.1) explored the correlation between

geographical proximity to the source of orthodox Islamic influence, measured in terms of the

distance to major trading routes and the northern coast, and the magnitude of the killings. Shorter

distances to the source of orthodox Islamic influence implied a stronger presence of the *santri*

community, while longer distances suggested a weaker presence. However, regions farther from

the source of Islamist influence might also represent the frontier of orthodox Islam's spread,

potentially indicating a heightened level of social conflict. This could result in a (reverse) U-

shape relationship between the proximity to source of orthodoxy Islam influence and the severity

of killings. Therefore, I added a quadratic term to identify this potential turning point in model

1.1B.

The empirical findings from both Model 1.1 and 1.1B confirmed our hypothesis that proximity to

the source of Islamic influence significantly affected the severity of the killings, as the signs on

the interested variable *path_islam* are positive and significant. However, the positive quadratic

term (and linear term) in model 1.1B revealed that an exceptionally strong presence of the *santri*

group in the subdistricts closest to the source of orthodox Islam influence did not lead to a

reduction in violence. This contradicts the expectation of reduced violence in areas with greater

homogeneity (Enloe, 2010). I believe this was because even in areas with the highest

concentration of the *santri* population, there was still a significant proportion of non-orthodox

local minority (the *abangan*). This made them susceptible to being targeted and killed by the military and militants.

The correlation among the three proxies used to gauge the proportion of the *santri* population is usually not very high (see Table 3-6 , except for the correlation between *Ethnicity* and *Vote_islam*). Thus, I introduced the other two proxy variables, namely *Vote_islam* and *ethnicity* alongside "*Path_islam*" in Models 1.2 and 1.3. In Model 1.2, the added proxy is the voting pattern, since the *santri* were most likely to support Islamist political parties (*NU* and *Masyumi*), while the *abangan* would almost absolutely not (Ricklefs, 2007). The significant negative coefficient on *Vote_islam* suggested that areas, where people were more inclined to vote for Islamist parties (*NU* and *Masyumi*), were also more likely to experience greater population loss due to the killings.

In East Java, the two primary Muslim ethnic groups were the Javanese and Madurese. The Javanese were primarily *abangan* but also encompassed the *santri*, whereas the Madurese were overwhelmingly dominated by the *santri*. Thus, the variable *ethnicity* may provide a conservative estimate of the *santri* population[46], I introduced the *ethnicity* variable into Model 1.3, and its negative coefficient in Model 1.3 implied that a higher concentration of the *santri* community correlated with more killings. While this result could not dismiss Suharto's administration and some early research's claim that attributed the killings to mere ethnic conflicts (Hellwig and Tagliacozzo, 2009), the results of this model did affirm a stronger presence of the *santri* correlated with exacerbated killings.

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[46] In the model 1.3, the proxy *ethnicity* was defined as the proportion of Madurese within the total population.

Model #	1.1	1.1B	1.2	1.3	2.1	2.2	2.3	3.1	3.2
(intercept)	-4.442 ***	- ...***	0.9267	-0.9956	-0.5198 ***	-2.537 **	-2.489 **	-6.518 ***	-4.981
Path Islam	1.277e-02 ***	+ ...*	1.694e-2 ***	1.997e-4 ***				2.147e-02 ***	2.111e-2 ***
Vote_Islam		(Path Islam^2:	-14.61 ***	-10.23 ***					
Ethnicity		... *)		-2.872 *				-5.728***	-5.028 ***
Con_abangan					3.824 *		7.722e-01 *	-1.974e-2	2.263e-1
Con_santri					-1.5342e-1 *	-7.181e-1 *		-5.568e-1 ^	-4.669e-1
Elevation	-1.981 ^	...	-2.900 *	-2.206 ^		-1.978 ^	-0.9103		-1.688
Pop_density	9.453e-03	...	-3.304e-1	-2.666e-1		-6.378e-03	-4.696e-1		-9.654e-02
Road_access	-7.599 ***	...	-6.473 **	-6.061 **		-6.740 **	-7.846 ***		-5.799 **
Pesantren	1.231e-2	...	-2.981e-03	1.006e-03					
Military	2.568e-01 ***	...	2.940e-01 ***	2.895e-01 ***		2.622e-01 ***	2.679e-01 ***	2.910e-01 ***	2.758e-01 ***
Madura	-4.181 ***	...	3.064e-01	1.371		-3.920 ***	-2.924 **	1.100	7.748
R^2 adjusted	0.2009	0.21	0.259	0.2653	0.04048	0.1912	0.1909	0.2393	0.2505
Degree of freedom	482	481	481	480	487	483	483	483	480
F-Statistic	18.56	>18.56	22.37	20.62	11.32	20.27	20.23	26.63	19.16
Moran I of residuals	0.09	0.09	0.07	0.04	0.08	0.02	0.05	0.04	0.03

Table 3-7 Summary of regression results.
Note: ^ $p<0.1$, * $p<0.05$, ** $p:0.01$, *** $p < 0.001$
...: indicates results significant but not relevant to our study

3.6.4 Empirical Results 2.1 – 3.2

In Models 1.1 through 1.3, the proxy variables exhibited significant coefficients that aligned with my expectations, which confirmed the influence of pre-existing inter-community tensions between the *santri* and the *abangan* in the killings. Building on this foundation, the subsequent models aimed to explore whether intra-community connectivity affected the killings. Model 2.1 focused solely on the two relevant variables, assessing intra-community connectivity based on their spatial configuration simulated. Both coefficients are significant and consistent with our prior expectations: a stronger *santri* connection exacerbated the killings, while a stronger *abangan* connection aided potential victim groups in resisting. However, the adjusted R-squared value was only approximately 0.0405, indicating connectivity alone only had a marginal impact on the killings. To achieve a more comprehensive and robust interpretation of intra-community connectivity's role in the killings, it requires a stronger model.

Model 2.2 and 2.3 examined the two types of intra-community connectivity respectively while considering control variables. Note that the controlling variable *pesantren* had a relatively high correlation with the two variables of interest (*Con_ abangan* and *Con_santri*), and the coefficient of *pesantren* is not significant in previous models (1.1-1.3). Thus, I removed *pesantren* from the analyses[47]. In Models 2.2 and 2.3, the control variables accounted for the spatial configuration of communities associated with community connectivity, and the proximity to the major perpetrator, the *military*. The spatial configuration variables included *elevation*, population density (*Pop_density*) and accessibility (*Road_access*).

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[47] Strongly correlated variables will lead to an underestimation of the coefficient's variance.

The level of intra-community connectivity calculated in this study is embedded with two factors, and to confirm the connectivity itself actually influenced the result of the killings, both factors need to be controlled. **A.** Intra-community connectivity was closely tied to settlement spatial configurations as previously explained. However, the spatial configuration of settlements directly influenced the dynamics of the killings. For instance, a more dispersed spatial layout implies a reduced likelihood of being accessed by perpetrators, and lower intra-community connectivity. The results of models 2.2 and 2.3 indicated that both variables (*con_the abangan* and *con_the santri*) remained significant even when control variables were taken into account. This underscores the role of community connectivity in the killings, emphasizing its significance.

B. The metric of connectivity might be inherently affected by the proportion of each group (*abangan* or *santri*) in the local population, especially when the two groups were partially segregated. For example, in a highly segregated settlement, both the minority group and majority group would stick together, and in this case the average intra-community connectivity of the minority might be as strong or stronger than the majority. However, in a partially segregated settlement, the minority group might be scattered in different locations despite the fact that they might be aggregated into a few small clusters, but in the meanwhile the majority group would be naturally more connected. As a result, the average connectivity of the minority group would be naturally lower than the majority group. Because the Moran's I in our simulation is relatively low, the proportion of each group might have a direct effect on the connectivity through this phenomenon. Therefore, this impact had to be controlled, especially since I already knew the relative strength of *santri* (measured by metrics detecting its proportion of the population) would impact the result of the killings directly.

In Model 3.1, I incorporated the variables used in Models 1.1-1.3 to mitigate (to the best of our ability) the impact of the proportion of *santri* (or *abangan*) in the total population. The results showed that the sign of *Con_abangan* and *Con_santri*'s coefficients remained as I expected, but their significance decreased. The coefficient for *abangan*'s intra-connectivity was no longer significant, while the coefficient for the *santri* communities remained positive. This implied that the connections among potential perpetrators were significantly more important than the connectivity among the victim's group, which supported previous studies about the role of the network of perpetrators' leader (Fujii, 2009, McDoom, 2014). Finally in Model 3.2, I included both of the above considerations (A. and B.) related to connectivity models, i.e., the connection between connectivity and landscape and connectivity and the proportion of each group. The coefficients of *Con_abangan* and *Con_santri*'s were no longer significant now, but this might be caused by the potential multicollinearity within these many variables added in the model. This suggested further research would be needed to explore the impact of intra-community connectivity on the killings.

3.7 Discussion and Conclusion

This research tested the impact of two factors in East Java's society on the magnitude of the killings, and the result suggested 1.) pre-existing potential social conflicts in East Java society were associated with the killings of 1965-1966. The *abangan* and the *santri* communities, despite sharing a common language (Madurese spoken in the Madurese *santri* community were

also mutually intelligible with Javanese) and religion[48], were largely segregated due to deeply ingrained disagreements on religious practices, socioeconomic status, and insulated lifestyles in a traditional society. Furthermore, economic inequality, particularly in terms of arable land distribution, was a persistent and pervasive issue, and the stagnant urban economy could not provide enough opportunity to *abangan* peasants, and thus the PKI's land reform policies, also known as *Aksi Sepihak*, served to exacerbate tensions, particularly when the policy met strong opposition from the wealthier NU-associated *the santri* community (Crouch, 2019). Historically, the spread of orthodox Islam primarily occurred along major trading routes, which led to a concentration of *the santri* in areas surrounding these paths. As such, this research used the potential concentration of the *santri* group as an indicator of the social conflict between the *abangan* and the *santri* communities. This study used three different proxies to detect this concentration and confirmed that areas with a higher concentration of the *santri* were associated with more killings. The findings suggested that the potential conflict between these two groups was a contributing factor to the mass violence that occurred in East Java, although this paper did not try to interpret the mechanism of how social conflict influenced the killings (detailed discussion, see: Arieli and Schaffer, 2023, McGibbon, 2004, De Jonge and Nooteboom, 2006).

2.) The second factor explored in this study pertained to the impact of social connectivity on the severity of killings. In a traditional society, physical barriers would impede connections between local communities. As such, the spatial distance between two places (or neighborhoods) would serve as an indicator of connectivity between them. This study calculated the subdistrict-level

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[48] We should cautiously interpret the religious statistics since it is easy to conclude that one religion strictly adheres to a region: see PARK, C. 2002. *Sacred Worlds: An Introduction to Geography and Religion*, Routledge.. Practicing the non-dominant religion or no religion at all was not uncommon. The number of church members could be misleading, too, as most are not active. Any statistic will underplay the rise of secularism in the modern world.

connectivity of communities based on the simulated spatial configuration of the *santri* and the *abangan* neighborhoods. Results showed that the *santri* communities were more connected and united than the *abangan* community. The regression analysis examined the relationship between the intra-community connectivity of the *abangan* (or the *santri*) and the magnitude of mass violence. The findings indicated the *abangan's* connectivity was negatively associated with the magnitude of the killings, suggesting the victims might be able to form a united front and resist the killings through their internal connection. However, this effectiveness disappeared after I considered the controlling factors, which implied the connections between potential victims were unable to form an effective resistance. On the contrary, the connectivity of the *santri* was positively related to the severity of killings even after some of the controlling variables were added. This indicates that when potential perpetrators were able to form a network, the incidence of killings was likely to increase. The connections between perpetrators had a stronger and more significant impact on the killings, compared with the connection among the potential victims.

There are several limitations to this study that need to be addressed in future research. 1. Static perspective. The study treated the social connectivity of the *abangan* and the *santri* communities as a fixed, predetermined factor. However, social bonds and networks in a society were in a constant state of flux, particularly during periods of profound social transformation (McDoom, 2005, Holtzman, 2017). The fear of harm could erode longstanding social bonds and compel individuals to become perpetrators, even when they once shared a common public life with the victims (Ibrahim, 1982). Future research should explore the ways in which social connections between these groups transformed during the period of mass violence.

2. Parameter Sensitivity. Before discussing the impact of intra-community connectivity on the killings, I highlighted that the calculated internal connectivity of the two groups was inherently

influenced by the magnitude of residential segregation. After comparing the spatial configuration of two groups with different levels of simulated segregation, I assumed the actual level of segregation (as measured by Moran's I) was around 0.3. The historical discourse of the *santri*'s expansion and anthropological field study also supported this assumption of low-level partial segregation between the *santri* and the *abangan* (Hüsken, 1989, Jay, 1969, Koentjaraningrat, 1967a, Koentjaraningrat). Although my study yielded good results based on this assumption, whether this assumption truly mirrored the reality of East Java would require further investigation, especially when minor changes of the assumed parameter (Moran's I) would lead to significant changes of the result. In addition, among all the monotonic decreasing functions I chose a concave function to depict the relation between distance and connection and then calculated the aggregative connectivity of a subdistrict based on this function. However, was concave function a really close approximation to the real world? Will the form of function affect the result of the analysis? These questions need to be addressed in future studies (for a more comprehensive discussion, see Appendix II).

3. Reliability of underlying assumption. Besides the assumptions about the magnitude of segregation and the function between social connection and distance, it is essential to acknowledge that this study relied upon multiple layers of underlying assumptions and approximations due to the limitation of data availability. For example, in order to quantify the spatial configuration of the two groups (the *abangan* and the *santri*), I assigned settlements to a grid composed of 100m × 100m cells, each representing a homogeneous neighborhood of either *abangan* or *santri* group. While this approximation served the practical needs of the study, questions arise about whether it was close enough to the reality. More importantly, what impact could the error between this approximation and reality have on the findings? Could it potentially

reduce the reliability of the models and introduce bias into our results? While one assumption or assumption may not significantly influence the overall conclusion, the cumulative effect of many potential assumptions may introduce significant systematic bias that future studies should concern.

4. Potential missed variables: While reasonable to assume that inter-community communication (between the *abangan* and the *santri*) was minimal, it is important to realize the limited communication might have still served an important role. Communication and interaction between different groups have long been recognized as crucial for preventing violence (Varshney, 2003). However, the underlying assumption I used to quantify intra-group connections would not be applicable for inter-community connections. Therefore, future studies exploring communication and interaction between different groups would provide valuable insights for the study of mass violence.

Although this study has provided some useful insights from the quantitative perspective on the mass killings study, the restriction of data availability would unlikely be resolved in the foreseeable future. Future geographical research aiming to further our understanding of mass killing may consider exploring this topic from a few different aspects. First, similar research can be conducted for more recent mass killings, as contemporary events tend to provide more detailed data that can help alleviate data availability limitations. Second, altering the scale of analysis could be a promising approach, particularly for research aiming to investigate personal connections using extensive individual-level datasets. Current individual-level quantitative research on mass killings primarily focuses on a limited sample of individuals, with a specific emphasis on the individual perpetrators directly involved in the acts of violence (Fujii, 2009, Asal et al., 2014, Fujii, 2008). Expanding research to include perpetrators, victims, and civilians

not directly involved, while concentrating on individual-level social connections, would hold the potential to produce more robust and persuasive findings, ultimately boosting the credibility of the research.

Good connectivity of a community can foster solidarity, but good connectivity would also empower groups with malevolent intentions by strengthening the network of potential perpetrators. Sixty years ago, when anti-PKI Islamist militants sharpened their machetes, communication and networks between perpetrators mainly relied on the existing immediate social circles (landlines and telegraph service provided by PTT[49] might also facilitate their communication once the network was established), which were largely constrained by physical barriers discussed in this research. Even though there were nationwide parties backing them, it is hard to imagine that those grassroots militants would dominate the mass violence against another group. Since the help and coordination of the army's transportation and equipment was vital to them (Chandra, 2019), the grassroots militants were merely playing a supportive role (Cribb, 2001a) in the mass violence.

Today, the proliferation of tools like the Telegram app, Twitter, and Toyota pickup trucks, has dismantled the distance barrier that once isolated potential perpetrators. Potential grassroots perpetrators now have the greater potential to form a united front even without the coordination from a state's sponsorship. While these tools would also enhance connections among potential victims, this research suggested that increased potential of unity among victims would not

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[49] See PARAPAK, J. L. 1994. Indonesia. *In:* NOAM, A. E., KOMATSUZAKI, S. & CONN, D. A. (eds.) *Telecommunications in the Pacific Basin: An Evolutionary Approach.* Oxford University Press.

necessarily translate into effective solidarity. In fact, it may further fragment victim communities, reinforcing this disappointing conclusion.

So, what can we do? Unless we want to surrender our freedom to a supreme totalitarian authority[50] (see part 3.2), we must explore an alternative approach. The answer might be found in the variable neglected in this study: intergroup communication and connection. Communication and connection between different groups would discourage the act of violence (Varshney, 2003), and build a stronger, united society. But will this work? The future will give us the answer.

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[50] In a lot of cases, totalitarian rule would effectively prevent mass violence between non-state groups. See LOTSPEICH, R. 1995. Crime in the Transition Economies. *Europe-Asia Studies,* 47**,** 555-589.

CHAPTER 4: MOTIVATION OF THE MILITARY IN THE MASS MURDERS, A MULTILEVEL-LINEAR MODEL

Abstract

Under the state's direct governance, regular military forces were primarily tasked with preserving national sovereignty. Nevertheless, the military could also be deployed as an instrument to enforce the state's authority through coercion and violence. Yet, individual soldiers and lower-ranking officers sometimes engaged in acts of violence driven by personal interests, including economic, political, and nepotistic motivations. These facts, often being overlooked in post-mass violence trials, highlighted the need to assess the autonomy of different military hierarchies in executing orders aligned with their interests. This research, focusing on East Java, aimed to determine if the magnitude of killings varied among different military factions (*kodim* level) through a multilevel regression model. While the data limitations posed constraints, the results indicated significant variations in the magnitude of killings across various *kodim* jurisdictions. However, the results could not conclusively establish whether these differences were attributable to local economic and political interests. Furthermore, a *kodim*'s remoteness, which should be directly linked to its decision-making autonomy, indeed influenced the involvement level of the *kodim*. *Kodim* headquarters located in remote areas were more likely to exhibit autonomous decision-making behaviors.

4.1 Introduction

When organized, human beings can lead to remarkable achievements or commit grave acts of malevolence. Characterized by coordinated and systematic actions, mass killings are organized events (Bloxham, 2008). In CHAPTER 2:, I posited that the Indonesian army played a central role and bore the primary responsibility for the mass killings in Indonesia of 1965-1966, as compelling empirical evidence indicated that the military's presence was pivotal in targeting and ultimately led to the subsequent demise of the victimized communities (Robinson, 2017). Despite being outnumbered by local militia and other civilian-hostile groups, state-controlled military force (not limited to Indonesia) often played a crucial part in mass killings, either by providing logistical support for the acts of killings or by failing to prevent the critical crisis from escalating (Kiernan, 2007). However, the military's involvement did not inherently implicate the individual accountability of every soldier and officer for the killings. It is therefore important to ascertain whether these soldiers and officers merely followed orders from higher authorities or acted as self-driven perpetrators (Power, 2001). This distinction is of paramount importance because the motivations of individuals ultimately shape their degree of responsibility (Williams and Pfeiffer, 2017), and any ambiguity in this regard could potentially result in the exoneration of those responsible (Milanović, 2006).

In practice, securing justice for mass killings has seldom achieved satisfactory outcomes, either within domestic judicial systems or through international courts (Minow, 1999). Even in the instances where justice was attained in a court system, there was often ambiguity regarding whether accountability for the killings had been adequately addressed (Milanović, 2006). Typically, only a limited number of high-ranking individuals were held accountable. For

instance, in the special court set for the trial of the *Gang of Four* for their crimes (Cook, 2016), only eleven individuals were found responsible for the widespread massive violence and chaos during the Cultural Revolution of China. In the *Khmer Rouge Tribunal*, only the ten top leaders of the Khmer Communist Party were prosecuted for the mass violence that claimed the lives of three million Cambodians (Extraordinary Chambers in the Courts of Cambodia, 2023). These compromises were driven by intricate factors grounded in historical, political, and pragmatic contexts (see Human Rights Watch, 2016). Nevertheless, the enduring belief that mass killings' accountability should primarily target high-ranking leaders, with lesser or non-responsibility attributed to regular military forces' soldiers and lower-ranking officers, persisted within both academic research and legal procedures (Williams, 2006)[51].

With easier access to archives for relatively recent events, comprehensive investigation and trials for mass violence crimes became more feasible, especially in those states where the government has been transitioning from an authoritarian to a democratic one (Hollyer et al., 2011)[52]. Consequently, significant efforts were made to hold lower-ranking officers and individuals accountable in these contemporary mass killings. For instance, the International Criminal Tribunal for Rwanda found over 93 individuals guilty for their crimes during the Rwanda Genocide of 1994, a significant portion of which were not high-ranking military officers or related to the military[53] (UNICTR, 2023). Another notable example that brought more lower-ranking officers to trial was the International Criminal Tribunal for the former Yugoslavia. This tribunal, which operated until its dissolution in 2017, brought 161 individuals to trial, including

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[51] An example of this can be seen in the opinion of Justice Richard Goldstone from the Arusha Tribunal: Specific individuals bear the major share of the responsibility, and it is they, not the group as a whole, who need to be held to account, through fair and meticulously detailed presentation and evaluation of evidence…
[52] Transparency, including transparency of data has been seen as a vital indicator of democracy.
[53] The majority of the 93 individuals were members of the military.

many lower-ranking colonels and soldiers (International Criminal Tribunal for the Former Yugoslavia, 2017)[54].

When assessing the military's involvement in mass killings, there is a prevailing inclination to adopt a holistic perspective that perceives the perpetrators as a collective. In legal terminology, there are four types of participation in mass killings (Obote-Odora, 2002): planning, ordering, instigation, and abetting. When these types were employed to scrutinize the military's accountability, they actually underscore the overall accountability of the system, with particular emphasis placed on holding the top leaders and maybe only the top leaders, responsible for the consequences of killings. Given that numerous mass killings in the 20th century occurred within the context of nation-state building (Giddens, 1986), the holistic perspective was convenient, as this viewpoint posited that the state (or just the top leaders) institutionalized the military as a unified entity and utilized it as a tool to implement the state's nation-state building policies (Dutton et al., 2005). Indeed, state policies in favor of mass violence were often systematic and designed for the long-term, and these policies usually also faced numerous resistances. Thus, it is understandable that the military as a whole, the most powerful instrument at the state's disposal, became the primary means to implement the state's policies.

However, when examining the micro-level dynamics, research focusing on the collective psychology of individual officers and soldiers indicated that lower-level factions in the military hold a significant share of responsibility for the acts of violence. While the military was anticipated to carry out the killing orders (or any order) in a dispassionate, systematic, and

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[54] It is important to note that the number of individuals tried in the aftermath of a genocide can depend on various factors, such as the length of time that has passed since the event, the domestic laws of the succeeding regime, and the international political environment. However, the variations in the number of individuals tried in these cases may also reflect different perspectives on assigning responsibility within a formal military force.

efficient manner as a part of the state apparatus (Althusser, 2006), the sadistic cruelty observed in

many mass killings events (see Morrock, 2014) exceeded what was necessary to achieve the

removal of a victim group (of either political belief, race, or ethnicity) from the space of the

perpetrators' desire (Tyner, 2017). Some studies highlighted the role of the state's doctrine in

endorsing cruelty. The state would use propaganda as an effective doctrine tool to portray

opposing victim groups as public enemies, and the propaganda often employed dehumanization

tactics that striped victims of their human attributes and instead depicted them as animals or

other repulsive creatures (Staub, 1999, Wieringa and Katjasungkana, 2018). Perpetrators were

not inherently sadistic or violent, but when the victims were described in degrading and

repugnant terms, the perpetrators would aim to exert dominance over these people and strip off

their humanity (Dutton et al., 2005). Although this approach may appear helpful in explaining

the excessive brutality observed during mass killings, recent research suggested that portraying

victims as lesser in cognitive, experiential, and emotional statuses only exacerbated the cruelty

when killings were for instrumental proposes[55], while killing practices perceived as morally

righteous[56] were not associated with the dehumanization of victims (Rai et al., 2017).

The aim of this study is to explore the implementation of killing orders by different factions

within the military and examine the motivations that would drive local military factions to

engage in killings. The variations in the implementation of killings were reflected in regional

differences, and a multilevel regression model will be employed to investigate if these variations

can be attributed to factors specific to each military faction. The case study will focus on East

Java in Indonesia. The chapter is outlined as follows: Section 2 provides a comprehensive review

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[55] Exploiting human to get instrumental gain, such as labors in sweatshop, human experimentation, etc.
[56] For example, drone strikes targeting terrorists.

of the motivations and other factors influencing the involvement of local military factions in carrying out killings. Section 3 presents an overview of the Indonesian case and explores its alignment with the identified motivations within the military. Section 4 describes the data sources and methodology utilized in this study. Finally, Sections 5 and 6 present the empirical findings derived from the analysis conducted in this study and a discussion about this study.

4.2 Background: Army in Killings

4.2.1 Re-examining Military Involvement in Mass Violence

Regular military forces were frequently utilized as a convenient tool for advancing a state's nation-building goal, which carried inherent risks for mass violence due to the military's unparalleled capacity for violence compared to any civilian entity (Koonings and Kruijt, 2002). However, it is crucial to recognize that the scope of nation-state-building policies could extend beyond the military's domain, as intolerant nation-state-building endeavors may also encompass policies such as disseminating prejudiced propaganda, discriminatory allocation of resources, and fueling animosity among civilian groups to foster a homogeneous cultural-political environment (Wieringa and Katjasungkana, 2018). The military's role may appear less prominent in such situations, but its presence should not be underestimated: the mere presence of the military can serve as a suppressive force, as evidenced by historical events like the Chinese Cultural Revolution (Su, 2011), the Guatemala Genocide (Esparza et al., 2009), and East Timor Genocide (Dunn, 2012), where a relatively small number of well-equipped troops could effectively quell potential uprisings and impose order, paving the way for subsequent mass persecution.

Regular military forces might be effective for the state to achieve its goals, but modern states, especially democratic ones (Rummel, 1998), tended to refrain from implementing repressive policies using military powers (Alvarez, 2006). This cautious approach arose from the potential consequences of international sanctions, which could result in significant domestic political and economic repercussions. Furthermore, engaging in serious repression could undermine the state's moral and legal claim to its sovereignty and potentially justify foreign intervention (Campbell, 2001). Regular military forces also lacked the necessary flexibility for domestic repression, as they were typically positioned in strategically important locations to defend against potential foreign invasions. Besides, regular military forces' training and equipment were also not practical for domestic suppression, relegating such tasks to regular police forces (Young, 2009), armed police (e.g. P.R.China, see Sun and Wu, 2009), secret police (e.g. Stasi and Gestapo, see Sluka, 2010), and other civil law enforcement branches. However, in cases of international warfare, especially when the objective of war shifted from defeating the enemy to outright destruction, or when the scope of warfare extended to both civilian and battlefield settings, regular military forces, no matter if it was effectively controlled by the state, may be more likely to commit mass violence related crimes (Kim, 2004).

While numerous studies recognized the role of regular military forces in perpetrating mass violence, they often depicted them as the agent of the state under the control of extremist and nationalistic political leaders (Arendt, 2006, Mandelstam, 1999). This portrayal had a few problems. First, it overlooked the fact that the military was not a uniform entity and disregarded their autonomy as individual actors with distinct motivations and psychologies (Wilson, 2019). Achieving success in military operations necessitated a certain level of autonomy throughout the entire military hierarchy, with the responsibility of lower-ranking officers and the flexibility of

their actions becoming particularly crucial in high-pressure situations (Roberts et al., 1994). When soldiers and lower-rank officers acted upon their own interests and motivations, these interests and motivations would serve as a driving force behind their involvement in violent acts and make the soldiers accountable for the killings (see the next part for more details). For instance, in the case of the Armenian Genocide, soldiers who participated in the persecution of minority victims were often motivated by material rewards, such as taking jewels and money from the very victims they were supposed to be escorting (Alexanian and Alexanian, 2017).

Second, a state's exclusive control over all the armed forces would not be realistic. While states, especially those aspiring for progress and success, would typically strive to monopoly authority over all armed forces (regular military force would be a part of them) within its territory, there was also a prevailing inclination for states to entrust coercive authorities to non-state groups (Eck, 2015). These groups may encompass entities like pro-government militias, private armies, and mercenaries (Davis, 2009). While a state may rely on militia's local influence to gain popularity (Acemoglu et al., 2013), these groups were found more likely to abuse their power and violate human rights (Jentzsch et al., 2015, Adar and Munyae, 2001, Staniland, 2015). In addition, in many Latin American, African, and Asian states, the boundaries between regular military forces and non-state armed forces were not always clear since the military's origins were intertwined with non-state armed forces. When the current government's formation was supported by militias who subsequently evolved into the new government's regular military, the government would have very limited influence on its military. In this case, the military would be more likely to be driven by their own interests and, at most, maintain loyalty to a select few agents in the central government.

Lastly, even though mass violence was most often associated with the state as the major perpetrator, it has been proven that the state's active involvement was not always essential, or at the very least, the state may not play a central coordinating role in mass violence (Simon, 1996). Mass violence encompassed a range of coordination levels, including meticulously planned state-sponsored incidents as well as more spontaneous occurrences in a haphazard and diffuse manner. In the latter scenario, the state's involvement may be limited to tacit permission at most (Hinton, 2012). For example, throughout the history of European colonization in Africa, Australasia, and the Americas, there were organizations of perpetrators based on divisions of race who employed white militias (with co-opted indigenous individuals sometimes) for "Indian hunting". The purpose of these killings, as argued by the militia at that time, was merely an attempt to stop native people from murdering settlers or pilfering their livestock (Madley, 2016)[57]. Although these coordinated activities, by the standard of the 20th and 21st centuries, were genocidal, these temporary and rudimentary organizations were neither directly state-sponsored nor established for the purpose of nation-state building. Accountability for mass violence should not rest solely on the few leaders in the military and the state. Hence, the differentiation of accountability among specific factions and individuals of the military becomes imperative.

4.2.2 Military Motivations for Participating in Mass Violence

The argument about the state and military's involvement in mass violence often hinged on a few important assumptions: 1) the military's actions aligned with the state's will and 2) the military operated entirely under the state's control. Nevertheless, as elucidated in the preceding section, the state may not always be directly implicated in the acts of killing, and the rationale for mass

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[57] The state, in this case is not entirely absent. Evidence shows that the militia received funding from the state.

killings may not solely revolve around the construction of a unified nation-state. Therefore, this section will embark on an exploration of the various factors that motivate and influence militaries and their branches.

International triggers may incentivize military involvement in the killings. For instance, during the Cold War, the military and financial support provided by the United States and the Soviet Union widened the gap of capability between the government and anti-government guerrilla forces (Melvin, 2018) and enabled the military to escalate the conflict and take drastic measures to eliminate their adversaries (Kalyvas and Balcells, 2010). Moreover, military organizations may adopt state-sanctioned ideologies, which can range from nationalism and communism to religious fundamentalism. These ideologies were often influenced by transnational ideological and political movements, and had various consequences (Sidel, 2021). Nationalism, for example, on one hand can be a driving force behind mass violence (Straus, 2015b), but on the other hand it might constrain mass violence by imposing limitations on the forms and targets of violence, and thus make the nationalist perpetrators less violent compared to perpetrators with a transnational ideology (e.g., jihadist groups). Especially when the nationalist perpetrators had stronger ties to their stronger roots and dependence on local populations, these perpetrator's behavior tended to be less violent (Toft and Zhukov, 2015).

While historically, undisciplined military forces were often associated with robbery, murder, rape, and arson during warfare (Gebhardt, 2016), modern military typically tended to adhere to a code of honor that restricted their engagement in violence against civilians (Alvarez, 2006). Therefore, besides following the killing orders blindly, to target civilians the military must possess other compelling motivations. On an individual level, soldiers or officers' active participation in acts of violence would not necessarily indicate an inherent bloodthirsty nature of

them (Lemkin, 1945), rather, it reflected their allegiance to the military's agenda (such as nation-state building) and readiness to undertake risky tasks (Bloxham, 2008, Petersen, 2002). Since the military was controlled by the state, the military's agenda often aligned with the state: to protect the building of the nation-state. Nation-states essentially categorized people into in-groups and out-groups. The perceived threats posed by these out-groups to the nation's identity could serve as an initial justification for the military to use violence, as out-groups were often devalued and seen as morally inferior (Staub, 1999)[58]. If the out-group's socioeconomic status was superior, it was depicted as gained through unjust means.

However, mere ideological fervor cannot fully explain the sadistic brutality witnessed in many mass violence events. The extreme rage and excessive extermination carried out by armed forces often surpassed any conceivable necessity. This overzealous desire to wield absolute power over human lives reveals a profound inhumanity that transcends rational justifications. In these cases, personal attributes of the soldiers, especially military branch leaders may also have an impact on the result of killings. On an individual level, specific emotions directed towards the targeted group—including anger, shame, disgust, and resentment—were proven to be linked with excessive violence against civilians (Mitton, 2015). These potent emotions not only motivated individuals to denounce the targeted group, but also instigated a quest for revenge for past violent events, leading to increased levels of killing (Balcells, 2010). This was particularly important to the local decision-maker's involvement. If the local leaders were intent upon eradicating a target group and rely on coercion, obedience, fearmongering, and xenophobia, they

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[58] Evident in the Nazi view of Jews, the Marxist view of Ukrainian farmers, the Hutu view of Tutsi, and the Japanese view of Chinese

may impose extreme violence that was seemingly unnecessary for achieving the central government's goal (Danner, 1994, Dragojević, 2019).

The last but arguably the most significant motivation would be instrumental. The prospect of gaining potential power would entice military officers to participate in acts of violence against civilians. Moreover, in times of significant social and political transformation, the potential reconfiguration of the political landscape, particularly in situations where military personnel risk losing their economic and political advantages, would intensify their motivation to engage in the killings. Mid-level officers might also aim to establish or enhance their ties with the central command to showcase loyalty and secure better prospects within the post-mass violence regime (Jenkins, 2010). Empirically, the execution of killing orders within the military hierarchy was often influenced by both the central command's intentions and local incentives (see Dutton et al., 2005). However, regular empirical analyses and studies cannot definitively determine whether local commanders were acting of their own volition or under the influence of the central government's objectives. In the case of a disciplined army that strictly followed orders from the central command, the primary responsibility for the killings lies with a small number of senior leaders in the military. If local factors significantly influenced local commands, then the responsibility for the killings should shift toward the local level, or even extend to each individual soldier.

In reality, the regional variance of implementation may be a result from a combination of central government's regional strategy, local officer's calculated approaches, and individual personnel's irrationality. Studies about regional differences in the magnitude of persecution in Nazi-occupied regions reflected local demographic features and central government would affect the magnitude of perpetration (Kiernan, 2007), while regional variations in violence during China's Cultural

Revolution reflected the level of local officers' obedience of following top leader's order (Su, 2011). These regional disparities in implementation would also provide insights into the role of military officers and their motivations during the Indonesian mass killings (Robinson, 2018). In the next section, I will examine how the Indonesian army was mobilized by delving into the individual and regional level motivations during the killings.

4.2.3 Military in Indonesia
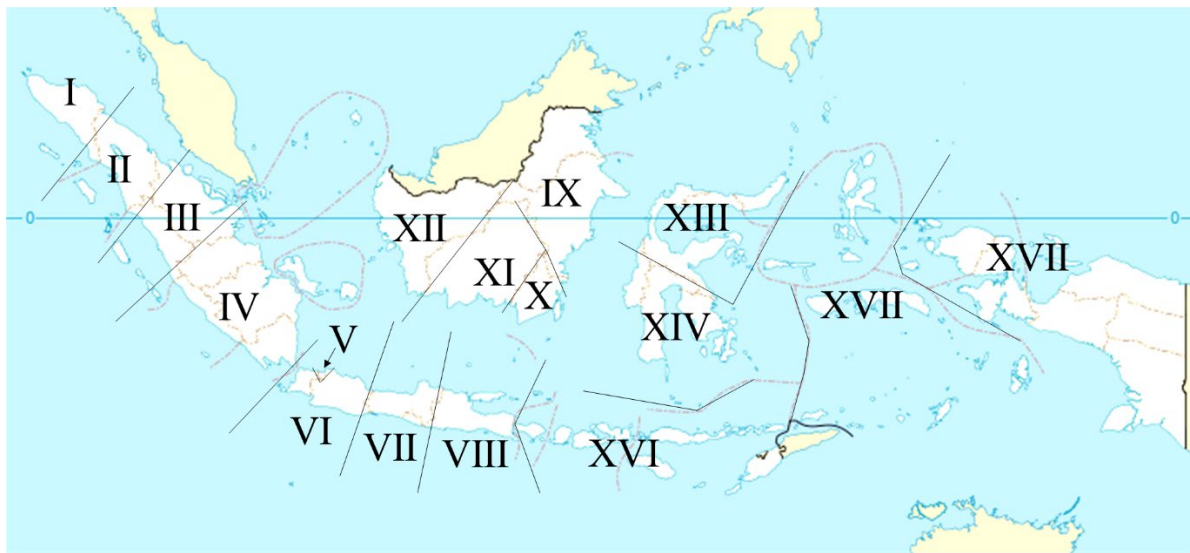
Figure 4-1 Military Regional Commands (Kodam) in Indonesia, 1965.
Note: Kodam (Komando Daerah Militer) territorial boundaries were usually delineated according to local provincial boundaries, except for Kodam V which encompassed Jakarta and a few regencies in West Java. The province boundaries in the figure reflect the modern boundaries today. See Appendix III for details.
Source: author

Similar to my argument in Chapter 2, an increasing number of scholars asserted that the Indonesian army played the pivotal role in the atrocities during the mass killings in Indonesia under Suharto's leadership (Robinson, 2017, Melvin, 2018, Kammen and Zakaria, 2012).

The Indonesian army attempted to connect themselves with the country's ancient history and promising future, thereby enhancing its legitimacy and authority (Kahin, 2015). Although the Indonesian army used ancient kingdoms and kings as the names of their regional commands (Figure 4-1, *Komando Daerah Militer, Kodam*)[59], the history of the Indonesian army did not start until World War II (Crouch, 2019). A major part of the army largely originated from militias set up by the Japanese Empire during Dutch East Indies' (Indonesia today) WWII occupation. Militia such as PETA ("*Pembela Tanah Air*", or "Defenders of the Fatherland") not only received financial and equipment resources from Japan, but the Japanese Empire also helped train mid-level officers, as the militia were expected to assist the Japanese against the Allies. However, before gaining independence, limited resources and time led to insufficient tertiary military education, resulting in a shortage of highly skilled higher-ranking officers within the army (Lev, 1963).

After WWII, PETA and other militias in East Java were reorganized as the People's Security Body *(Badan Keamanan Rakyat*, abbr. as *B.K.R.*), which later evolved into the regular army of East Java. It further integrated four battalions of Dutch soldiers (KNIL), and other militias like the student army (TRIP), Islamic armed rebels, as well as the Indonesian Socialist Youth (*Pesindo*, which had close ties with the PKI prior to the independence) (Kingsbury, 2005). There were around 50,000 orthodox Muslims (*santri*) composing guerrilla forces such as *Hizbullah*[60] (affiliated with *Masyumi*) before the independence, but the majority of soldiers were *abangan* Muslims, as orthodox (*santri*) were generally unwilling to join armed forces due to the conflict

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[59] The army drew upon historical and cultural significance when naming its commands. For example, in Central Java, the command was named "*Diponegoro*," after the son of the first Sultan of Yogyakarta. In East Java, the command was called "*Brawijaya*." For more information on the origins and significance of these names, please refer to Appendix III.
[60] Not confused with *Hezbollah*, حزب الله, the notorious Lebanese Shia Islamist political party and militant group.

with their daily prayers. Consequently, the vast majority in the army after independence were also *abangan* Muslims (Jenkins, 2010).

Besides its vital role in the War of Independence, the Indonesian military also had an important role in Indonesia's integration. The military targeted itself with Sukarno's Greater Indonesia ideology and attempted to incorporate both Northern Kalimantan (unsuccessfully) and New Guinea (successfully) into the territory of Indonesia. These close ties with modern Indonesia's formation and integration provided the military special privilege in the society (Rinakit, 2013). The army was definitely an upper elite class in Indonesian society where 95% of the population were illiterate. Military officers had typically gained a secondary education, while soldiers would have attended school for at least a few years (Crouch, 2019). Because the army did not have an apolitical tradition, just like the other newly independent countries at that time, the officers had the opportunity to hold important positions in the government and exert significant influence on local political and economic life.

The military believed its role in Indonesian society was *dwifungsi* (dual function), which was proposed by General Nasution in his "Middle Way" speech. *Dwifungsi* stated that the Indonesian armed forces (*ABRI*) should perform two roles simultaneously: defend the country from foreign invasion and act as guardians of the country against internal enemies (Kingsbury and Aveling, 2003). General Nasution further addressed that the armed force's societal role should be the preparation of *Hankamrata*, or "Total War", which indicated the war was not only on the battlefield but also within everyday life. Under this idea (Cribb, 2001b), military officers held the belief that they had the authority to determine which organizations and activities posed a threat to the country's political stability.

In order to gain popular support from the population, the military in Indonesia engaged in a wide range of civic missions and provided socio-economic services to local communities. These efforts included the construction of infrastructure, such as schools, roads, water supplies, power plants, dams, and clinics, as well as assisting agricultural projects, such as providing land for landless peasants, rebuilding rubber plantations, exterminating pests, and planting sugar cane (Crouch, 2019). The narrative of the military as a benevolent force working to aid local communities remains prevalent to this day (Kingsbury, 2005). To counter the threat posed by the Communist Party of Indonesia (PKI), the military deployed its doctrine through the use of Territorial Warfare, Social System Weapons, and Civic Action Policies (Lev, 1963, Hellwig and Tagliacozzo, 2009). The PKI was skilled in the use of guerrilla tactics, but the military's experience in guerilla warfare against the Dutch from 1945 to 1949, as well as the Islamic guerrilla war in West Java (1948-1962), helped them become familiar with these tactics and effectively confront the tactics of PKI.

However, the decade before the mass killings presented a complex period for Indonesia, characterized by heightened government spending and an insufficient allocation of resources towards adequately equipping the military with modern weapons and equipment (Cribb and Brown, 1995). This inadequate provision ultimately weakened the military's standing within the local community. Moreover, the economic situation on Java Island significantly deteriorated, in contrast to more favorable conditions on the outer islands. Consequently, members of the military sought to preserve their operations and privileges, resorting to smuggling activities akin to those observed within the Vietnamese military during the 1980s. Additionally, the military engaged in unorthodox arrangements with local Chinese businesses for mutual gain, which further exacerbated issues of corruption (Saptari et al., 2020). These circumstances served as

motivation for the military to partake in killings towards perceived enemies, in efforts to reinforce their economic and political advantage.

4.3 Research Question

In the empirical phase of this study, my objective is to conduct a detailed examination of the accountability regarding the actions carried out by the Indonesian army. The motivations driving military leaders, soldiers, and mid-level officers should exhibit considerable differences, yet in the meanwhile military leaders, mid-level officers, and soldiers were structurally connected and nested within one another. To address this complexity, I will use a multilevel model to differentiate the diverse influences of different military levels and to evaluate whether the degree of involvement in these actions differed among the various jurisdictions of mid-level command (Figure 4-2).
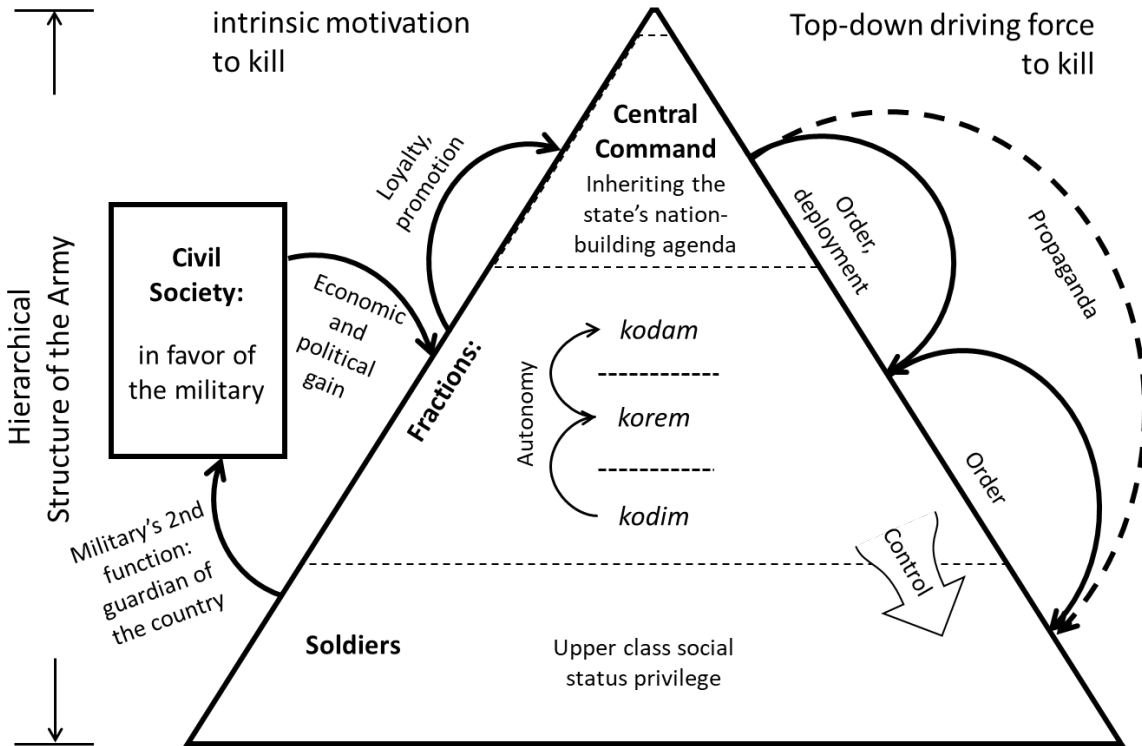
Figure 4-2 Conceptual framework of violence motivations across military hierarchical levels in East Java.

As illustrated in Figure 4-2, the Indonesian army, much like the country's civil government, adhered to a hierarchical structure that aligned geographically with administrative divisions. Each level of the army structure had distinct motivations for removing the PKI from the political arena. At the top level, despite occupying influential political and economic positions within Indonesian society, the military lacked formal representation in congress. The increasing influence of the PKI in congress posed a potential threat to the army's interests, and the S930 event provided a unique opportunity for top-level officers, particularly General Suharto, to retain control of the government and society through authoritarian means (see 4.2). At the bottom level, soldiers were under the direct control of local commands. However, as the military's foundation, soldiers were motivated by more than just chain of command. The military's *Dwifungsi* doctrine

positioned them not only as the defenders against foreign threat, but as guardians of the nation itself (see 4.2.3). Therefore, soldiers had sufficient intrinsic motivation to act against the PKI if they genuinely believed the PKI to be the greatest threat to the nation.

This study's research questions center on the mid-level army commands (Figure 4-2). Between the central command and individual soldiers, there existed 3-4 hierarchical tiers of middle-level military structure. While these mid-level commands were obligated to follow orders from central command and were often deployed based on strategic objectives set by central or immediate superior commands, they may have harbored their own motivations for eliminating PKI influence (see 4.2.2). Firstly, participating in the killings may demonstrate loyalty to central command. Secondly, removing PKI power potentially secured the commands' local political and economic advantages.

Besides motivations, the degree of autonomy afforded to mid-level commands was crucial in shaping the patterns of killings. Where such autonomy existed, these commanders' motivations could influence their decisions to either support or abstain from violence. The army's role in the killings was primarily supervisory and logistic rather than direct, allowing the inclinations of these mid-level commanders to amplify and manifest in varying levels of support provided to the militia—the main perpetrators of the violence. Consequently, the outcomes of killings could differ markedly across different jurisdictions of mid-level commands, reflecting the individual mid-level commander's inclination.

However, the rigid hierarchical structure of the army might have compelled local commands to strictly adhere to central command orders, leaving little room for independent action. Therefore, the level of autonomy depicted in Figure 4-2 may have been non-existent. In this case, the

variations in killings across different regions may still exist, but they might be attributed to other regional characteristics unrelated to the mid-level command.

The first research question aimed to verify if the middle-level command of the army had the autonomy to wield influence in shaping the magnitude of the killings. To empirically investigate this matter, I assessed whether there were noteworthy differences in the scale of killings across various army command jurisdictions (*kodim*). The first research hypothesis is as follows:

Hypothesis I: the magnitude of killings perpetrated by the army exhibited significant regional variation across different army command jurisdictions at the *kodim* (district) level.

The second research question sought to explain the differences of the scale of killings observed among various *kodim* jurisdictions. I speculated that the actions of middle-level army branches during the killings were shaped by their underlying motivations, particularly the desire to preserve their socio-economic status. This motivation may have led these commands to disregard the victims of mass violence's suffering. Additionally, the dedication to demonstrate loyalty to the central command may have further propelled the officers in the local army branches to be involved in the killings. Because the middle-level commands may enjoy a certain level of autonomy (assuming the first hypothesis holds) in supporting the killings or not, their motivations could be reflected in the differences in the scale of killings at the district level.

In addition to motivations, different *kodim* jurisdictions may possess varying degrees of autonomy as well. The level of autonomy would reflect their ability to fulfill their motivation. In general, a command situated farther away from the army's high-level headquarters should exhibit a greater level of autonomy, as implied by past military operations (Sudjatmiko, 1992). This

study will use East Java as a case study and formulate two hypotheses related to the motivation and autonomy of the middle-level command during the killings:

Hypothesis II: *kodim* jurisdictions with stronger economic and political motivation exhibited a greater tendency towards autonomous action, and thus a higher likelihood of involvement in killings.

Hypothesis III: greater remoteness of *kodim* enhanced its autonomy and consequently, its involvement in killings.

4.4 Methods and Data

4.4.1 Multilevel Regression

The empirical part of this study aimed to assess the variation of killings across different army's territorial commands and the cause of the variation. I will use multilevel regression analysis to investigate the potential variations in the patterns of killings across different *kodim* (military district command) groups, as well as the *kodim*-level factors that may account for these variations.

Multilevel regression, also known as hierarchical linear modeling or mixed-effects modeling, is a statistical technique commonly used to analyze data collected from hierarchical structures, such as individuals nested within groups or repeated measures over time (Peugh, 2010). In contrast to other quantitative analysis methods previously employed in mass violence studies, multilevel regression can detect whether the intercepts (and coefficients) across different regions have

significant differences, thereby providing a means to disentangle the complex relationships that exist within and between groups.

The Indonesian Army was organized under a multilevel territorial command system that corresponded to the local civil government structure in East Java. East Java's civil government comprised four levels, including the provincial government (*provinsi*), 30 regencies (*kabupaten*), 490 subdistricts (*kecamatan*), and 3000 villages (*desa*). The army established corresponding organizations at each level (*kodam*, *korem*, *kodim*, *koramil*, and *babinsa*), led by officers of varying ranks, except for the Military Subarea Command (*korem*), which does not correspond to any existing civil administration (Figure 4-3). All commands in the province maintained a certain level of autonomy. However, due to data limitations, this analysis will primarily focus on the *kodim* level.
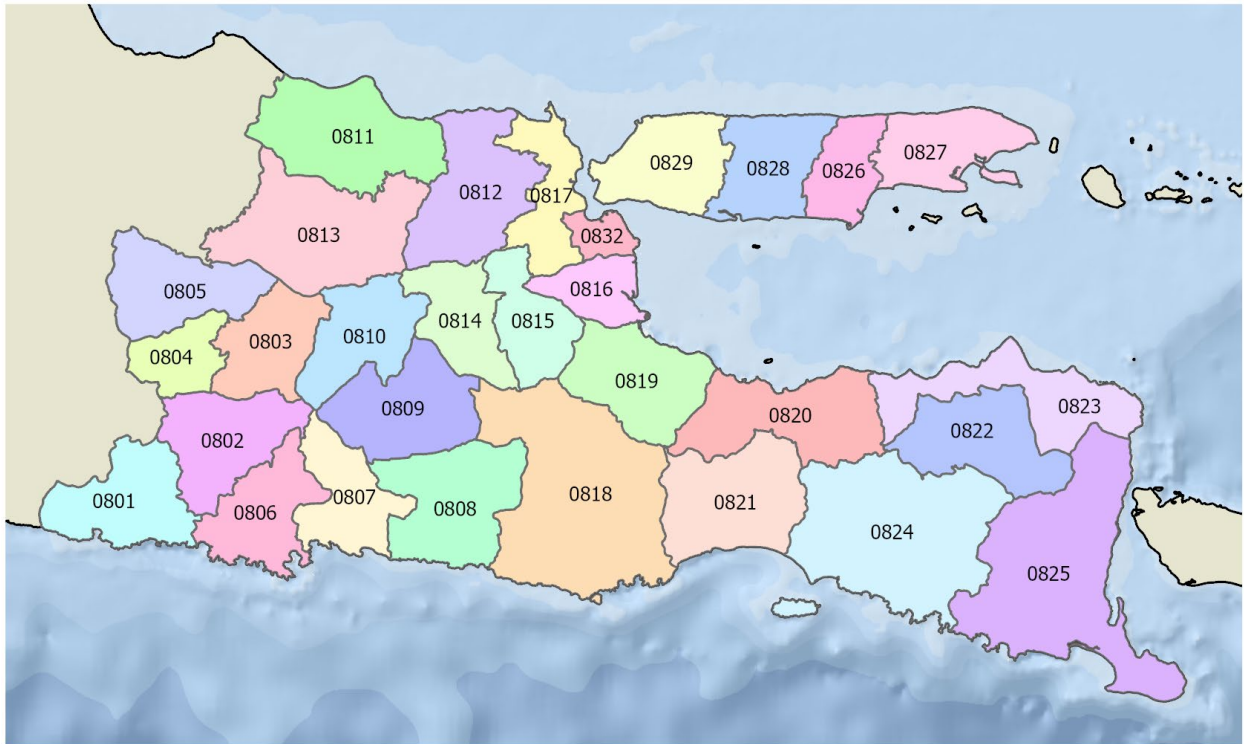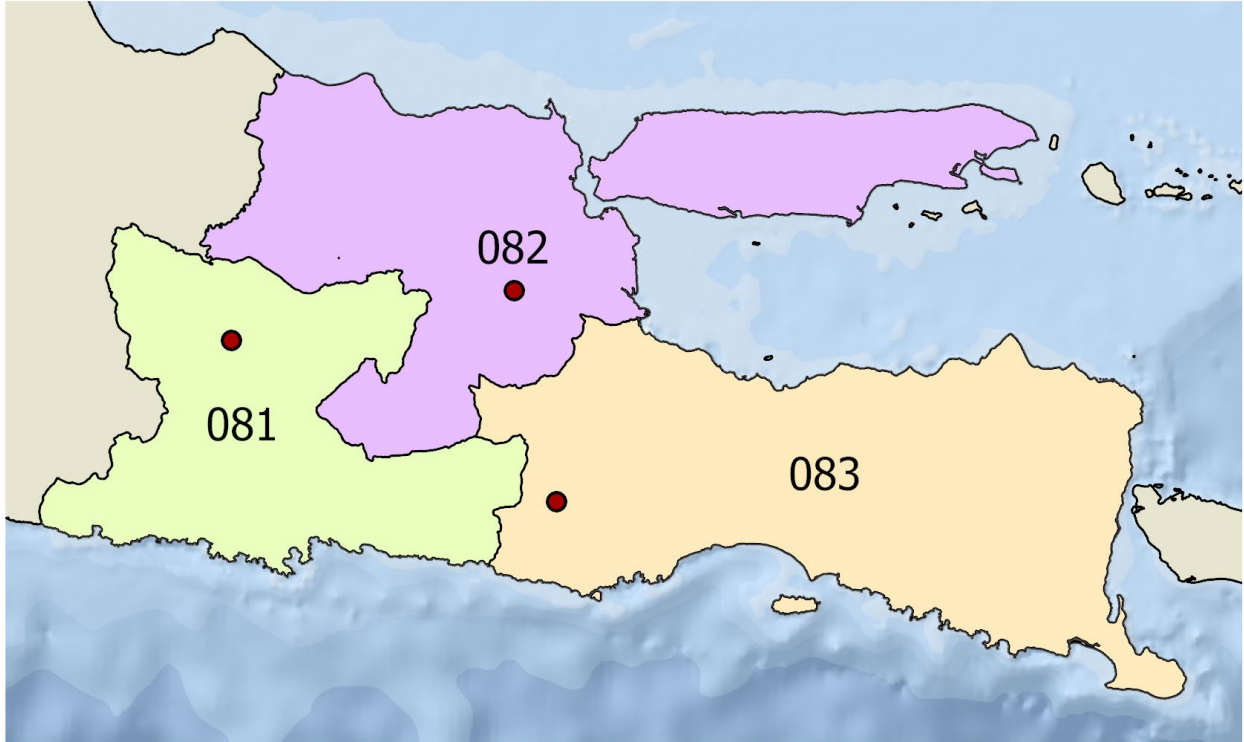
Figure 4-3 Structure of army organization in East Java: korem *and* kodim.
Note: The upper figure is korem *while the bottom* kodim. *Numbers refer to the code assigned to each* kodim *or* korem. *The circle shows the location of three* korem *headquarters (Madiun, Mojokerto, and Malang). Further information about these designations can be found in Appendix III.*

4.4.2 Dependent Variable

The variables I used were listed in Table 4-1. Similar to the analysis I did in CHAPTER 2: and 0, the dependent variable I used here was the percentage of population change caused by the mass killings in each subdistrict (*kecamatan*). I treated the population change due to the mass killings as a one-time shock of the population growth process, thus the gap between the estimated populations based on two different projections (census prior to the killing and after) could be viewed as the population change due to the killings. The population change could be positive or negative. Positive population change in a region indicated that potential victims from other districts tended to flee there, while negative population change in a region indicated population loss due to death and out-migration.

Impact from army: Similar to the variable I used in CHAPTER 2:, I will use the distance to the local command (*kodim*) as an indicator of the army's influence: closer to the command suggested stronger influence from the army ('s *kodim* branches), and vice versa. In the first part of the analysis, I examined two types of distance: the distance (from each subdistrict) to *kodim*, and to Surabaya[61], since the troops from Surabaya may also directly coordinate the killings.

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[61] Surabaya was the headquarters of *kodam* (*Kodam* V/*Brawijaya*), and also the provincial capital of East Java. The distance to *korem* level was also examined in my preliminary analysis but I did not report it here since it is not significant and important.

NAME	UNIT	DESCRIPTION
pop_change	%	Percentage of population change due to the mass violence
d_kodim	km	Distance to the closest military district command
Group Features		
political support	%	Support for the political party that is not a threat to the army's position
plantation	%	Percentage land covered by plantation in the *kodim*'s jurisdiction
altitude	meter	The elevation on the corresponding *kodim* headquarters
dist_to_sura	km	Distance to Surabaya from the *kodim* headquarters
pop_den	pop per sq km	Average population density in the jurisdiction where the research unit is located, excluding the non-habitable places.
REMOTENESS+	1	Index calculated from altitude and population density and distance to Surabaya
Individual Features (Control Variables) *		
plantation*	%	Percentage land covered by plantation in each research unit (district) after extracting the group-level variable
altitude*	meter	The elevation on the corresponding research unit (district) after extracting the group-level variable
dist_to_sura*	km	Distance to Surabaya from the subdistrict after extracting the corresponding group-level variable
pop_den*	pop per sq km	Average population density in the jurisdiction where the research unit is located after extracting the group-level variable
remoteness*	1	Index calculated from altitude and population density and distance to Surabaya after extracting the group-level variable

Table 4-1 Description of variables in the multilevel linear model.

* Variables used in regression were transformed by differencing the group-level variable effect, i.e., Individual-level variable = variable detected on the individual-level unit – corresponding group-level variable

4.4.3 Control Variables

The autonomy of the *kodim*-level army branch was reflected in the variance of killings across different subdistricts. Two distinct categories of control variable sets were employed to examine the autonomy's impact on the killings. The first category aimed to discern the motivations of army branches, while the second sought to gauge their level of autonomy using remoteness as a proxy. These control variables (with the exception of the variable about political support) were further divided into two sets: the group-level variables and individual-level variables. This distinction was necessary because the multilevel regression method necessitates variables to reflect both the collective features of the group and the specific attributes of each individual. In this study, group-level variables pertained to the traits of either *kodim*'s jurisdiction or *kodim* headquarters' location, while the individual-level variable referred to the control variables subtracting group-level variables. If, after adding a group-level control variable, the model's ability to explain inter-group variance improved, this would suggest that the autonomy of army branches was likely influenced by the control variables.

Political motivation: The variable "political support" indicated the proportion of local people who did not oppose the army. This variable provided insight into the local army command's feelings towards their security of power and measured the percentage of votes in the first congress election (the only one before the killings) that was not for the Communist nor Islamist parties. If the potential political power that could oppose the army in the subdistrict was weak and gained little popular support, the local army would feel less threatened and less motivated to support the killings. Thus, I expected the sign of this variable to be positive – less threat meant fewer killings. It is worth noticing the variable I used here measured the threat rather than the

support to the army. The perpetrators of mass killings seldom felt the need to consider public support, and anecdotal evidence (Mandelstam, 1999) demonstrated that even in some of the most violent episodes of mass killings in human history, the active support or direct participation of the broader public in violence was not a necessary condition for the occurrence of violence (Valentino, 2005).

Economic motivation: I also used the variable 'plantation' to track local economic motivation that might drive the command of the local army. This variable used the ratio of plantation coverage to rice field coverage on habitable land to measure the proportion of non-subsistence agricultural activity in a subdistrict. The predominant agriculture in rural Indonesia (especially East Java) was subsistence-based, which barely offered any incentive to the army. However, the army had the capability to exert influence on other agriculture activities, particularly plantations, following the plantations' nationalization or privatization after the independence (Elson, 1984)[62]. A higher value of this variable implied a greater incentive for the army to exert their local influence and a higher motivation to participate in the killings. Thus, I expected the sign of this variable to be negative at the group level, yet unknown at the individual level. Adding this variable should reduce the unexplained inter-group variation.

Remoteness: I used a few different indicators to measure the remoteness of a local army command, including the local population density (population density on habitable land), altitude, and distance to the headquarters. These indicators were also split into group-level and individual-level variables. Group-level variables would measure the remoteness of each *kodim*, which

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[62] In this scenario, it is not imperative for the army to directly control the plantation. Whether it is privately owned or state-controlled, the army has the potential to derive benefits directly from the plantation or from local industries associated with production. In essence, it was the commodity economy that benefited the army.

reflected the potential autonomy of each *kodim*. The increase in remoteness would increase the autonomy of local commands. Since their autonomy could lead to either more or fewer killings, I did not have an expected sign for these variables, but expected the group-level variables would reduce the unexplained intergroup variation of the killings. However, the remoteness of a place would also affect the result of killing in different ways. For example, the remoteness would make it hard for the army and militia to approach a subdistrict. Thus, the model I used would also control the individual-level of remoteness to ensure the group-level remoteness reflects only the remoteness of *kodim* headquarters and their potential autonomy.

4.5 Empirical Results

As previous studies showed (Chandra, 2017), the further away from the headquarters of local commands, the population change due to the mass killings would be more likely positive since the influence of army became weaker as the distance increases. The research intended to detect the motivation and autonomy of the *kodim*-level commands, but first I would test if the *kodim* level was the major level of operation in the killings[63].

4.5.1 *Kodim*, the Operational Level of the Killing Orders

Model 0 was the base model (Table 4-2) in which I included only intercepts to detect the variation of dependent variables by groups. There were two levels in this model:

$$\text{Level 1: } POPchange_{ij} = \beta_{0j} + r_{ij}; \text{ Level 2: } \beta_{0j} = \gamma_{00} + \mu_{0j}.$$

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[63] I.e. to test if the miliary as perpetrator was organized on the *kodim* level.

In the model above, $POPchange_{ij}$ was the dependent variable measuring the population change due to the event in *kodim* jurisdiction j and subdistrict (*kecamatan*) i. β_{0j} indicated the average population change in group j, which was derived from the level 2 (higher level) model. In the level 2 model, γ_{00} indicated the average *kodim* level population change, while μ_{0j} measured the fluctuation of population change between *kodim*, essentially representing the derivation of population change in *kodim* j compared to the overall *kodim* average. Model 0 also set up the baseline condition to compare the other models with. Most variability in the population change in different subdistricts could be explained by their individual differences, but there were still 21.86% of the overall variance can be attributed to the difference between different *kodim* jurisdictions (see ICC level 1).

MODEL	0	A1	A2	A3
INTERCEPT	- 0.2904	-4.810***	-8.283 ***	12.79 ***
d_kodim		0.2937 ***	0.2801 ***	0.296 ***
D_KODAM[+]			0.03552 **	
D_KODAM (Group-level)				0.04224 ***
D_KODAM (Individual-level)				0.0119
Ethnic Java (Control)				5.000 **
Madura (Control)				0.6876
Var. Group	11.64	10.09	6.481	3.237
Var. Residual	41.62	36.45	36.498	36.339
ICC (Level 1)	0.2186	0.2168	0.15	0.08
Level 1 N	482	482	482	482
Level 2 N	29	29	29	29

Table 4-2 Empirical result of regression models 0–A3.
[+]*In model A3, this variable refers to the group-level variable.*

In Model A1 and Model A2, I introduced the proxies for *kodim's* influence and *kodam's* influence into the Level 1 model, respectively. Similar to the findings in CHAPTER 2:, the coefficient for *kodim* was positive and statistically significant in both models, indicating that local commands

had the influence I anticipated on the occurrence of killings. Below is the formula used in the multilevel model.

$$\text{Level 1: } POPchange_{ij} = \beta_{0j} + \beta_1 X_{ij} + r_{ij}; \text{ Level 2: } \beta_{0j} = \gamma_{00} + \mu_{0j}$$

Comparing these models to the base model, the variance of the group-level residuals decreased to 10.09, but it still accounted for approximately 21.68% of the total variance, which remained almost the same compared with the base model. This was expected, as the variable here referred to the distance to the *kodim* headquarters within each *kodim*'s jurisdiction, and this variable would not have a significant group-level variance. When I introduced the *kodam* impact variable in Model A2, the group-level variance dropped to 6.4, which contributed to only 15% of the total variation. The positive coefficient suggested that the subdistricts (*kecamatan*, the unit of research here)[64] further away from Surabaya (the headquarters of the *kodam* in East Java) tended to report fewer killings, and the reduced ICC (from 21.68% to 15%) suggested the variable *kodam* did help explain a lot of differences between the killings in different regencies (*kodim's* jurisdiction). However, it was worth noting that the proxy I used here may also be strongly associated with other factors. For example, the spatial distribution of ethnic composition and religious practices near Surabaya tends to be more anti-PKI and has a larger Madurese proportion, which might be the reason why subdistricts close to the *kodam* tended to have worse killings while the closeness of these places to Surabaya was simply coincidental.

In Model A3, I included two control variables in the analysis to account for the influence of these non-military factors which happened to be correlated with the distance to *kodam* (the provincial

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[64] Such as the southwestern and southeastern parts in the East Java.

headquarters of the army). I also divided the *kodam* variable used in model A2 into two components, indicating "distance to *kodam* (individual-level)" and "distance to *kodim* (group-level)" respectively. The group-level "distance to *kodim* (group-level)" referred to the distance from the local *kodim* headquarters to the *kodam* (Surabaya), while "distance to *kodam* (individual-level)" represented the remaining part of the distance. The following formula and figure (Figure 4-4) explained the relation between the undecomposed distance variable and the decomposed distance variables.

$$d_{kodam} = d_{kodam_{individual}} + d_{kodam_{kodimlevel}}$$
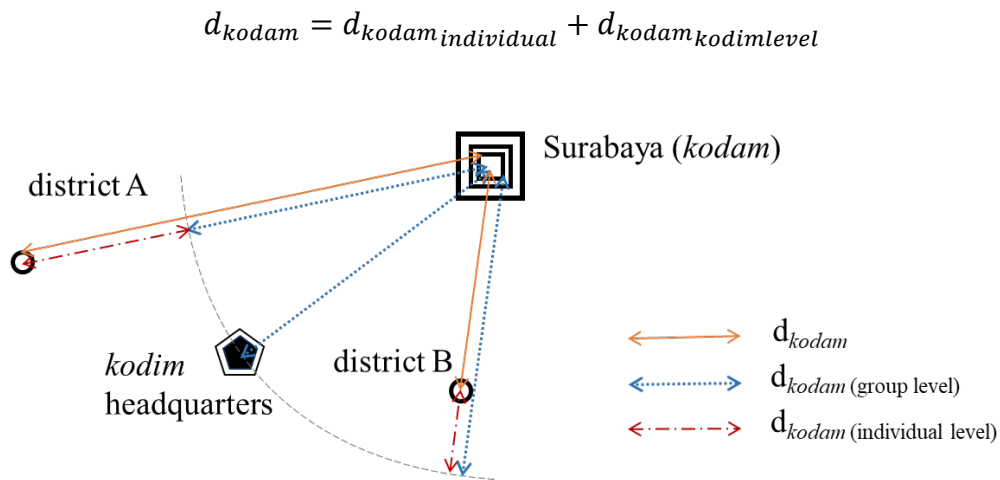
Figure 4-4 Dividing original distance variable to group-level and individual-level.
Note: The distance from A (or B) to Surabaya (d_{kodam}, in orange) could be divided into two components: the group-level (in blue) and the individual-level variables (in red). The group-level distance remains consistent for all locations (A and B) within the same kodim*'s jurisdiction, while what distinguished A from B was their differences in individual-level distance. In this case, the individual-level component of the variable at point B is negative.*
This approach of decomposing a variable into group-level and individual-level component would be also applicable to other variables.

If the military forces from *kodam* indeed had an effect on the incidents of killings, it would be anticipated that the individual-level *kodam* variable should also exert an influence on the extent of these killings. This implied that even within the same *kodim* jurisdiction, if a subdistrict is situated slightly farther from the *kodam*, it should experience a reduced impact from the *kodam's* military presence, particularly when the control variable is included in the analysis.

The outcome of Model 3A affirmed the significant role of these added control variables (*ethnicity* and *Madura*), showing a correlation between stronger anti-PKI communities and higher population loss. However, once the control variable was factored in, the *kodam* variable at the group-level remained statistically significant, while the individual-level *kodam* variable lost its significance. This implied that the reason why the distance to *kodam* affected the incidence of killings was not primarily due to the logistical difficulty faced by the army in reaching remote subdistricts from Surabaya, where the headquarters of *kodam* was located. Instead, it was more likely related to some unexplained features at the group level. Within the same *kodim* jurisdiction, distance from the *kodam* (Surabaya) did not significantly affect the killings, although in the *kodim* farther away from the *kodam* headquarters, fewer killings occurred. The lack of significance of the individual-level *kodam* variable suggested that the army's operations were more likely to be organized at the *kodim* level rather than the *kodam* level. Thus, in future studies should consider the distance to *kodim*, rather than distance to *kodam* or *korem*, as an indicator of the army's influence.

Nevertheless, an army operating at the *kodim* level did not necessarily imply that the *kodim*-level command would autonomously determine the extent of their involvement. In the subsequent section, I intended to investigate various local motivations and factors that could influence the autonomy of local commands. The degree of autonomy exhibited by these local commands would consequently indicate their responsibility for the incidents of killings.

With the addition of these variables, the variation of residuals between groups also decreased to 3.237 from 6.481. indicating that the group-level distance to *kodam* variable accounts for a substantial portion of the factors contributing to group-level variations. The lack of significance of the individual-level *kodam* variable suggested that the army's operations occurred at the *kodim*

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level. Consequently, it can be concluded that the most reliable indicator of the army's influence is the distance to *kodim*, rather than *kodam* or *korem*. Thus, my first hypothesis holds: **the magnitude of killings perpetrated by the army exhibited significant regional variation across different army *kodim* jurisdictions.** In the next part of this study, the distance to *kodim* will be used as an indicator of the army's influence.

However, an army operating on the *kodim*-level would not necessarily suggest the *kodim* level commands would have their own autonomy to decide the magnitude of their involvement. In the next section, I examine different local motivations and factors that would impact the autonomy of the local commands, and the autonomy of local command would imply the responsibility of the local commands for the killings.

4.5.2 Local Motivation and Independence

Models B1-B2 (Table 4-3) were developed to identify local factors that could influence the local army command's motivation. Due to data limitations, I only examined motivations related to economic drive and political support using two sets of proxies, although personal preference and cultural preference may also be vital factors that drove the local commands. As previously discussed in the data section, these proxies would be restructured into variables of group and individual-levels[65], similar to how I constructed the '*kodam'* variable in the earlier section.

The variable used for detecting local economic interest was plantation, which measured the proportion of land covered by plantation in the research unit (*kecamatan*). As I assumed earlier,

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[65] Group-level variable captures the feature of the whole district (regency), while individual-level variable is the remaining part of the variable after removing the group-level part.

this variable represented the economic interests of the local army fraction that they wanted to maintain. The higher the potential economic interests in the *kodim*'s jurisdiction would encourage the local fraction to be more involved in the killings. In model B1 I did not decompose the variable to group and individual level, while in model B2 the variable plantation was decomposed.

The variables used for detecting local political interest were two group-level variables, including the proportion of non-opposition parties (including PNI, *Partai Nasional Indonesia*, and parties other than Islamist ones and the PKI) in the elected local council as the result of the 1953 local election, and the ratio between the proportion of PNI and PKI parties in the council. These two variables both detect the relative strength of the parties that did not oppose or support the army. Higher values of the above two variables would indicate higher political interest the local army held in the local area, and the local army would be more likely to protect their local interest by involving themselves more in the killings. In Model B1 and B2, assuming a variable was significant, then after I divided the variable into group-level and individual level, if the group-level variable remained significant while the individual-level not, it would suggest the local army branches were stimulated by their local interests. Compared to the baseline model (models 0 and 1), adding these two sets of variables significantly reduced the inter-group-level variance and the proportion of inter-group-level variance in the overall variance (ICC dropped from 0.21 to 0.13 and 0.11, respectively).

Unfortunately, the political proxies were not available on the individual level. At the group level, political proxy was significant, and the sign fit my expectations. The result also suggested the economy variable was significant neither before it was split into two levels nor after. The results from both models did not provide enough evidence to suggest whether local commands (*kodim*)

would intensify or reduce killings in their jurisdiction based on their potential economic and political benefits, but it did indicate that, in areas where political activities were less threatening, the local army would be less involved in the killings.

The plantation may not be the best proxy for predicting economic motivation. Despite the army taking over most Dutch-owned plantations in 1957 (Ingleson, 2022), plantations might not offer enough incentive for the army and its branches as they constituted only a small portion of the total local economy. Furthermore, it remained unclear whether the plantations were of more interest to the provincial headquarters or local commands. In sum, my hypothesis II was neither proved, nor rejected: **There was not enough evidence to determine whether economic or political motivation would exhibit a greater tendency towards autonomous action or a higher likelihood of involvement in killings.**

MODEL [+]	B1	B2	B3	B4	B5	B6
Intercept	11.61***	8.737***	-9.781***	-9.332***	-8.254***	-10.07***
kodim	0.2994***	0.2929***	0.2912***	0.2806***	0.2889***	0.2936***
PLANTATION(GROUP)	10.82	10.14				5.986
PLANTATION (IND')		3.940				3.313
Non-Oppose Party (Group)	22.93 **	19.05 **				9.359
Ratio Between PNI/PKI (Group)	1.609 *	0.6192				
Altitude (Group)			1.496	1.492		
Pop Den (Group)			0.9784	4.713		
DIST_*KODAM* (Group)			0.03899 *	0.03883 *		
Remoteness index (Group)					0.9006 ***	0.7152 **
Altitude (Ind')				-2.228 _		
Pop Den (Ind')				14.99 *		
DIST_*KODAM*(I ND')				0.008599		
Remoteness index (Ind')					0.03869	-0.00723
LANGUAGE/JA VANESE [+]		-1.291 *			5.033 ***	4.699 ***
Var. Group	5.786	4.699	7.157	7.092	3.459	3.272
Var. Residual	**36.475**	36.575	36.420	36.077	36.33	36.41
ICC	0.1369	0.1138	0.1642	0.1643	0.0869	0.0825
Level 1 N	482	482	482	482	482	482
Level 2 N	29	29	29	29	29	29

Table 4-3 Empirical result of regression models B1–B6.
[+] *Control variable*

4.5.3 Local Remoteness and Autonomy

In the next set of models (Model B3 – B6), I checked the autonomy (potential independence of decision-making) of a *kodim* command's influence on the killings. If the independence of decision-making of *kodim* did have an influence on the killings, I would expect the inter-group-level variance would become smaller after I introduced these factors.

I assumed the autonomy of decision-making for a *kodim* was determined by the remoteness of this *kodim*. The variables added in Model 3B were three indicators detecting the remoteness of the *kodim* headquarters at the group level, including elevation, population density of its jurisdiction[66], and the distance to Surabaya (the headquarters of the provincial command). Higher elevation, low population density and long distance from Surabaya all indicated the *kodim* command was either hard to reach or located in a remote area, which all improved the *kodim's* potential to implement killing policies in an independent way.

In model B3, only one of the three variables was significant, but what really mattered in this regression was the change of variance between different models as increased autonomy (of decision-making) would either increase or decrease *kodim'* s involvement in the killings. Comparing the model with Model A1, by adding three new variables to the model, the inter-group-level variance dropped to 7.157, a 29% improvement[67]. Although the remoteness I measured here indicates the *kodim*'s remoteness would determine the *kodim*'s independence of decision-making, the measured effect might be simply caused by the added variable themselves, as these factors all had their own way of impacting each single subdistrict.

Thus, I added a set individual-level measurement in Model B4, to separate their effect on individual subdistricts from the group factors. From Model B4 I found that some of the individual-level variables had an impact on the killings (population density, for example), yet the variance of individual-level residual did not reduce much compared to Model B3 (reduced from 7.157 to 7.092, and the ICC barely changed). This implied that the remoteness of a place

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[66] I only counted the inhabited part of the jurisdiction.
[67] (10.09-7.157)/ 10.09 = 0.2907

impacted the killings mainly through the remoteness of the *kodim* headquarters, while the individual subdistrict (research unit, *kecamatan*) remoteness would not affect the killings very much.

For the last two Models, I formed a single index of 'remoteness' to make the idea of 'remoteness' easier to interpret. The index of remoteness was formed by the following formula, and this variable can also be decomposed into group level and individual level. Therefore, the group-level remoteness of a place actually referred to the remoteness of the *kodim* that governed the place, rather than the remoteness of the place itself:

$$Index = Zscore(altitude) * Zscore(distance) * Zscore(population\ density)$$

Model B5 only included the remoteness variables of two levels, while in B6 there were more control variables included. In both models, the group-level remoteness variable was significant, while the individual-level variable was not. This indicated the more remote a *kodim* headquarters was, the less likely the *kodim* was involved in the killings. In addition, the group-level variance of the residual also reduced to 3.459 and 3.272 respectively compared to the base models (Model 0 and A1, where the group-level variance was 10.09). This large reduction indicated that the remoteness index captured the difference between groups and could explain most part of the group variance. Because the remoteness of a *kodim* is directly related to the independence of a *kodim* command, my third hypothesis is correct: **the remoteness of a *kodim* will improve the *kodim*'s autonomy and further impact the *kodim*'s involvement of killing.**

4.6 Discussion and Conclusion

As exploratory research, this chapter served two primary purposes. First, it employed multilevel regression analysis in the context of quantitative mass killing studies, demonstrating its capability to discern subtle variations in the magnitude of effects across different groups. While there were various methods for identifying regional disparities in the scale of killings in a mass violence study, the multilevel regression approach stood out for its ability to pinpoint local drivers that exclusively affected outcomes through specific intermediaries (in this case, the *kodim* command), or when the direction of the effect is uncertain (in this case, direction of the effect was uncertain but the variance of inter-group residuals were reduced). In comparison to other techniques like Geographically Weighted Regression (GWR), which can identify regional differences in effects but not distinguish the effects of different levels, and dummy variable-based approaches that can detect regional differences but not group-level effects, multilevel regression offers a valuable advantage.

Second, this article challenges the hypotheses I formulated regarding the army's responsibility during mass violence. It underscored significant variations in killing patterns across different *kodim* command jurisdictions, suggesting that the *kodim* level command was the level within the army that made decisions and directed the killings. The study also examined several factors that could influence *kodim*-level decisions, including the influence of economic and political motivations. While the impact of local economic incentives was not significant, the study did find a correlation between political opposition and the magnitude of killings. The finding may suggest that more political opposition would increase the local command's interest in participating in killings, since the local army faced more threats in these areas. The study also

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explored the impact of *kodim* commands' remoteness. For the *kodim* commands, being situated in remote locations suggested a greater level of autonomy when receiving killing orders. This autonomy turned out as a crucial predictor in understanding group-level variance, as the remoteness improved the variability of the *kodim*'s killing results.

Nonetheless, there are two general limitations to this study. First, due to data availability constraints, the individual-level data for certain variables was lacking, making it challenging to determine whether the magnitude of the variable at the group level reflected the characteristics of the group or the average attributes of each subdistrict within that *kodim* group. Second, the variable proxies may not accurately represent the attributes they intend to signify. For instance, in this study, plantation coverage (%) in each *kodim* area was used to represent the economic motivation for *kodim* commands to issue killing orders. While plantations should be a significant economic sector in rural Java, it remained uncertain whether plantation coverage adequately represented the economic interests of the army, particularly the army of the local *kodim* command. After all, the army was not a profit-driven organization, and power, rather than economic interests, should be the most direct motivator.

Mass killing studies often highlight regional variations, particularly when accounting for the regional autonomy of the perpetrators. Patterns of killing were influenced by features that were not globally uniform. However, if the emphasis was solely on the traits of the victims or if the perpetrators were viewed as a singular entity, studies may neglect the actions of lower-level actors. From a quantitative standpoint, these features can be represented by a nested data structure. Multilevel regression served as a valuable tool for examining processes at various geographic and organizational scales. I anticipate that future research might usefully adopt this approach in studies across different domains.

CHAPTER 5: CONCLUSION AND THOUGHTS

The term "genocide" has expanded to encompass a spectrum of events in media today, ranging from a few deaths in a village to more broadly impactful but less deadly actions like forced 'official' language imposition and large-scale incarcerations. While acknowledging the severity of these incidents, this "inclusivity" overshadows the true horror of the more severe atrocities, and this "inclusivity" potentially blurs our understanding of the nature and essence of mass violence. This research intentionally avoided using the term "genocide" to prevent this risk, despite the Indonesian mass killings conforming to the classical notion of a "genocide": it targeted a specific group, had a widespread impact, and recorded tremendous death tolls. Instead, the term "mass killings" is used in this research[68], as I found the adjective meanings of the word "mass" listed in Merriam Webster[69] highlighted three key attributes of genocide and seemed to encapsulate the nature of the killings more accurately: civilian-related, massive scale, and intending to eliminate a group[70].

The exploration of mass killings is an inherently weighty endeavor, which made the completion of this dissertation a challenging and time-consuming journey. As I navigated through the intricate layers of historical records, geographic data, and socio-political contexts, the significance and enormity of this subject became even more evident. The Indonesian mass killings were a haunting chapter in human history, but it was relatively less known and studied[71]

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[68] I also used the term 'purge' in the first chapter.

[69] They are: 1. Relating to the mass of the people, 2. participated in by or affecting a large number of individuals, 3. having a large-scale character, and 4. viewed as a whole.

[70] However, I choose to use the term "Indonesian Communist Purge" in the second chapter, because the word "purge" did not emphasize the killing process, while who did the killings was what that chapter intended to discover.

[71] For example, in one of the most popular textbooks on genocide (JONES, A. 2016. *Genocide: A Comprehensive Introduction*, Routledge.), the Indonesia mass killings was not even mentioned as a major case study, despite the fact

compared with the mass killings that happened in Nazi Germany, Rwanda, Bosnia, Soviet Union, and Cambodia, which made the study about this event particularly intriguing. In addition, while data related to this region in some respects (population, natural physical geography, infrastructure, and agriculture) were abundant, it was less so for others (including demographics, voting patterns, and religious affiliations), which made the quantitative study challenging in an interesting way. Luckily, Indonesia's rich diversity attracted hundreds of anthropologists and historians to conduct their field study there, which facilitated my ability to develop an objective yet holistic understanding of its society.

Most of the data used in this research were simply photocopied scans of records requiring digital conversion for analysis, thus I had to narrow down the study area to a part of Indonesia (ideally a province) to keep the workload manageable. Among the five provinces most impacted by the killings, Aceh, Bali, and North Sumatra had too few subdistricts (*kecamatan*) to conduct reliable quantitative analyses. Central Java experienced the construction of the *Gadjah Mungkur* reservoir in the 1970s, and the massive transmigration caused by this project complicated the estimation of population change due to the mass violence in each subdistrict. Thus, East Java became the ideal research area for this study.

My study consists of three empirical investigations, each utilizing spatial research methods to address a distinct aspect of mass violence: the perpetrators' responsibility, the role of local communities, and the internal accountability within perpetrator groups. The first area of focus studied two types of perpetrators (Chapter 2): the army and the local militias. Through evaluating

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that its anti-communist essence made the killings a distinctive instance among all the other genocidal events. A search using the keywords "Indonesian genocide" yielded approximately 48,900 results (as of the end of 2023) on Google Scholar, which may also encompass references to the East Timor genocide. In contrast, searches for "Rwandan genocide" and "Bosnian genocide" returned about 155,000 and 82,200 results, respectively.

their influence based on proximity to settlements, my study revealed their differences in the magnitude and scope of influence during the killings. The second empirical research (Chapter 3) in my dissertation looked at the local communities' involvement, specifically the *abangan* and *santri* who felt deep political and religious antipathy toward each other. This part of the research highlighted that the social connections within these communities either assisted the communist party (in *abangan* communities) in resisting or strengthened perpetrators (in *santri* communities) to kill. The third study (Chapter 4) examined the hierarchy of army command: the central and local headquarters. My study found that the local branches of the army possessed sufficient autonomy to influence the killings, as opposed to the objectives of the central command.

The limited data availability to study the mass violence in Indonesia constrained the feasibility of quantitative research on this topic. Yet, adopting a spatial perspective opened a new dimension for analysis. In my first study (Chapter 2), the spatial perspective enhanced the analysis in three aspects: **a)** the use of proximity-based proxies, **b)** the improvement of independent variables' quality through data disaggregation, and **c)** the use of Bayesian methods. **a)** With respect to proximity-based proxies, there were two groups of perpetrators during the killings identified by my research: the Indonesian Army, and local militias. While the active involvement of both groups was recognized, their respective responsibilities in the killings have not been distinctly quantified, which is the gap this research intended to fill. Inspired by the 'first law of geography'[72], I employed the distance between a place and the perpetrator's location (either the army's local headquarters or the Islamic boarding schools) as a proxy for measuring the perpetrator's influence on that place, and this influence diminished as distance increased.

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[72] According to Waldo Tobler, a famous American geographer, the first law of geography is described as: everything is related to everything else, but near things are more related than distant things.

Because the two kinds of sources of influence did not overlap (though in some cases they were in the same city and close to each other), proximity-based variables could distinguish the army and militia's respective impact across different places. **b)** Regarding the quality of independent variables, accurately measuring distances was crucial since distance-based proxies were the focus of this research. However, defining an exact distance from a point (a school or an army's headquarters) to a relatively large subdistrict would be arbitrary and unreliable (see Figure 5-1). To address this issue, I refined the research unit to the settlement level with the help of AMS (Army Map Service) maps and assigned the subdistrict level data to settlements accordingly. This approach enhanced the reliability and precision of the variables of interest in this research.

c) Last but not least, instead of using regular regression models, my research employed Bayesian regression methods. These models incorporated pre-existing knowledge to yield more credible results. Essentially, Bayesian regression recognizes the variability in the reliability of variables (and their interrelations) in various places and can make use of this part of information which would often be neglected by non-Bayesian methods. Comparing the result from Bayesian and non-Bayesian regression models is difficult because they are two fundamentally different methods[73], but I suspect the use of Bayesian methods in my research may only modestly improve the result since the number of observations was large enough to give credible results even without the pre-existing knowledge. Nevertheless, Bayesian methods would still be particularly beneficial for studies with limited observational data.

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[73] For example, Bayesian regression gives the distribution of the coefficient while non-Bayesian regression gives one coefficient and its confidence interval.
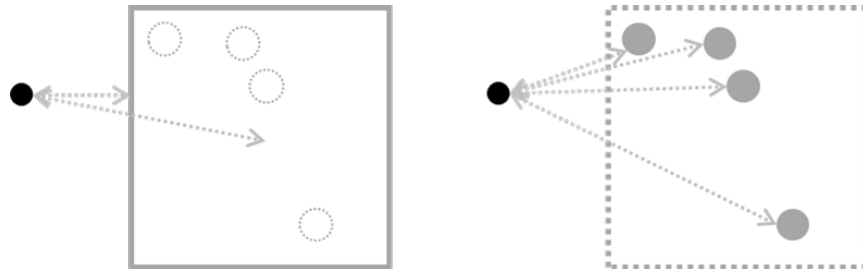
Figure 5-1 Two ways of defining distance.
left: the distance from a point to a zonal area (in this research, referred to as subdistrict) is arbitrarily defined as the distance to the area's edge or to its centroid; right: measuring the distance to the smaller entities (in this study, identified as settlements) within the zone.

Geography studies often emphasize the role of local cultural and socioeconomic background. My second empirical study (Chapter 3) thus focused on a single aspect of the local background's impact on the killings: the community's internal connectivity. The spatial perspective contributed mainly in two ways: **a)** simulating the segregated residential pattern of the two communities, and **b)** calculating the internal connectivity of a community. **a)** Although there was no data about the size and spatial residential pattern of the two communities (perpetrators and victims), the fact that the two communities were segregated would help us get a satisfactory simulation of this residential pattern. The segregated living pattern was common in an agricultural old-world society, and this knowledge informed two aspects of the simulation: First, because the people of the same identity tended to cluster together (at least in an agricultural old-world society), it justified my use of a 100m x 100m cell (referred to as neighborhoods in my study, each containing roughly 5-20 households) as the smallest homogeneous residential unit. Second, given the historical coexistence of these communities and the ongoing Islamization process, I opted for a relatively low segregation level in the simulation (Moran's I = 0.3). As an accurate simulation of the spatial pattern would be vital for improving this study, future research might investigate the living patterns in other societies with dual cultural identities (such as Cyprus before major population movements) and find general patterns that could be applicable to East

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Java society. **b)** Economic and urban geography has applied methods like the gravity model to detect the potential connectivity between two locations, which inspired my approach to measuring the internal community connectivity in East Java. However, the concept of 'connectivity' (or 'solidarity') is inherently abstract, and the 'connectivity' of rural communities in East Java may essentially differ from the western countries. For example, the connectivity in a traditional society would be mainly driven by rituals, customs, as well as family ties, while in a more modernized society, the connection may be motivated by opportunities and employment (reflecting the 'world is flat' paradigm). I hope that future studies will investigate the concept of connectivity, exploring its varied manifestations and underlying drivers across different societal contexts.

Shifting the focus to the military's involvement, my third empirical study (Chapter 4) delved into the multifaceted motivations that propelled individual soldiers and lower-ranking officers to engage in violence. This research was mainly inspired by the concept of spatial heterogeneity, which suggested the relation between two variables may vary across different regions. I felt this concept was particularly useful when it was hard to anticipate a specific type of relationship between two variables: In the context of East Java, while we knew the army impacted the killings and made the killings worse, what we did not know was the role of autonomy of army units along the chain of command. It would be challenging to theorize whether the autonomy of the army's local branches exacerbated or mitigated the killings. If a local branch perceived benefits from the killings, they might intensify their actions even beyond what the military headquarters expected. Conversely, if there was little to gain, the local branch might be reluctant to engage in killings. After all, killing people could not be an easy task. Methods-wise, this research utilized a unique feature of the Indonesian army structure: the army established a

parallel jurisdiction system alongside the civil government of different levels, resulting in the army's nested pyramidal structure. This structure was ideal for applying a multi-level model.

Geography approaches to studying mass killings should serve as a critical avenue for unraveling the spatial complexities inherent in mass violence. As I grapple with the implications of this research, the hope is that it sparks further investigations, fosters dialogue, and informs strategies to prevent such atrocities in the future.

The contributions of this dissertation mainly concentrated on two aspects: Methodology and the study of the Indonesian mass killings. Methodology-wise, this research demonstrated approaches to exploring problems when only very limited data is available. Research on historical events is often hampered by two kinds of data constraints: A. the data are not available; B. data are available, but they are not in the format or the unit of measurement the researcher desires. To solve the first restriction, the solution would be to find good proxies and explore data from diverse resources. For example, the three census datasets I used did not contain ethnic information, so I gathered this data from linguistic maps obtained from various sources. While ethnicity and language are not identical, the insights gleaned from these linguistic maps effectively reflected spatial ethnicity patterns in East Java at that time and were precise enough for the purposes of my research. To overcome the second restriction, the data had to be reassigned to the appropriate research unit. This process involved aligning data from various spatial divisions to match the research unit (Buhaug and Rd, 2006) and aggregating smaller-level data into the larger research unit. In my research, I employed different techniques (such as interpolation, cell swapping, and bootstrapping, based on reasonable assumptions) to realign, disaggregate, and aggregate data from different units, and ensured their alignment with the research units defined in my analysis.

The second methodological contribution of this research lies in its thorough use of available data. Regression-based quantitative research often faces a dilemma about the use of data. Typically, the distinction between having 100 observations versus 1,000 would be simply a tighter confidence interval, maybe shifting from 0.05 to 0.01. However, when additional data are available, researchers can and should dig deeper to find features that cannot be revealed by a smaller dataset. For example, examining regional differences in data patterns and relationships would be an effective way to uncover underlying factors that might be neglected by a smaller dataset. This idea about regional heterogeneity inspired my third research topic, which investigated varying degrees of obedience and autonomy among different military branches. Additionally, in my first research topic, recognizing that the relationship among the variables of interest would be more robust in certain regions, I adopted Bayesian methods and tailored the research area to capture this information about the regional variation in the reliability of these variable relationships, even though this research did not extensively explore regional heterogeneity.

This research also has the potential to make several contributions to the field of mass violence studies. First, with its focus on Indonesia, it reaffirmed the roles of the military forces and militias as primary agents in mass killings and underscored the crucial role of military (and state power) in these events. However, due to constraints in time and data, the study was unable to delve into the mechanism by which the military exerted its influence, such as providing assurances of safety to local militia or simply failing to intervene when violence escalated, both of which facilitated unchecked militia-led violence. Moreover, the study suggested that the military's impact extended beyond local areas around their regency (district) headquarters. Even in remote areas, the military's impact was still stronger than the influence of grassroots

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organizations and movements (in this case, proxied by local Islamic boarding schools) that were

expected to have a profound long-range effect. I suspect the involvement of the military (and the

associated state power) must have additional channels to influence the killings beyond their

direct involvement and their support for the militia. These channels of influence might work

through a set of indirect mechanisms that functioned over longer distances (such as campaigns

through media and propaganda) that was integrated with the nation-state-building process, which

pointed to an area needing further exploration in future research.

Secondly, this research used a non-monolithic perspective for understanding the military's

involvement in mass killings and emphasized the autonomy of the military's subdivisions'

influence on the killings. The underlying assumption that the military always followed orders

thoroughly (at least to a level expected in a modernized military or under a military junta) may

not hold true. Instead, different subdivisions of the military may engage in competition for

resources and exhibit reluctance to follow directives that could not serve their own interests.

Meanwhile, modern military structures often allow a degree of autonomy to subdivisions to

handle the complexity of a battlefield. Due to the lack of well-trained high-level officers, the

military was more fragmented at lower subdivisions in transitioning countries like 1960s'

Indonesia (compared with more organized countries like Nazi Germany or Imperial Japan),

which suggested that the autonomy of the military might be more pronounced at lower levels. In

addition, the military's local subdivision's privileged socio-economic status in its jurisdiction

could incline the local subdivision towards being motivated by locally embedded interests and

acting accordingly. Strong military presence was a common phenomenon in a lot of transitioning

societies at the time when a mass killing event occurred, such as in East Pakistan (1971),

Rohingya (2017-), and Darfur (2003-2020), even when the government was not a military junta

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yet (or the military junta was about to collapse). The experience of East Java may offer some valuable insights for future research in similar contexts.

The study of mass killings remains essential and must persist as long as the threat of atrocities exists. In Indonesia, the ongoing uncovering of mass graves will provide more robust quantitative evidence regarding the tragic events 60 years ago. Internationally, various groups dedicated to confronting mass killings and other atrocities are united to make their voices heard as they search for justice. I believe that a geographic perspective can offer a unique contribution to these efforts, assisting in the worldwide endeavor to pursue justice and leading to a brighter future for humanity.

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APPENDIX I: CONNECTIVITY CALCULATION

This analysis simulated the spatial neighborhood pattern of the *abangan* and *santri* communities

and calculated the connectivity of each group in 490 subdistricts (*kecamatan*). Assuming the

connectivity between two cells (i and j) on the East Java map is measured as a distance-based

function $M_{ij} = F(x)$, where x is the distance between cell i and j, the total connectivity level of

the cell i would be present as $T_i = \sum_{j=0}^{j \in EastJava} M_{ij}$, a sum of the connectivity of around 29,000

pairs (pairs between cell i to all the other *abangan* or *santri* cells in East Java). To reduce the

computational burden, I set up a threshold distance of 30km, beyond which the connectivity

between two cells would be assumed to be zero.

The average level of connectivity in subdistrict u (*kecamatan*) was expressed as:

$$Connectivity_u = \frac{\sum_i^{total\ \#\ of\ cells\ in\ u} T_i}{total\ \#\ of\ cells\ in\ u},$$

(where $T_i = \sum_{j=0}^{j \in EastJava} M_{ij}$, and M_{ij} refers to the connectivity between i and j.)

Due to the large number of cells, a kernel density approach was used to reduce the workload. The

bandwidth was set at 30 km, the threshold distance of the kernel function. I converted the raster

of cells to a multipoint layer, and then calculated the kernel density of the point pattern. The

calculation applies a kernel function, which decreases monotonically to represent the relationship

between influence and distance. When the connectivity function form is the same as the kernel

function, the average connectivity between cells in a subdistrict u ($Connectivity_u$) can be

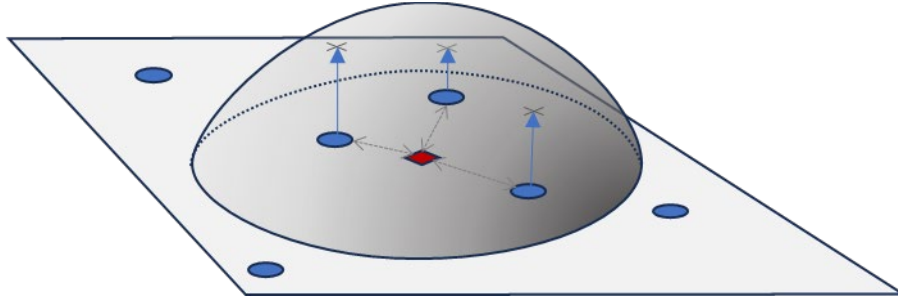computed more efficiently using the kernel density approach.

Figure AI-1 Spatial kernel density calculation.
Note: the kernel density value at a location (red diamond) is determined by the bandwidth,
selected kernel function, and the distances between events (blue dots) and the location.

Assuming the output of the kernel density function is K. Then the density value on cell w at

location (x, y) would be described as $Density_{w(x,y)} = K(x, y)$. The average density value of the

cells in the subdistrict u would be calculated by

$$Mean\ (Den_u) = \frac{\sum_i^{total\ \#\ of\ cells\ in\ u} Density_{w(x,y)}}{total\ \#\ of\ cells\ in\ u}.$$

It can be proved that (Proof omitted):

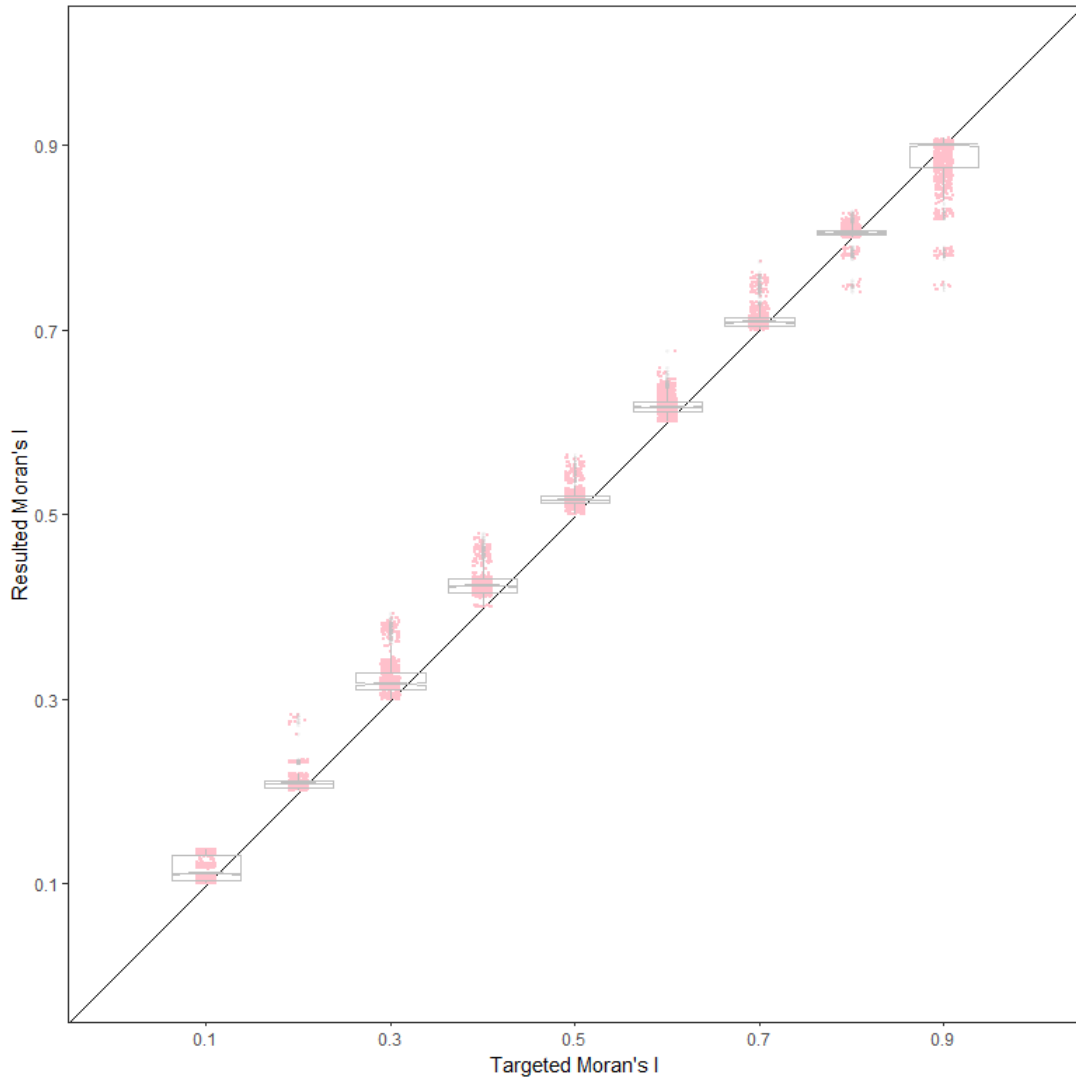$$\sum_i^{total\ \#\ of\ cells\ in\ u} Density_{w(x,y)} - total\ number\ of\ cells\ in\ u = \sum_i^{total\ \#\ of\ cells\ in\ u} T_i$$

Thus, this will be true:

$$Connectivity_u = Mean\ (Den_u) - 1$$

APPENDIX II: SIMULATION OF CONNECTIVITY

In this analysis, I used a few 100×100-pixel grids to simulate the spatial configuration of two kinds of neighborhoods. I found that connectivity was sensitive to a few input parameters.


Figure AII-1 Target Moran's I vs simulated Moran's I in the simulations.

Figure AII-1 demonstrated the relationship between the targeted Moran's Index I set for each simulation, and Moran's I realized.
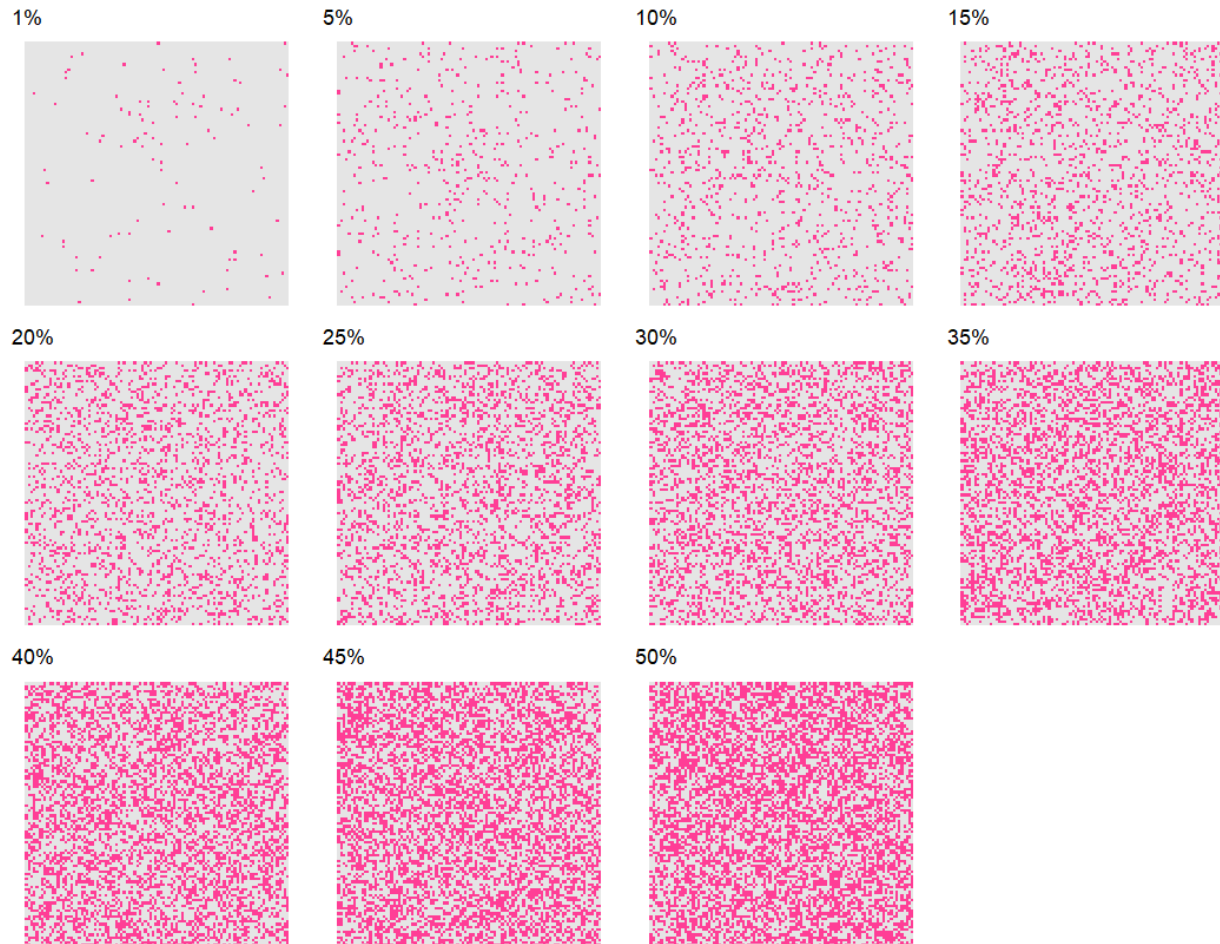
Figure AII-2 Spatial configuration in the cell grid before the cell-swapping.

The figure above illustrates the spatial configuration in the cell grid before the cell-swapping (depicting how the spatial configuration would appear if the two types of cells were randomly positioned), with varying proportions of red cells (1%, 5%, 10%, 15%... 50%).
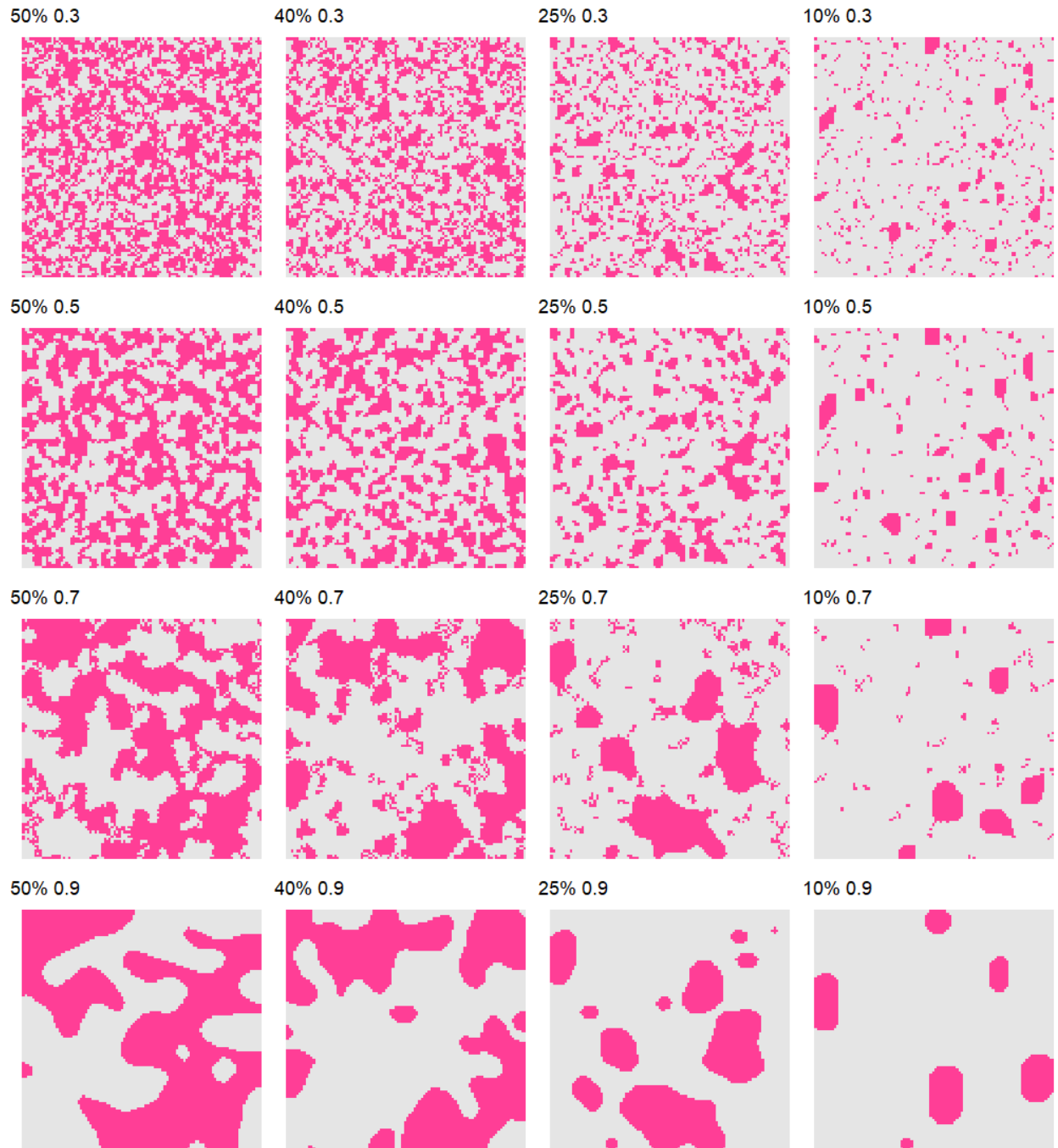
Figure AII-3 Spatial configuration in the cell grid after the cell-swapping.

The above figure depicts the resulting spatial configuration after the cell-swapping process, with different parameters for 1. the proportion of red cells (10%, 25%, 40%, 50%) and 2. the targeted level of segregation (Moran's I equal 0.3, 0.5, 0.7, and 0.9).
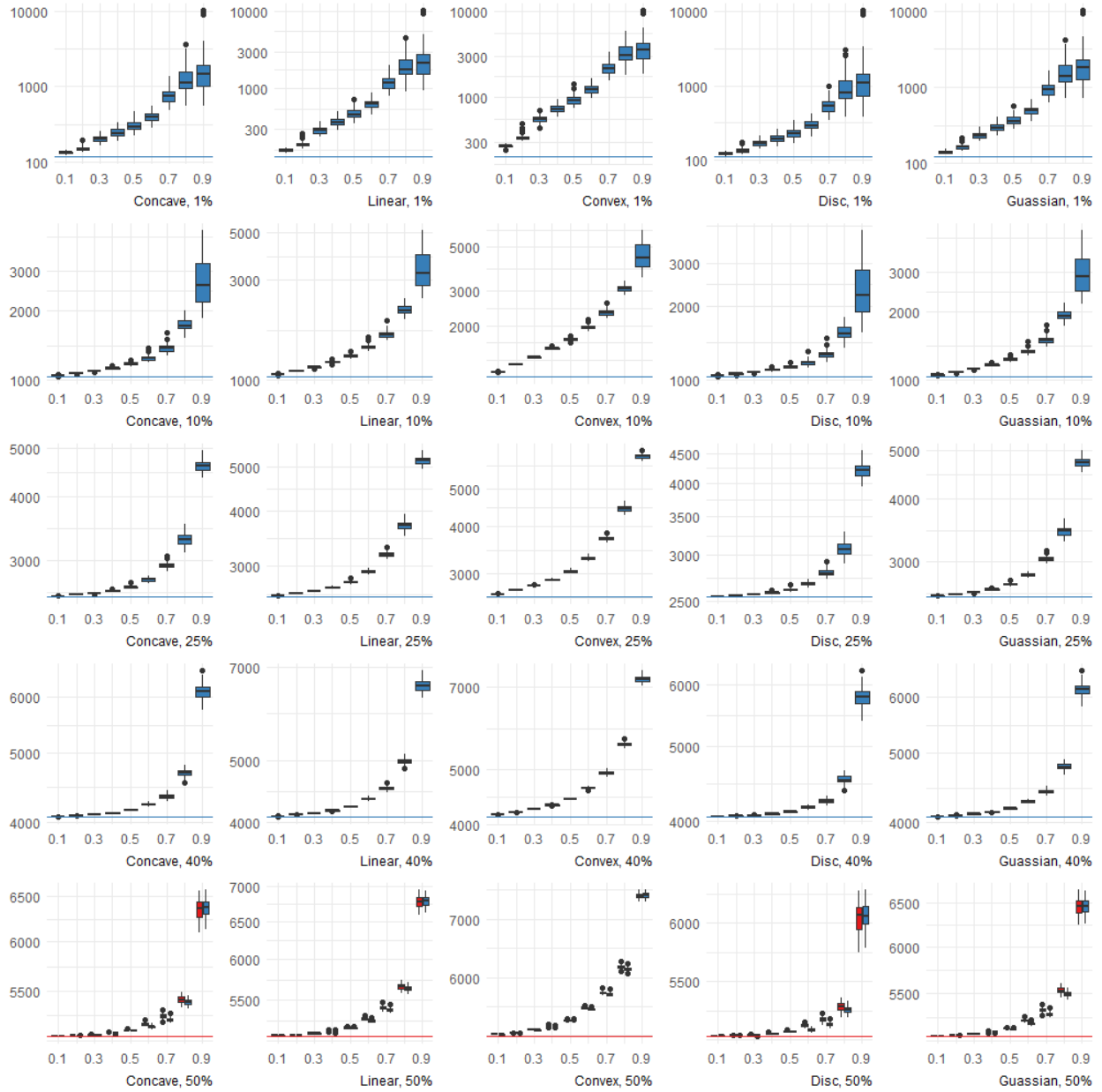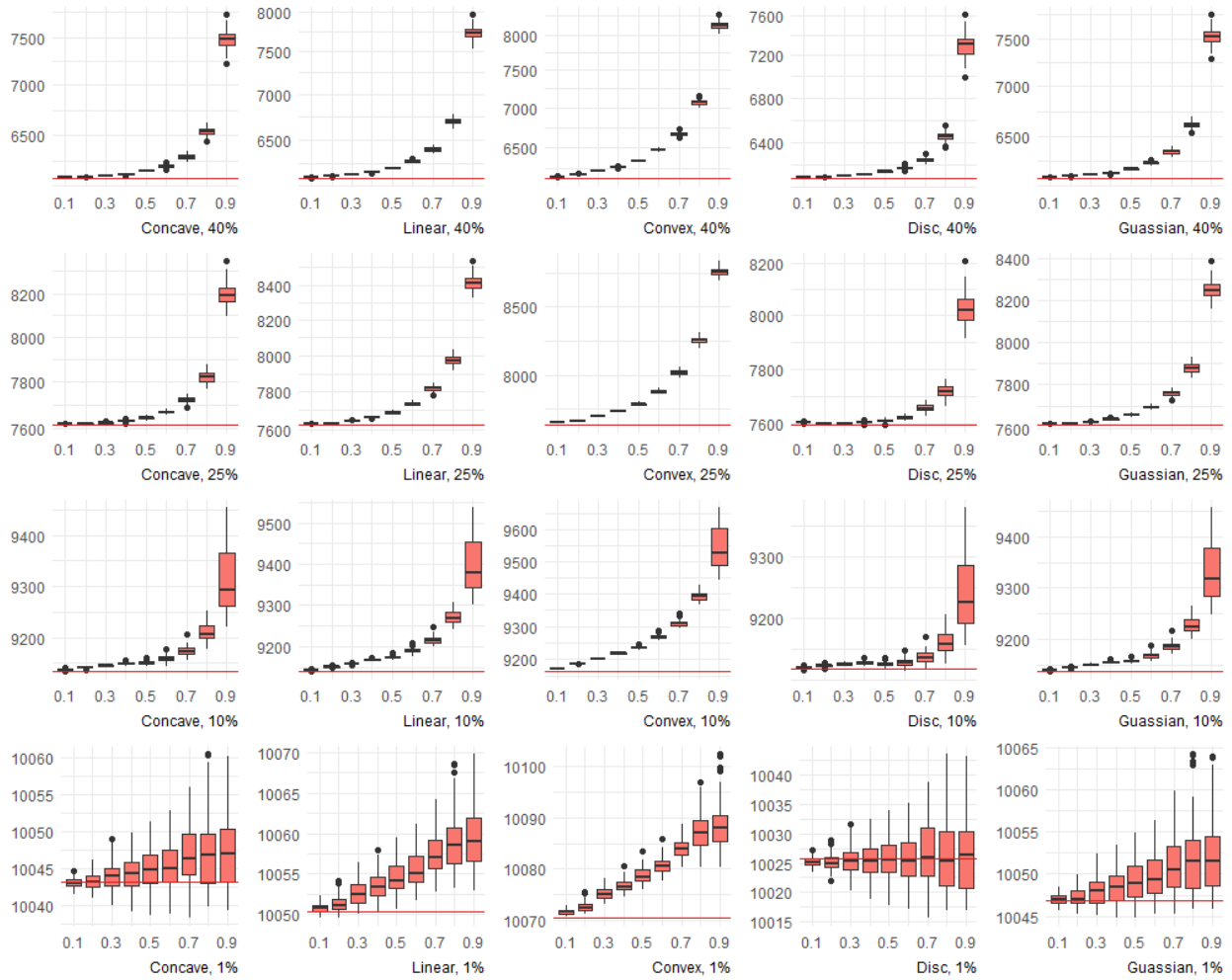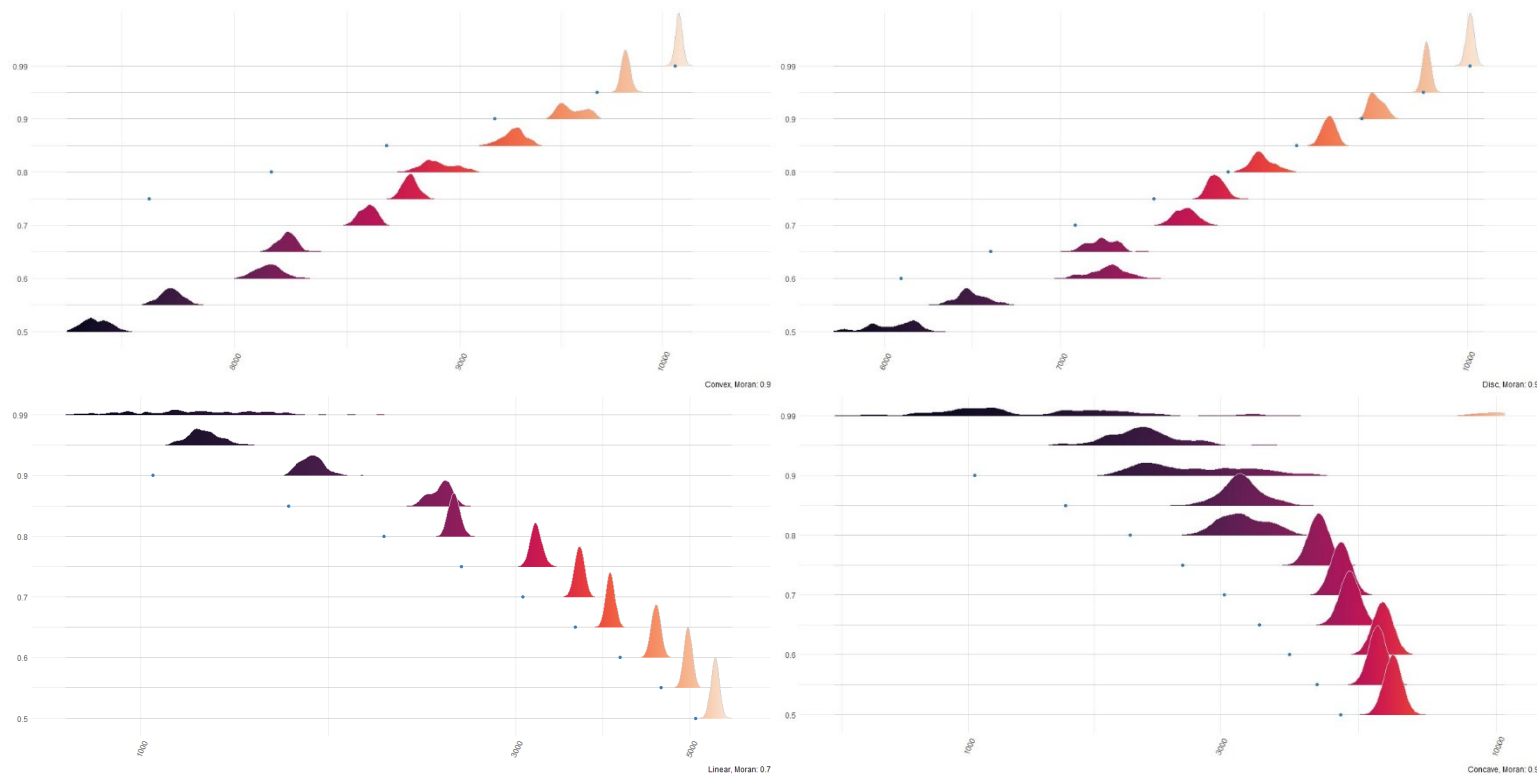
Figure AII-4 Calculated magnitude of connectivity of pink and grey cells.

The above figure (Figure AII-4) depict the calculated magnitude of connectivity of the two types of neighborhoods (blue color: pink community, red color: grey community), under three various parameters: 1. (by column) five different ways to depict the connectivity between two cells (Concave, Linear, Convex, Disc, and Gaussian function). 2. (by row) various proportions of the pink cell. 3. (in each figure, by X-axis) various levels of segregation (targeted Moran's I, equals to 0.3, 0.5, 0.7, and 0.9).

Figure AII-5 Calculated magnitude of connectivity of pink and grey cells.
Parameters used in figures (connectivity function, targeted Moran's I):
Top-left: Convex, 0.9; Top-right: Disc, 0.9; Bottom-left: Linear, 0.7; Bottom-right: Concave, 0.9

The figures above illustrate the calculated connectivity in a few selected scenarios. The Y-axis represents the proportion of pink cells, while the X-axis denotes the calculated connectivity (dot: before the cell swapping, distribution: after the cell swapping). The top two figures depict the connectivity of pink cells, and the bottom two figures represent grey cells.

APPENDIX III: PROVINCES AND KODAM
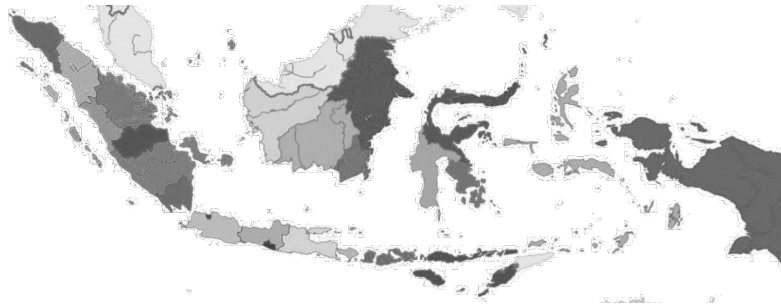
Figure AIII-1 Provinces in Indonesia in 1965.
Note: There were 25 provinces (and equivalent political units) in Indonesia in 1965. The number has increased to 38 by the end of 2023. In addition, the names of some provinces have changed since 1965.

Geographic Unit	Province or Equivalent	English Name	Capital	Fate
Java and Madura	Daerah Khusus Ibukota Jakarta Raya	Greater Jakarta Special Capital Region	Jakarta	Renamed from Jakarta Raya
	Jawa Barat	West Java	Bandung	
	Jawa Tengah	Central Java	Semarang	
	Jawa Timur	East Java	Surabaya	
	Daerah Istimewa Yogyakarta	Special Region of Yogyakarta		
Daerah Luar*	Daerah Istimewa Aceh	Aceh Special Region	Banda Aceh	Renamed from Aceh
	Sumatera Barat	West Sumatera	Padang	Founded in 1958
	Sumatera Selatan	South Sumatera	Palembang	
	Sumatera Utara	North Sumatera	Medan	
	Lampung	Lampung	Bandar Lampung	Founded in 1964
	Jambi	Jambi	Jambi	Founded in 1958
	Riau	Riau	Pekanbaru	Founded in 1958
	Kalimantan Barat	West Kalimantan	Pontianak	
	Kalimantan Selatan	South Kalimantan	Banjarmasin	
	Kalimantan Tengah	Central Kalimantan	Palangkaraya	
	Kalimantan Timur	East Kalimantan	Samarinda	
	Sulawesi Selatan	South Sulawesi	Makassar	Founded in 1964
	Sulawesi Tengah	Central Sulawesi	Palu	Founded in 1964
	Sulawesi Tenggara	Southeast Sulawesi	Kendari	Founded in 1964
	Sulawesi Utara	North Sulawesi	Manado	Founded in 1964
	Bali	Bali	Denpasar	Founded in 1958
	Nusa Tenggara Barat	West Nusa Tenggara	Mataram	Founded in 1958
	Nusa Tenggara Timur	East Nusa Tenggara	Kupang	Founded in 1958
	Maluku	Maluku	Ambon	
	Irian Barat	West Irian	Jayapura	Renamed Irian Jaya in 1973. Now Papua

Table AIII-1 Provinces in Indonesia in 1965.
Note: *: the regions outside Java and Madura Islands. In the census it was referred to as Diluar Jawa Madura, while it was also referred as Nusantara in more dated documents.

ID	Name	Location	Date	Meaning
I	Iskandar Muda	Aceh	1956	12th Sulṭān of Acèh Darussalam, under whom the sultanate achieved its greatest territorial extent.
II	Bukit Barisan	North Sumatra	1950	Barisan mountains, mountain range on the western side of Sumatra.
III	17 Agustus	West Sumatra, Riau area	1958 (now dissolved)	The August 17 operation was a military operation led by Colonel Ahmad Yani to crush the movement of the PRRI in West Sumatra[74] .
IV	Sriwijaya	Southern Sumatra	1946	Shining victory, a victorious country in Sumatra from 7th – 11th century (Chinese: 三佛齐).
V	Jayakarta	Greater Jakarta[75]		Old name of Jakarta.
VI	Siliwangi	West Java	1946 (now III)	Legendary king or ruler of the Sundanese kingdom of Pajajaran in West Java. The historical figure is sometimes regarded as a heroic and wise leader.
VII	Diponegoro	Central Java	1950 (now IV)	The eldest son of the Yogyakartan Sultan Hamengkubuwono II, important in the 1825-1830 Java War, a symbol for the revolution
VIII	Brawijaya	East Java	1948 (now V)	Majapahit, a great kingdom in Indonesia from the twelfth to fifteenth century.
IX	Mulawarman	East Kalimantan	1958 (as VI)	King of the Kutai Martadipura Kingdom located in eastern Borneo around the year 400 CE.
X	Lambung Mangkurat	South Kalimantan	1958 (now dissolved)	The 2nd king or ruler of the Negara Dipa Kingdom (later the Sultanate of Banjar).

Table AIII-2 Koram *in Indonesia in 1965.*
Note: see Chapter 4 for the figure.

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[74] Revolutionary Government of the Republic of Indonesia.
[75] Known as *Jabodetabekpunjur*.

ID	Name	Location	Date	Meaning
XI	Tambun Bungai	Central Kalimantan	1958 (now dissolved)	War hero figure in the ancient Dayak Ngaju tribe, namely the Kerajaan (kingdom) Tanjung Pematang Sawang.
XII	Tanjungpura	West Kalimantan	1958	An ancient 8th-century kingdom that was located along the southwestern coast of Borneo facing the Java Sea.
XIII	Merdeka	North Sulawesi	1958	Term of Independent and free.
XIV	Hasanuddin	South Sulawesi	1957	King in Gowa.
XV	Pattimura	Maluku islands	1959 (now XVI)	A famous Ambonese soldier (1783-1817) who became a symbol of both the Maluku and Indonesian struggle for independence
XVI	Udayana	Lesser Sunda	1957 (now IX)	An Indian philosopher and logician of the tenth century of the Nyaya school who attempted to devise a rational theology to prove the existence of God
XVII	Cenderawasih	Papua	1963	Bird of paradise, local name of

ID	Name	Headquarters	Active since	Meaning
081	Dhirotsaha Jaya	Madiun	1963	In Sanskrit, "Dhira" means wise or brave, and "Utsaha" means enthusiasm or effort. So, "Dhirotsaha" might be interpreted as wise or brave effort and enthusiastic wisdom.
082	Citra Panca Yudha Jaya	Mojokerto	1948	In Sanskrit, Citra typically means 'image', or 'representation,' Panca means 'five'; Yudha means 'war' or 'battle'; Jaya means 'victory' or 'success'. So, "Citra Panca Yudha Jaya" could be interpreted as "The Image of Five Battle Victories".
083	Baladhika	Malang	1963	In Sanskrit, Baladhika could be derived from "Bala" meaning 'strength'; 'force', or 'army' and "Adhika" meaning 'superior' or 'excellent'. Thus 'Baladhika Jaya' means 'superior strength'.

Table AIII-3 Etymology of Korem *in* Kodam *Brawijaya.*
Note: see Chapter 4 for the figure.

APPENDIX IV: INDONESIAN TERMS AND ABBREVIATIONS

Abangan   Javanese people who are Muslims and practice a much more syncretic version of Islam than the more orthodox *santri*

ABRI   *Angkatan Bersenjata Republic Indonesia* (Armed Forces of the Republic of Indonesia)

Aksi sepihak   Unilateral action. In this dissertation, it refers to the actions to implement land reform legislation by the PKI and their affiliated organizations.

Ansor   *Gerakan Pemuda Ansor* (Ansor Youth Movement), a youth organization affiliated with the NU. The name Ansor was derived from *Ansar* (الأنصار, al-Anṣār, "The Helpers")

Banser   *Barisan Ansor Serbaguna* (Ansor Multipurpose Brigade), militias affiliated with Ansor

BTI   *Barisan Tani Indonesia* (Indonesia Peasants' Front)

Desa   Sub-district level administrative division in Indonesia

G30S   *Gerakan 30 September* (September 30th Movement)

Gerwani   *Gerakan Wanita Indonesia* (Indonesian Women's Movement)

Kabupaten   Regency or district, a sub-province level administrative division of Indonesia

Kecamatan   Subdistrict, a sub-regency level administrative division of Indonesia

Kyai   Ulama, expert in Islam

Kodam   *Komando Daerah Militer*, Military Regional Command

Kodim   *Komando Distrik Militer*, Military District Command

Koramil   *Komando Rayon Militer*, Military Subdistrict Command

Korem   *Komando Resor Militer*, Military Subarea Command

Masyumi   *Partai Majelis Syuro Muslimin Indonesia* (Council of Indonesian Muslim Associations)

Muhammadiyah   Followers of Muhammad, a major Islamic organization in Indonesia

NU   *Nahdlatul Ulama* (Revival of Ulama, council of Islamic scholars)

Pancasila   Five Principles, Indonesia's national philosophy

Pesantren   Islamic boarding schools in Indonesia.

PETA   *Pembela Tanah Air* (Defenders of the Fatherland)

PKI   *Partai Komunis Indonesia* (Communist Party of Indonesia)

PNI   *Partai Nasional Indonesia*, Indonesian National Party

PRRI   *Pemerintah Revolusioner Republic Indonesia* (Revolutionary Government of the Republic of Indonesia)

TNI   *Tentara Nasional Indonesia* (Indonesia National Army)

Santri   A term for someone who follows Islamic religious education in *pesantren*