

Mandala Matters: Former Tributary States and Modern Civil Conflict in Thailand

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Abstract

Thailand's former governance structure, known as a mandala system, defined an area's strength of relationship with the center, Bangkok, and outlying tributary polities based on its geographic proximity to both. Using novel civil conflict data covering 1970-2015, we find that long after the abolishment of the mandala system in the nineteenth century, proximity to a former tributary state continues to be associated with a strong local identity and higher levels of separatist violence today, controlling for distance to the state capital, borders, and other geographic and socio-economic factors.

Keywords: Southeast Asia; Thailand; civil violence; historical government institutions

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1. Introduction

How does one explain the spread and persistence of civil violence and mobilization against the state? Since the 1960s Thailand has witnessed a series of anti-government and separatist movements that have often resulted in violence and casualties. Economic disparity and ethno-religious divisions, often cited as determinants of civil conflict (e.g. Cederman, Gleditsch, and Weidmann 2011, Horowitz 1985, Siroky 2011), have certainly featured prominently in the country. Thailand has relatively high income inequality and comprises diverse ethnic communities and a large Muslim minority within a predominantly Buddhist population. The country's civil conflicts have spread far and wide, from the southern tip of the country to the northern and northeastern borders.

In addition to these well-established determinants of conflict, Thailand provides an interesting case of separatism based on its former political system and subsequent political reform, which we argue to be critical for explaining the location and spread of civil conflict in the country today. In this paper, we specifically aim to demonstrate the importance of local identity with former tributary states in Siam (as Thailand was formerly known) in explaining civil conflict today. The case of Thailand speaks to a growing literature on the legacies of historical polities, which predominantly focus on the aftermath of territorial border changes and institutions due to plausibly exogenous historical events.¹ Adding to these existing works is the concept of local identities and governance structure defined by proximity to polity cores instead of territorial borders. This type of polity system stood very much in contrast to modern territorial states in Europe but prevalent in Southeast Asia. At the same time, our

¹ Becker et al. (2014) for example investigates the long-run legacies of the Habsburg Empire, which increased the level of trust and reduced corruption in regions formerly ruled by the empire. Grosfeld et al. (2013) finds that the people living in the "Pale of Settlement" area under the Russian Empire have become more trusting of others but less entrepreneurial, stemming from snit-Semitism. Acemoglu et al. (2011) finds the "creative destruction" by the French occupation of German regions following the French Revolution led to a series of reforms and the adoption of the French civil code, and subsequent urbanization. Nunn (2014) further provides an overview of the literature written on the long-term effect of historical development.

paper further describes a unique setting in Siam. Unlike the rest of Southeast Asia, the kingdom maintained its sovereignty under colonial threat to an independent modern sovereign state through internal reforms. This sets the Thailand case apart from numerous other studies that look at the impact of new institutional reforms, implemented and directly enforced by colonizers and other external forces.² Finally, our findings contribute to the Thai studies literature on civil conflict, which has mainly focused on the determinants of political grievances and separatism against the state from a qualitative approach. By introducing a novel set of data that extends beyond the years covered by the PRIO initiative, we are able to investigate the root of separatist movements in Thailand with empirical analysis to support our claim.

Siam's traditional government system in use until the late nineteenth century is often called a "mandala system". The mandala consists of a core (*manda*), the center of authority, and a periphery (*la*) that encircles the core (Tambiah 1977). The periphery consists of satellite principalities in a tributary relationship with the core kingdom, and the political structure does not revolve around the control of land by the core, but rather the control of the population (Tambiah 1977). Importantly, the geographical boundaries are not fixed, and the authority's influence on its peripheries expand in concentric circles from the center. Diminution of Siam's power over distance describes the political theory of Siam and roughly how politics operated on the ground, in contrast to the modern territorial state that we have come to know today.

In the following, we argue that the rebelling minority groups in Thailand are generally located in the regions which had been geographically closer to these historical tributary states. Under the mandala system, villages and towns surrounding the cores of tributary centers identified themselves as part of these tributary states rather than Bangkok-centered Siam. Importantly, we argue that this local

² A large literature on the colonization process of the New World and India, for example, focuses on the legacies of colonization. See the earlier works by Acemoglu et al. (2011) and Banerjee et al. (2005) for examples, among others. Paik and Vechbanyongratana (2017) discuss in detail a series of centralization efforts that Siam undertook in order to thwart the Western imperialists from claiming their dominance over Siam.

identity persists over generations and is expressed through grievances against the central government, which in turn manifest themselves in the form of civil conflict across districts in Thailand.

To get a sense of the persistence of local identity formed around historical tributary centers, consider the case of Satun province, a Muslim majority province (83 percent in 1960) located on the southwest coast of Thailand bordering Malaysia (Central Statistical Office 1960). Satun is located on the opposite side of a steep mountain range and approximately 140 kilometers away from the Kedah sultanate, which came into a tributary relationship with Siam in the late eighteenth century. In comparison, Narathiwat is a southernmost province bordering Malaysia, located less than a hundred kilometers across flat plains from the historical Pattani sultanate. Similar to Satun, the population in Narathiwat is predominately Muslim (78 percent in 1960) (Central Statistical Office 1960). Although the two provinces look very similar to each other in terms of location, ethnicity, and religion, the modern conflict outcomes are very different. On average, districts in Satun experienced 1.7 fatal civil violence events involving the government over the period of 1970 to 2015, compared to 34.4 for Narathiwat.³

A lack of a shared historical identity likely accounts for these differences in civil violence outcomes (Suwannathat-Pian 2008). Both the sultanates of Kedah and Pattani had chronicles—the *Hikayat Marong Mahawangsa* and *Hikayat Patani*, respectively—that established their historical political pasts, acknowledged the existence of and its tributary or kinship relationships with Siam, recognized each other as separate kingdoms, and asserted their independent local identities (Virunha 2008).⁴ However, when Satun, which was on the periphery of Kedah's mandala influence, was

³ Authors' calculations from the UCDP Georeferenced Event Dataset and data collected from the *Bangkok Post*.

⁴ Southeast Asian polity centers often had their own local histories recorded in chronicles that served the functions of placing the polity within the larger Buddhist or Islamic realm, as well as recounting the polity's origins, chronology of rulers, and important historical events. These chronicles elucidated the political relationships within the larger mandalas (i.e. Ayutthaya, Bangkok, Melaka, Johor, etc.) from a local perspective, including the nature of tribute, the degree of independence from the larger power centers, and conflicts with the mandala centers (Virunha 2008).

separated nationally and administratively from the historical core in 1909, there was no subsequent rewriting of Kedah's history as a response to crisis and a device to reassert Kedah's autonomous identity on Satun. In comparison, Narathiwat was part of the core of the Pattani sultanate. New local histories of Pattani written in the chronicle style have been produced over the twentieth century; these histories redefine the shared identity of the population that resides in the former Pattani sultanate vis-à-vis the central state and call for outright separatism (Virunha 2008; Puaksom 2008). Thus, even though Satun on the surface looks very similar in ethno-religious and economic terms to Narathiwat, the lack of shared identity with their historical tributary center likely explains the divergent violence outcomes across the southern provinces (Suwannathat-Pian 2008).

According to the mandala system, the distance from each district to the closest former tributary state can proxy for historical allegiance to and identity with the local authority. In looking at the proximity measure, our study follows James Scott's (2009) seminal work. Scott (2009) argues that people residing in Zomia (borderland regions in upland Southeast Asia) were those who conscientiously made decisions to avoid being ruled under national state societies by settling down in regions far away from the center. This claim would suggest that the inhabitants in these borderlands, located away from the administrative center, would likely resist assimilation and prefer local autonomy.

While similar in proposing that geographic distance from the center is important, the mechanism presented in this paper is more nuanced than the one suggested by Scott (2009). In our study, we consider the possibility of multiple centers from which distance can be measured. The focus is on the distance between each district and the nearest historical tributary center, as well as the distance to Bangkok and the modern national borders. Applying Scott's theory, we argue that people historically chose to move far away from certain polities, which often meant that they settled in locations that were closer to other competing polities. In choosing the location of settlement, they also

chose to form their identities around the polities that were closest to them, and these identities continue to persist today, to the detriment of nation-making efforts by the central government.

As an example, the male population in areas surrounding Siam's bureaucratic center (formerly Ayutthaya and later Bangkok) and other smaller polities (*muang* including tributary centers) within Siam's realm was historically required to provide annual corvée service for activities such as soldiering, building temples, and digging canals (Baker and Phongpaichit 2009). While many submitted to the demands of the local polities across Siam, many also evaded corvée obligations by moving to remote areas beyond the reach of local *muang* and Ayutthaya/Bangkok authorities (Baker and Phongpaichit 2009). That is, those who did not want to be governed moved into intermediate spaces that were beyond the reach of competing regional political centers as well as Ayutthaya and Bangkok. Those who instead chose to settle in areas near the *muang* centers and submit to local corvée demands would presumably create a greater sense of local identity with their respective political centers.

For our empirical exercise, we use the distance from each district to the closest former tributary state, and interpret this distance as a proxy for historical allegiance to and identity with the local authority. We also construct a novel district-level domestic civil violence dataset for Thailand covering the years 1970 to 2015. The dataset is compiled from two separate sources. For the years 1989 to 2015, we use the UCDP Georeferenced Event Dataset compiled by the Peace Research Institute of Oslo (PRIO), which provides global geo-coded incidents of violence. Since the series is only available from 1989, we extend the dataset by extracting fatal civil conflict incidents involving the Thai government from a major English language Thai newspaper, the *Bangkok Post*, going back to 1970, the earliest year for which the *Bangkok Post* has records available.

In the main findings, we take into account all three dimensions of a district's political relationships: the historical political relationship to a tributary state, proxied by the distance between each district and its closest former tributary center, distance to the state's administrative center (Bangkok), and distance to the modern borders of Thailand. We show that a district's proximity to its historical tributary center is associated with a higher level of civil violence against the central state, after controlling for a district's distance to Bangkok, distance to the nearest country border, as well as

a number of other geographic and economic controls. For every 100 kilometers further a district is located from a former tributary center, the expected number of fatal civil conflict incidents witnessed by that district drops by 54 percent. We also show that the distance effect on conflict appears to be obtained through the district's historical ties to its closest former tributary state as presented in this paper, and not through income levels or the religious divide.

The paper proceeds as follows. In the next section, we provide historical background on mandala relationships, the centralization of Thailand, and the subsequent emergence of grievances and civil violence against the state. Section 3 provides a brief overview on the literature looking at economic disparity and ethnic and religious composition as the main drivers of civil conflict in Thailand, and present local identities formed under the mandala system as another important factor related to the violence outcomes. Section 4 explains our data collection and the use of the UCDP Georeferenced Event Dataset in more detail, and section 5 lays out our empirical strategy. Sections 6 and 7 present our main findings and robustness checks. Section 8 concludes.

2. Historical Background

Mandala states

Bangkok, established as the capital of Siam in 1782 after the fall of Ayutthaya, maintained strong control over provinces in close geographic proximity to Bangkok, and formed the core of Siam since the 15th century (Bunnag 1977). Siam's tributary states were generally geographically distant from and functioned independently of Bangkok. They chose their own royal families/hereditary leaders, governments, and laws, but they regularly paid tribute and ceremonially declared their loyalty to Bangkok. Siam's military advances and strategic alliances formed at the end of the eighteenth century brought several regional polities into the mandala tributary relationship with Bangkok, including: Chiangmai, Lamphun, Lamphang, and Nan in the north; Luang Prabang, Vientienne, and Champasak in Laos; Siam Riap and Battambang in Cambodia; and the Malay Sultanates of Pattani, Kelantan, Kedah, and Terengganu located in Southern Thailand and Malaysia. Mandala polity systems did not seek to assimilate, meaning that it was not incongruous for polities to submit to a mandala center while being linguistically and religiously distinct. Tributary centers had their own

local identities that were separate from the identities of the mandala center(s) and other neighboring polities (Virunha 2008).

Centralization Process and Grievance Formation

By 1909, the majority of the tributary centers located in the peripheries were colonized by the British and French with the exception of the northern tributaries (Chiangmai, Lamphun, Lamphang, and Nan) and Pattani in the south. In response to western colonial pressures in the region, King Chulalongkorn pursued the centralization of Siam's administration and brought the peripheral areas under a measure of direct control by Bangkok starting in the late nineteenth century. Peripheral populations were brought more firmly into the central government bureaucracy after the 1932 Revolution, especially under the administrations of Prime Minister Plaek Phibunsongkhram (1938-1944 and 1948-1957). As a response to the international political climate during World War II, Phibunsongkhram's administration enacted nationalist policies across the country based on central Thai identity in order to establish the country as a unified "civilized" society in the eyes of the international community (Aphornsuvan 2008). The nationalist policies included the imposition of the central Thai dialect as the official language used in schools and government offices, the abolishment of the use of Islamic law and courts in the Islamic south, the adoption of Western dress in public, and the adoption of Buddhism as the official religion (Aphornsuvan 2008; Suwannathat-Pian 2008).

The process of centralization, the progressive reach of the state into the everyday lives of the peripheral populations, and the implementation of Thai nationalist policies all became causes of grievances against the state by populations living in close proximity to former tributary centers in the northeast, north, and south. These populations were largely ethnically and linguistically distinct from Thais living in the Central Plain in close proximity to Bangkok.⁵ The mandated use of the central Thai

⁵ The upper northeastern population shared a common language and culture with the Lao on the east side of the Mekong. In fact, Lao-speaking Thais outnumbered Thai-speaking Thais on the Thai side of the Mekong River and made up one third of Thailand's population in 1960 (Osornprasop 2012). The population living in provinces

dialect in government offices largely excluded non-Thai speakers from government services. Also, the compulsory school curriculum was delivered in the central Thai dialect rather than regional languages, covered Bangkok-centric versions of history, social studies, and national ideology (Baker and Phongpaichit 2009). Other grievances in the south included increased tax burdens with no appreciable benefits from the state (Syukri 2005) and the abolishment of Islamic law and courts (Aphornsuvan 2008). Communities in the mountainous north lost their livelihoods due to a government ban on opium cultivation and the appropriation of forests in the name of protection and security (Tapp 1989). The upper northeastern part of the country was largely excluded from government investment through the mid-twentieth century, leaving the region the poorest in the country (Paik and Vechbanyongratana 2017). These are only a few examples of how the increasing reach of the central government into the peripheral communities with historical ties with former tributary states had negative consequences that sowed the seeds of violent opposition against the central state.

Rise of separatist and communist movements in Thailand

Growing discontent led to calls for increased regional autonomy or outright separatism in Thailand's peripheral areas in the aftermath of World War II and against a backdrop of decolonization in the region. With only a few notable exceptions, however, violent events against the Thai government related to grievances against nationalist policies or separatist ambitions were rare in the first half of the twentieth century. Violent events attributed to the southern separatist movement began in earnest in 1968, which was concurrent with the rise of political instability and the spread of the communist movement across Southeast Asia in the late 1960s. The communist movement in Thailand embraced the peripheral populations' growing frustrations with forced assimilation policies, economic

along the Cambodian border was largely Khmer speaking. The hill tribes of the north were a diverse group of ethnicities and languages with historical ties to the northern tributaries and China (Tapp 1989). Finally, the population in the southernmost provinces along the Malaysian border were predominantly Malay speaking Muslims.

deprivation, and general increased intervention of the central state in daily life (Baker and Phongpaichit 2009). The Communist Party of Thailand (CPT) thus followed the Chinese model of initiating a rural revolution and started sending representatives to organize the peasantry starting in 1961 (Baker and Phongpaichit 2009). It is no coincidence that the rural CPT bases were established in areas where the population was formerly under the influence of eighteenth-century tributary states.

The first armed clash between a communist guerilla group and a police patrol took place in 1965 with violent incidents escalating and peaking in 1977 (Baker and Phongpaichit 2009). The communist insurgency was very widespread across Thailand. By 1969, 35 of 71 provinces in Thailand had communist activities, and by the mid-1970s armed guerrillas numbered 8,000, the CPT completely controlled 412 villages, and the CPT had influence over 4 million people residing in another 6,000 villages (Baker and Phongpaichit 2009). Violence associated with the southern insurgency and the communist movement both escalated in the 1960s and waned in the 1980s. In the case of communist movement, internal conflict within the CPT, the loss of support from abroad, and amnesty extended to the CPT members in the early 1980s brought the communist movement in Thailand to a fairly abrupt end (Anderson 1993). There was also a concurrent cessation of violence associated with the southern insurgency due to amnesty extended to insurgents (McCargo 2012), regional economic development and an embracing of regional culture and identities (Suwannathat-Pian 2008), as well as increased political participation and representation (Ockey 2008). This period of relative calm in Thailand lasted through the 1990s.

Violence in the three southernmost provinces reemerged in 2001 with a significant escalation in lethal incidents in 2004. The election of Prime Minister Thaksin Shinawatra in 2001 brought a more forceful approach to dealing with the simmering separatist movement (McCargo 2012). Violence against the central state increased dramatically in 2004 when former Prime Minister Shinawatra ordered a crackdown by security forces in the south that led to many civilian injuries and deaths (McCargo 2012). Prior to the 1970s, the southern conflict was framed as an ethnic “Malay versus Thai” dispute, but there was a shift towards interpreting the conflict in religious terms from the 1970s onwards (Harish 2006). Although the conflict was increasingly taking on a religious dimension and the uptick in violence coincided with the 9/11 terrorist attacks in the United States by the Islamic

extremist group, Al-Qaeda, it is generally believed that the increase in violence in southern Thailand at this time stemmed from factors independent of the global Islamic movement (Liow and Pathan 2010). No direct ties have been established between separatists in the south and international Islamist organizations. However, some believe that while there was no such tie, the global Islamic movement did embolden the southern separatist movement and indirectly contributes to the violence in the south (Gunaratna, Acharya and Chua 2005).

3. Causes of Civil Conflict

Numerous works in the conflict literature look at the prominent role of economic inequality as a driver of grievances among the relatively disadvantaged ethnic groups, who may then pursue political mobilization (Sambanis 2005; Østby 2008; Østby et al. 2009; Cederman et al. 2011).⁶

Historical works on Thailand have also attributed economic disparity in peripheral provinces to be one of the main factors behind the rise of violence in the northeastern and northern regions during the Cold War period (Tapp 1989; Wyatt 2003; Baker and Phongpaichit 2009). However, the grievance argument by the economically disadvantaged falls short of explaining the separatist movement in the southern provinces, which on average have higher relative income levels than the northeastern and northern provinces, and yet witnessed the most rampant spread of violence in recent years.

Other studies that focus on the political unrest in the southernmost provinces note that the ethno-religious divide between the Thai Buddhist majority and the Malay Muslim minority is an increasingly important driver of the conflict (McCargo 2012). The separatist movements in the southern regions surrounding Pattani, for example, can be described as a “sons-of-the-soil” conflict as theorized by Myron Weiner (1978): the dominant majority (Thai Buddhist) takes possession of the land (Pattani and surrounding southern provinces) long considered the homeland of the minority group (Malay Muslim). James Fearon and David Laitin (2011) also list features that characterize the

⁶ More broadly, it has been long established that political instability may be impacted by economic standing and development (Barro 1991, 1997; Alesina et al. 1996; Fearon and Laitin 2003) as well as ethnic and religious diversity (Easterly and Levine 1997; Esteban and Ray 1999; Reynal-Querol 2002).

sons-of-the-soil conflict dynamics in Thailand leading to grievances and civil war: Malay Muslims of the Pattani region have historically identified themselves as separate from the Thai Buddhist majority; there was a history of Thai Buddhists relocating to the Pattani region; low-level violence in the region continued on with intervention from the central government; and finally, systematic assimilation of the minority and promotion of nationhood was evident through national language policies and education in public schools.⁷ The northern hill tribes also experienced a similar fate with concerted Buddhist missionary efforts, ethnic Thais settling on available agricultural land, and assimilation through compulsory schooling and the national(ist) curriculum (Tapp 1989).

These claims likely hold true for minority groups in Thailand, but we also show below that each district's local identity formed under the mandala system is an overlooked component that can also explain the origins of separate regional identities and modern civil conflict.

4. Data

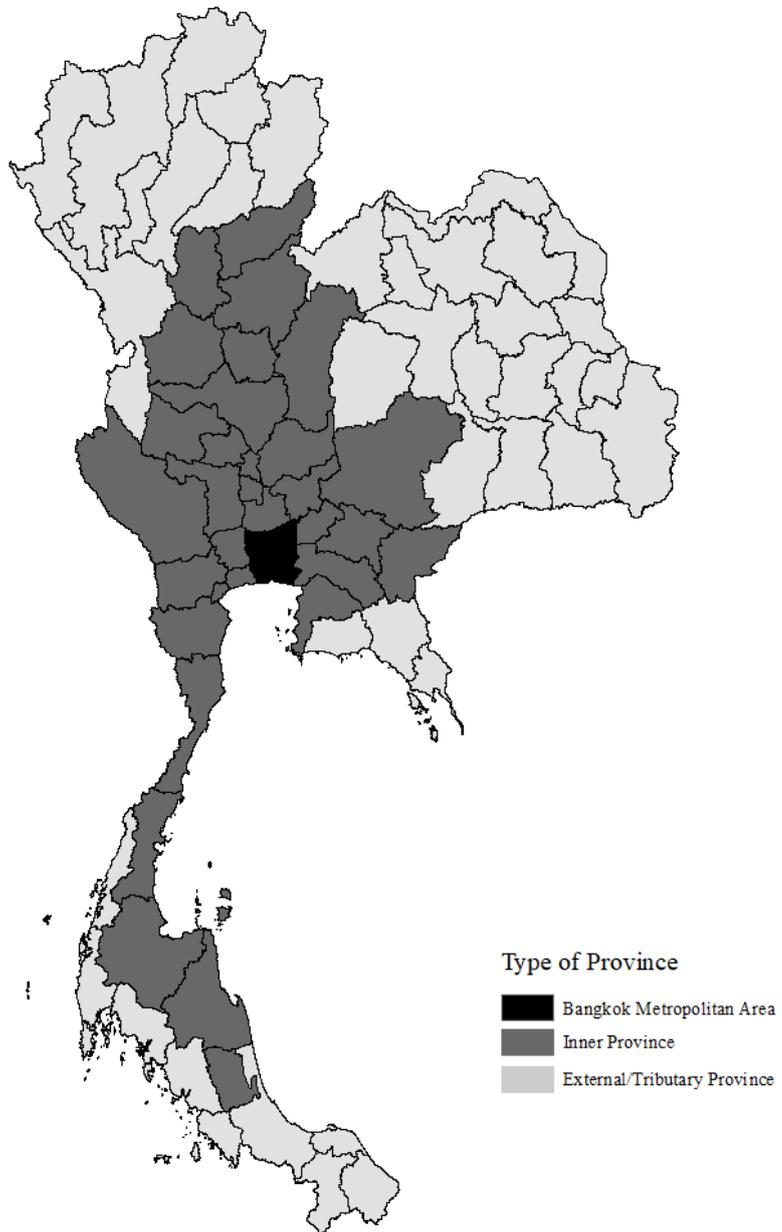
The main empirical exercise in this paper determines the relationship between a district's distance from the nearest former tributary center—a proxy for the strength of local identity—and the incidence of lethal civil conflict events involving the Thai government. The civil conflict data used to construct the dependent variable come from two sources. The first source is the UCDP Georeferenced Event Dataset compiled by the Peace Research Institute of Oslo (PRIO). This global dataset contains violent events committed between January 1, 1989 and December 31, 2015. An event is recorded in the database if it met the following criteria: 1) an organized actor commits violence against another

⁷ Harish (2016) for example shows that different types of schools help to perpetuate the idea of Thai versus other ethnic identities, and keep the debate on integration versus secession alive. For example, alternative versions of history on 'Greater Patani' from those of Thai public schools are taught in Muslim educational institutions (*tadikas* and *pondoks*). Instead of promoting Thai culture and assimilating the Malay-Muslims into Thailand, these alternative institutions emphasize the history of the former tributary states as autonomous entities to the Muslim populace, and instill these teachings down generations through their own unique education system.

organized actor or civilians; 2) there is at least one death; and 3) the location and date of the event can be identified (Croicu and Sundberg 2016, 2). The violent incidents were recorded from news reports by well-known news outlets such as the Associate Press, Reuters, etc. (Sundberg and Melander 2013). In addition to the international news outlets, PRIO also gathered reports on violent civil conflict events in Thailand from local Thai English language newspapers, including the *Bangkok Post* and *The Nation*. In order to extend the time period to capture violent events during the Cold War and the communist movement in Southeast Asia, we also collected all lethal civil conflict events between September 1970 and December 1988 reported in the *Bangkok Post* (to our knowledge, the only local Thai source that goes back to 1970 among those used by PRIO). The year 1970 is as far back as the *Bangkok Post's* archive extends, and roughly coincides with the beginning of the violence witnessed in the late 1960s.

For this paper, we specifically utilize the civil conflict events recorded for Thailand that had clear government involvement. The sample is limited to districts that were located in external and tributary provinces that were historically considered outside of Bangkok's direct control on the eve of centralization. We exclude Bangkok and all core areas that were under direct rule by Bangkok in the nineteenth century as defined by Bunnag (1977) and Kermel-Torrès and Lafitte (2004). These core provinces, which formed the core of Siam for centuries, were plausibly not under the influence of outer lying tributary states and thus theoretically not relevant to the tributary relationship as presented in this paper. For reference, the classification of core and external/tributary provinces on the eve of centralization is provided in figure 1.⁸

⁸ In order to check that our results are not being driven by an overly select sample, we also ran the regressions including districts located in all provinces (excluding the Bangkok metropolitan area) and have reported the results in appendix table 2. The results, regardless of which sample we choose, remain qualitatively the same: violence against the state attenuates with distance from the closest tributary center and the results are statistically significant.



Sources: Bunnag (1977); Kermel-Torrès and Lafitte (2004).

Figure 1. Classification of Core and External/Tributary Provinces on the Eve of Centralization

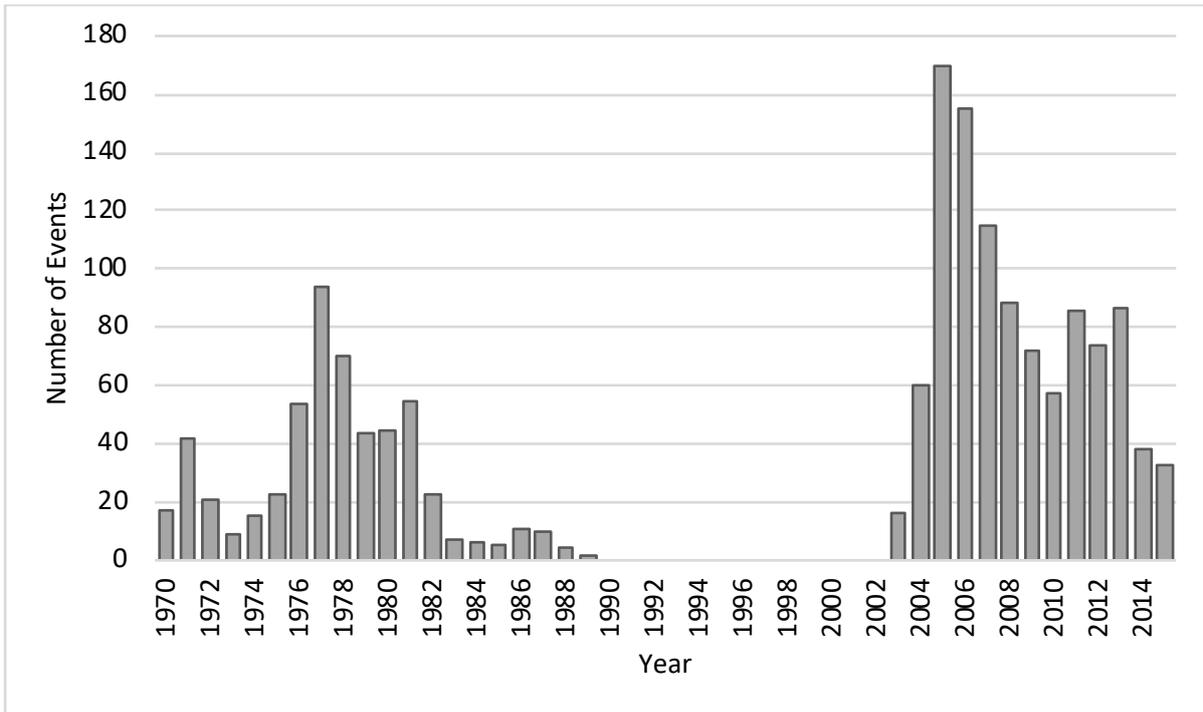
The dataset also excludes districts that were the historical tributary state centers, because there are likely tributary center effects which stem from their initial selection as the polity centers. That is, we are concerned about unobserved factors that led to the selection of these locations as former tributary centers, which in turn affects conflict outcomes. The excluded districts are the administrative centers (*amphoe muang* districts) in the provinces of Chiangmai, Lampun, Lampang, Nan, and Pattani.

The resulting dataset covers 510 districts (*amphoe*) in Thailand and includes 1,608 civil conflict events involving the government that resulted in at least one death over the years 1970 to 2015. The headlines from the news reports tended to describe the civilian combatants as “communists,” “separatists,” or “insurgents.” The events were often described as “ambush,” “clash,” “attack,” or “bombing.” With some notable exceptions, typically the events were short in duration (nearly all taking place in a single day) and recorded very few deaths (the median number of deaths is one per event).

Our data reflect the location of a violent event. While the location of violence is not always indicative of the origins of groups responsible (i.e. global terrorist attacks), in the context of Thailand’s history it generally reflects the locality of the civilian actors. When communists from Bangkok were dispatched to peripheral regions and led violent incidents, it was only with the support of the locals that such efforts became materialized. There is also little evidence that outsiders have been involved in more recent events tied to the separatist movement in the south (Gunaratna, Acharya and Chua 2005). Migration patterns in Thailand as indicated from various censuses are generally consistent with economic migration, with flows primarily to Bangkok, industrial areas, and areas that depend heavily on tourism. In other words, we find no evidence that local incidents were driven by

non-locals.⁹ The intensity of civil conflict varied substantially over time with increased violence coinciding with the Cold War and the post-9/11 period, as shown in figure 2.

⁹ Bangkok has witnessed incidents by non-locals (i.e. the “Red Shirt” protests of 2010 and the political crisis of 2013-2014), but the capital is a clear exception and also excluded from our analysis.

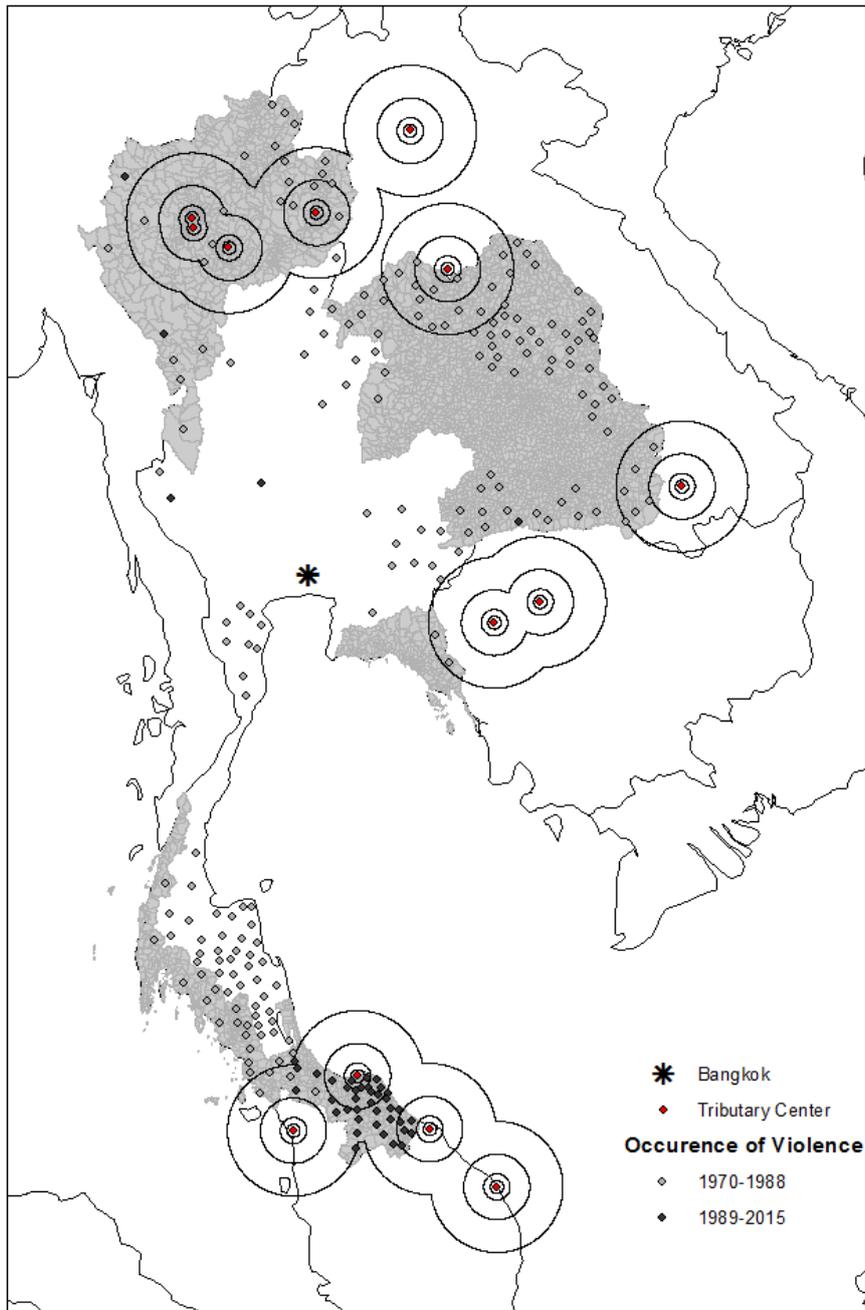


Sources: UCDP Georeferenced Event Dataset; Bangkok Post.

Figure 2. Lethal Civil Conflict Events in Thailand, 1970-2015

The first period between 1970 and 1988 coincides with the Cold War and the communist movement in Southeast Asia. A total of 555 events occurred during this period and were reported in the *Bangkok Post*. An additional 1,053 lethal events occurred in the post-9/11 period and were captured by international news media outlets and major English language Thai newspapers, including the *Bangkok Post*.

Figure 3 combines the geographic distribution and timing of the lethal events with the locations of polity centers brought into a tributary relationship with Siam in the late eighteenth century, including in the north of Thailand (Chiangmai, Lamphun, Lamphang, and Nan), Laos (Luang Prabang, Vientienne, and Champasak), Cambodia (Siam Riap and Battambang), and Southern Thailand and Malaysia (Pattani, Kelantan, Kedah, and Terengganu). The concentric circles around each polity center graphically represent spheres of influence under the mandala system, and the shaded areas are those within the modern borders of Thailand that were formerly under tributary state influence, as defined by Bunnag (1977) and Kermel-Torrès and Lafitte (2004).



Sources: UCDP Georeferenced Event Dataset; Bangkok Post.

Figure 3. Geographic Distribution of Violent Civil Conflict Events in Thailand, 1970-2015

Figure 3 shows two important patterns. First, violence within Thailand tends to be concentrated in areas that are closer to the historical tributary centers. Second, most of the events occurring after 9/11 were located in the south and associated with the separatist movement centered in Thailand's three southernmost provinces. The map also shows that we need to separately identify the effect of proximity to former tributary centers from country borders, as the violence witnessed near the Myanmar border to the east of Bangkok indicates that some of these conflicts may be driven by contemporary border disputes rather than allegiance to historical polities.

As is common in conflict studies, there is potential selection bias in our dataset, namely the possibility of systematic underreporting of active years of violence. PRIO set an arbitrary threshold of 25 conflict-related deaths perpetrated by an identifiable entity (such as "communists" or "southern insurgents") within a single year for events to be included in the UCDP Georeferenced Event Dataset (Sundberg and Melander 2013). Accordingly, even if districts witnessed lethal events in these years, it may be the case that they are coded as having had a non-active year of violence. This concern is particularly relevant in the 1990s, during which the PRIO data shows no incidents of violence. Since we do not have a credible way to resolve this systematic under-reporting of incidents, we recognize the potential measurement error as an important caveat in our study.

There are other concerns arising from using different sources for the years from 1970 to 1988, and 1989 to 2015. While we adhere to coding rules of PRIO, there are likely discrepancies between the two sets of data, especially considering that we are only able to gather information from the *Bangkok Post* in the earlier years. We recorded all the fatal incidents for years that did not exceed PRIO's 25 deaths-per-year threshold, and accordingly have greater numbers of incidents from the *Bangkok Post* archives prior to 1989 than would have been captured by PRIO. Given that we focus on the long-term average effect of the tributary relationship on subsequent violence, and the coding procedures are consistent across districts for any given year, we do not believe that pooling these separate datasets should cause systematic biases in our estimates. In the following section, however, we run separate analysis for each of the two periods as an additional check.

Furthermore, there may be a related concern about violence reported in the post-9/11 period. News reports in the post-9/11 period show a marked uptick in the number of civilian versus civilian

conflict rather than government versus civilian conflict. According to Duncan McCargo (2012), the Thai media has a history of pro-government reporting bias. Many Malay Muslims in the south believe that the Thai media underreports violence perpetrated by security forces, and that the international media gives a more balanced view of the conflict from the local perspective (McCargo 2012, chapter 5). While Thai media reporting bias is a valid concern, it is important to note that the data used for the post-9/11 period are extracted from both international and local Thai media sources. Thus, we do not believe there is a concern for bias introduced by systematic under-reporting of lethal events involving the government for the post-9/11 period.

5. Empirical Approach

We hypothesize that districts with closer proximity to former tributary centers, controlling for proximity to borders and Bangkok, are associated with higher numbers of violent civil conflict events. To test this hypothesis, we construct a cross-sectional district-level dataset covering 510 districts in Thailand that are located in areas brought into a tributary relationship with Bangkok in the late eighteenth century. The outcome variable is the total count of lethal civil conflict events involving the government in a district over the period 1970-2015. The main independent variable of interest is the straight-line distance in hundreds of kilometers between each district centroid and the nearest eighteenth-century tributary center. As explained above, the distance serves as a proxy for the extent of persistent local identity formed around the historical tributary center.

We include a series of district-level controls that could also be related to the incidence of violence. First, distance to Bangkok captures the degree of control by the central government, and distance to the nearest national border captures any border effects on the district. We also include a set of dummies identifying the closest tributary center for each district. Each of the former tributary states had its own unique historical relationship with Bangkok that could influence the propensity for future violence. For example, Chiangmai and Lampang strategically entered into tributary relationships with Siam in the 1770s and tended to focus on strategic alliance (Wyatt 2003). In contrast, the Lao tributaries have historically had more contentious relationships with Bangkok. The Lao tributary centers were militarily defeated in the 1770s (Wyatt 2003) and then completely conquered after a

rebellion in 1827 that culminated in the total destruction of Vientiane ordered by King Rama III (Keyes 1967). This set of dummies also reflects any persistent, unique ethnic and linguistic differences between areas encompassed by former tributaries and central Thailand. Dummies for the Malay tributary states, for example, additionally capture the fact that a large proportion of the population in southern Thailand has been and continues to be Muslim. This is in contrast to the rest of the country, which remains predominantly Buddhist. With the inclusion of these controls, the coefficient on the distance to the former tributary state will thus be net of the impact of proximity to the administrative center and borders, as well as any differences across tributary centers.

In addition, we include several geographic variables to capture each district's terrain and economic potential. Elevation, the standard deviation of elevation, and the roughness of terrain are important, as the literature highlights the strategic use of mountainous terrain in civilian movements against the government (Fearon and Laitin 2003). We also attempt to capture economic potential and commercial viability through a series of controls including agricultural suitability (proportion of a district's land suitable for agriculture) and the distance to rivers and the coast. The longitude and latitude of each district centroid are further employed to capture any additional impact on conflict coming from the location each district. Appendix Table 1 includes summary statistics for the relevant variables.

The outcome variable is the pooled number of lethal civil conflict events involving the government that resulted in at least one death in a district (*amphoe*) between 1970 and 2015. On average, each district experienced 3.15 violent incidents over the entire period under observation. There are eleven tributary sites included in our data, and the average distance from the district centroid to the nearest tributary site is 130 kilometers.¹⁰ On the other hand, the average distance to Bangkok is 485 kilometers, and the distance to the nearest border is 62 kilometers.

¹⁰ There are thirteen tributary centers identified by Bunnag (1977), but two (Luang Prabang and Terengganu) are dropped because none of the districts within Thailand's current borders are located closest to these tributary centers.

Since our outcome is an overdispersed count variable, we utilize a negative binomial regression specification following Cameron and Trivedi (2010). We define y_i as the number of lethal civil conflict events involving the government in each district i . The mean of y_i is determined as follows:

$$E[y_i] = \mu_i = \exp[\beta_0 + \beta_1 DistTrib_i + \beta_2 DistBKK_i + \beta_3 DistBorder_i + \sum_{k=2}^{11} \delta_k Trib_i^k + X_i' \gamma].$$

The main variable of interest is $DistTrib_i$, which is the straight-line distance between each district centroid and the nearest tributary site. The variable $DistBKK_i$ is the distance from the district centroid to Bangkok, which proxies for the degree of control by the central state, and the variable $DistBorder_i$ is the distance to the nearest national border. $Trib_i^k$ is a set of dummy variables that indicates each district's closest tributary center. The set of tributary dummies in part control for the unique historical relationships each of the 11 historical tributary centers had with Bangkok. The vector X is the set of district-level geographic controls described above to capture a district's economic potential and features of the terrain that could be conducive to warfare against the state. The regression coefficients are estimated through a standard maximum likelihood estimation with clustered standard errors at the provincial level. The results are reported in the next section.

6. Results

Table 1 reports the results of the negative binomial regressions, where the coefficients are reported as incidence rate ratios.

Table 1. Determinants of Lethal Civil Conflict Events in Thailand, 1970-2015

VARIABLES	(1) 1970-2015	(2) 1970-2015	(3) 1970-2015	(4) 1970-2015	(5) 1970-1988	(6) 1989-2015
	Dependent Variable: Number of Lethal Civil Conflict Events					
Distance to Closest Historical Tributary Center (km 100s)	0.198*** (0.065)	0.462*** (0.110)	0.421*** (0.095)	0.458*** (0.120)	0.534** (0.141)	0.026*** (0.011)
Distance to Bangkok (km 100s)		1.503*** (0.184)	0.990 (0.160)	0.759 (0.205)	0.698 (0.182)	0.002* (0.008)
District Distance to Border (km 100s)		0.278** (0.140)	0.210*** (0.092)	0.222*** (0.094)	0.207*** (0.090)	27.776 (86.040)
Nearest Center Nan			8.586*** (3.886)	10.938** (11.415)	15.126** (17.505)	0.000 (0.000)
Nearest Center Lampang			10.859*** (6.867)	47.303*** (30.796)	55.193*** (40.085)	0.000 (0.000)
Nearest Center Lamphun			0.423 (0.511)	2.214 (4.146)	2.431 (4.721)	0.000 (0.000)
Nearest Center Vientiane			16.459*** (9.322)	9.292 (15.698)	19.405 (36.531)	0.000 (0.000)
Nearest Center Champasak			6.481*** (3.828)	2.043 (4.321)	5.788 (13.369)	0.000 (0.000)
Nearest Center Battambang			4.822 (5.248)	6.788 (11.410)	15.421 (28.532)	0.000 (0.000)
Nearest Center Siamriap			5.065** (3.495)	2.831 (5.442)	7.219 (15.335)	0.000 (0.000)
Nearest Center Kedah			20.371*** (9.322)	5691.791*** (15198.381)	29583.557*** (76625.601)	4540.405 (175518.086)
Nearest Center Kelantan			100.581*** (43.437)	7452.651*** (19959.048)	7452.955*** (19188.518)	10320.640 (405540.547)
Nearest Center Pattani			74.000*** (42.532)	8931.512*** (23597.394)	6664.309*** (16474.685)	10256.174 (400293.899)
District Geographical Controls	No	No	No	Yes	Yes	Yes
Observations	510	510	510	510	510	510

*** p<0.01 ** p<0.05 * p<0.1; coefficients are reported as incidence rate ratios; robust standard errors clustered at the provincial level are in parentheses.

Column 1 gives the results of the baseline model that only includes our variable of interest, distance to the nearest historical tributary center. In this model, for each 100 kilometers further a district is located from a former tributary center, the expected number of lethal civil conflict events decreases by approximately 80 percent. With the inclusion of additional controls for distance to Bangkok and distance to the closest national border (column 2) the estimated reduction in the expected number of incidents is 54 percent and is statistically significant at the 0.5 percent level.

The specification in column 3 adds a set of indicators for the closest historical tributary center where Chiangmai is the excluded category. The estimated incidence rate ratios for the historical tributary controls are consistent with the nature of the historical relationships with Bangkok. As mentioned above, Chiangmai strategically entered into its tributary status with Bangkok in the late-eighteenth century. In an effort to avoid rebellion, Bangkok slowly integrated Chiangmai into Siam's centralized system from the 1880s until the centralization process was completed in 1915 and strategically maintained the local elite (Ramsay 1979), as well as arranged a royal marriage between King Chulalongkorn and Princess Dararatsami of Chiangmai as a further move to strengthen the alliance (Ongsakul 2005).¹¹ In contrast, other tributaries, in particular the Lao tributaries and Malay sultanates, historically had more contentious relationships with Bangkok. These tributaries were conquered militarily and Bangkok became directly involved with local political affairs. The legacy of contentious historical relationships with Bangkok bear out in the regressions. Districts located closest to the Lao tributaries (Vientiane and Champasak) and the Malay sultanates (Kedah, Kelantan, and Pattani) have significantly higher incidence rate ratios compared to districts located closest to the Chiangmai tributary center. It is important to note that the estimated incidence rate ratio of 0.42 for

¹¹ This is not to say that there were no rebellions in Chiangmai. In fact, a rebellion against the central government took place in Chiangmai in 1889 in reaction to the enactment of centralization policies. In response, Bangkok was quick to roll back many of the new taxes, generally slowing the adoption of centralized policies, and enlisting the cooperation of local elites (Ramsay 1979).

our main variable of interest, distance to former tributary center, is similar to the estimate in column 2 despite the inclusion of the tributary center controls.

The literature suggests that economic conditions and local terrain are often correlated with the incidence of violence against the state. We add a series of district-level geographic controls that capture the economic potential of the district (longitude, latitude, elevation, distance to river, distance to coast, and agricultural suitability), as well as ruggedness (calculated following Nunn and Puga (2012)) and the standard deviation of elevation in order to control for mountainous terrain. The result from the specification that includes the full set of district-level controls (column 4) shows a reduction in the expected number of incidents for every 100 kilometers further a district is located from a tributary center of 54 percent. This result is similar to the results presented in columns 2 and 3 and remains statistically significant at the 1 percent level.

To allay concerns over the use of two different data sources (discussed above), we split the sample into two time periods and run the same analysis using the full set of controls. The first time period covers 1970 to 1988 and uses data collected from the *Bangkok Post*. The second period covers 1989 to 2015 and comes from the UCDP Georeferenced Event Dataset. The resulting incidence rate ratio estimates for the early and later time periods, reported in columns 5 and 6, are 0.53 and 0.03, respectively, and are statistically significant. Despite the use of two different datasets, both results are qualitatively similar. Thus, we conclude that the association of distance from former tributary centers with a reduction in the estimated number of lethal civil conflict events is not due to differences in reporting and data sources across the two datasets.

7. Robustness Checks

The main regression results indicate that the distance to former tributary centers matters for explaining recent lethal civil conflict events. In this section, we run a series of tests to show that the result is not sensitive to alternative specifications. The results of these robustness checks are reported

in table 2, with column 1 reporting the fully controlled specification from the main results (table 1, column 4) for comparison.¹²

¹²Appendix table 3 presents the OLS results with the same specifications as in table 2 for additional checks. The findings remain substantively similar, with the distance coefficient estimate statistically significant at the 10 percent level for specifications 3 through 6.

Table 2. Robustness Checks

	(1) Baseline	(2) Add 1960 District Population Density	(3) Add Provincial Language, Religion, and Economic Controls	(4) Add Distance to Provincial Center	(5) Add Indicator for Presence of Military Base	(6) Add Indicators for Closest Bordering Country
Dependent Variable: Number of Lethal Civil Conflict Events						
VARIABLES						
Distance to Closest Historical Tributary Center (km 100s)	0.458*** (0.120)	0.471*** (0.121)	0.501*** (0.132)	0.493** (0.140)	0.495*** (0.135)	0.550** (0.162)
Distance to Bangkok (km 100s)	0.759 (0.205)	0.769 (0.204)	0.636* (0.150)	0.677 (0.175)	0.685 (0.177)	0.501** (0.147)
District Distance to Border (km 100s)	0.222*** (0.094)	0.238*** (0.098)	0.250*** (0.101)	0.233*** (0.095)	0.237*** (0.100)	0.225*** (0.092)
District Population Density, 1960		0.995 (0.004)	0.993 (0.004)	0.994 (0.005)	0.994 (0.005)	0.993 (0.004)
Provincial Percent No Thai Language, 1960			1.050*** (0.009)	1.056*** (0.008)	1.056*** (0.009)	1.055*** (0.008)
Provincial Percent Muslim, 1960			0.989** (0.005)	0.988** (0.005)	0.988** (0.005)	0.989** (0.004)
Per Capita GPP (baht 1,000s), 1973			0.991 (0.008)	0.992 (0.007)	0.992 (0.007)	0.994 (0.006)
Distance to Amphoe Muang District (km 100s)				1.043 (0.717)		
Military Base in District					1.120 (0.346)	
Closest Neighboring Country Malaysia						10.062*** (6.802)
Closest Neighboring Country Cambodia						0.043* (0.079)
Closest Neighboring Country Laos						0.141 (0.259)
Closest Tributary Center Indicators	Yes	Yes	Yes	Yes	Yes	Yes
District Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	510	510	510	510	510	510

*** p<0.01 ** p<0.05 * p<0.1; coefficients are reported as incidence rate ratios; robust standard errors clustered at the provincial level are in parentheses.

The baseline result in column 1 suggests that a district's proximity to a former tributary state is an important factor associated with civil conflict in Thailand, but it is also clear from the literature that income differences and Thailand's ethno-religious diversity are related to the incidence of violence towards the state. Since it is possible that proximity to tributary centers may explain civil conflict through these other channels—and not through historical allegiance and local identity as described in our paper—we need to test whether the distance to the closest tributary center explains the aforementioned correlates of political instability.

We do not believe that our main variable of interest, distance to the nearest historical tributary center, should be correlated with economic disparity or the ethno-religious divide. Controlling for the distance to Bangkok and the border, the district's distance to the tributary state captures only the extent of historical mandala influence on the district. This distance is also independent of geography and coordinate location. In other words, the distance measure gives no indication to which region in Thailand a district is situated. This suggests that omitting economic disparity or ethno-religious composition would not bias the estimation of the proximity effect.

However, there are still reasons to believe that omitting these controls will lead to estimation bias due to correlations with other covariates in the regressions. To demonstrate that these omitted factors do not qualitatively change the main results, we control for economic conditions in the period prior to the uptick in violence due to both the communist and separatist movements by including 1960 district population density and 1973 per capita gross provincial product.¹³ We also include provincial level measures of ethnic and religious differences from the 1960 census, including the proportion of the population that does not speak Thai and the proportion of the population that identified as being Muslim.¹⁴ With the inclusion of these economic, ethnic, and religious controls in columns 2 and 3, the

¹³ Gross provincial product figures are only available from 1973.

¹⁴ Ethnicity information is not collected in the census or other government surveys, even at the provincial level, which poses a problem for comparative analysis (Pepinsky 2017). In its absence, we use “native language is not Thai” as a proxy for ethnic difference from Thais in the Central Plain.

incidence rate ratio on the distance to nearest historical tributary center variable remains similar to the baseline result both in magnitude and statistical significance.¹⁵

Our main claim is that the distance to former tributary centers matters for violence, but what about distance to current provincial administrative centers (*amphoe muang* districts)? Also, does the presence of a military base in a district impact the number of violent civil conflict events involving the government? Columns 4 and 5 report results for regressions adding the variables distance to the provincial center and presence of a military base, respectively.¹⁶ The results indicate that distance to the contemporary *amphoe muang* district and the presence of a military base in the district are not correlated with lethal civil conflict events. Additionally, the historical influence of the tributary states on violence remains unchanged, with an incidence rate ratio for the distance to the nearest tributary center of approximately 0.49.

Another potential concern is that the political situation across national borders may spillover into Thailand. This was indeed a concern of the Thai government during the rise of the communist movement in Southeast Asia during the Cold War, especially from Laos and Malaysia (Osornprasop 2012). The Myanmar border is also the site of several violent clashes related to its own internal disputes. Although we control for border effects in the main regression, this does not capture the

¹⁵ In Appendix table 4, we carry out yet another check to see whether economic and ethno-religious variables are correlated with the distance measure when they are outcome variables rather than controls. In the absence of recent district-level income or economic disparity measures, we use a proxy for economic standing, namely mean nighttime luminosity measured in 2011. We also use the number of Buddhist temples per 1,000 people and the number of mosques per 1,000 people as separate proxies for religious divide. The OLS output with the same set of controls used in the baseline specification in table 3 column 1 shows that there is no correlation between the economic and religious divide variables with the distance to the former tributary centers.

¹⁶ Since some provinces have split into two or three provinces since the early 1970s, we use the distance (in hundreds of kilometers) measured from each district to its 1970 *amphoe muang* border to coincide with the beginning of the conflict event dataset.

impacts of specific neighboring countries' political situations and ideological movements. We therefore add a set of dummy variables to indicate the closest neighboring country (Myanmar, Laos, Cambodia, and Malaysia) to each district to better capture these neighboring country effects. The results reported in column 6 indicate that the inclusion of the closest neighboring country does not change the main results.

8. Conclusion

In this paper, we investigate the lasting legacy of Thailand's tributary states and their relationships with surrounding areas on modern civil violence. Unlike territorial borders which define modern states, under the mandala system, span and strength of control were roughly defined by concentric spheres of influence radiating from polity centers. Although this governance system was common in Southeast Asia, it disappeared in Thailand with the country's centralization and adoption of territorial borders in the late nineteenth and early twentieth centuries. We argue that despite this change, peripheral areas continue to share local identities associated with the closest historical tributary centers. Using extended civil conflict data in Thailand between 1970 and 2015, we find that closer proximity to the former tributary states is indeed positively correlated with higher levels of lethal conflict against the central state.

Although Thailand stands out as a unique case in the region to maintain its sovereignty from the western powers in the nineteenth and twentieth century, our companion project seeks to exploit the findings and enlarge the scope of this paper's analysis to other countries of Southeast Asia that also formerly operated under the mandala system. These include Myanmar, Vietnam, Cambodia, Laos, Malaysia, and Indonesia. All of these countries had historical tributary states and, if our argument holds for Thailand, it may be generalizable to these neighboring countries as well. Aside from different colonization contexts, the broader geographic scope also will allow us to test for the persistent legacy of mandala system under different regime types in Southeast Asia today. The rich context provided by both the historical and the current states in the region certainly will add to the broader literature that has mainly focused on regions outside of Southeast Asia.

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Tables

Appendix Table 1. Summary Statistics

Variable		Mean	SD
Lethal Civil Conflict Events Involving Government 1970-2015	1970-1988 Bangkok Post; 1989-2015 UCDP	3.153	12.659
Distance to Closest Historical Tributary Center (km 100s)	Ministry of Commerce	1.303	0.796
Distance to Bangkok (km 100s)	Ministry of Commerce	4.845	1.617
District Distance to Border (km 100s)	Ministry of Commerce	0.618	0.529
Nearest Center Chiangmai	Ministry of Commerce	0.053	0.224
Nearest Center Lampang	Ministry of Commerce	0.047	0.212
Nearest Center Lamphun	Ministry of Commerce	0.037	0.19
Nearest Center Nan	Ministry of Commerce	0.076	0.266
Nearest Center Vientiane	Ministry of Commerce	0.331	0.471
Nearest Center Champasak	Ministry of Commerce	0.141	0.349
Nearest Center Battambang	Ministry of Commerce	0.065	0.246
Nearest Center Siamriap	Ministry of Commerce	0.075	0.263
Nearest Center Kedah	Ministry of Commerce	0.078	0.269
Nearest Center Kelantan	Ministry of Commerce	0.02	0.139
Nearest Center Pattani	Ministry of Commerce	0.076	0.266
Closest Neighboring Country Myanmar	Ministry of Commerce	0.149	0.356
Closest Neighboring Country Malaysia	Ministry of Commerce	0.147	0.355
Closest Neighboring Country Cambodia	Ministry of Commerce	0.227	0.42
Closest Neighboring Country Laos	Ministry of Commerce	0.476	0.5
Longitude	Ministry of Commerce	102.008	2.004
Latitude	Ministry of Commerce	15.018	3.934
District Distance to River (km 10s)	Ministry of Commerce	0.566	0.526
District Distance to Coast (km 10s)	Ministry of Commerce	24.678	13.739
Terrain Ruggedness Index (m 100s)	Ministry of Commerce	0.797	0.792
District Elevation Mean (m 100s)	Ministry of Commerce	2.59	2.02
District Elevation Standard Deviation	Ministry of Commerce	91.102	93.491
Proportion of District Suitable for Agriculture	Ramankutty et al. (2002)	0.316	0.098
District Population Density, 1960	CSO (1960)	58.65	59.507
Percent Province No Thai Language, 1960	CSO (1960)	6.168	15.753
Percent Province Muslim, 1960	CSO (1960)	8.73	21.364
Per Capita GPP, 1973	NESDB (1977)	26973.757	22818.619
Distance to Amphoe Muang District (km 100s)	Ministry of Commerce	0.167	0.209
Military Base in District	Brodeur et al. (Forthcoming)	0.067	0.25
Light Intensity Value, 2010 (0-63)	DMSP-OLS	5.232	6.354
Temples per 1,000 Persons, 2011	2011 NRD	1.837	0.843
Mosques per 1,000 Persons, 2011	2011 NRD	0.189	0.46
Observations	510 districts (across 40 provinces)		

Notes: UCDP = UCDP Georeferenced Event Dataset compiled by the Peace Research Institute of Oslo (PRIO); CSO = Central Statistical Office; NESDB = National Economic and Social Development Board; DMSP-OLS = Defense Meteorological Satellite Program's Operational Linescan System; NRD = National Rural Development Survey, Ministry of Interior.

Appendix Table 2. Determinants of Lethal Civil Conflict Events in Thailand, 1970-2015 (Full Sample Including Historical Inner Provinces)

VARIABLES	(1)	(2)	(3)	(4)
	1970-2015	1970-2015	1970-2015	1970-2015
	Dependent Variable: Number of Lethal Civil Conflict Events			
Distance to Closest Historical Tributary Center (km 100s)	0.349*** (0.081)	0.669** (0.133)	0.453*** (0.089)	0.679* (0.151)
Distance to Bangkok (km 100s)		1.459*** (0.135)	0.939 (0.149)	1.093 (0.189)
District Distance to Border (km 100s)		0.248*** (0.091)	0.242*** (0.086)	0.250*** (0.081)
Nearest Center Nan			10.642*** (5.222)	15.260*** (14.767)
Nearest Center Lampang			6.089*** (3.858)	19.445*** (13.306)
Nearest Center Lamphun			0.395 (0.474)	1.321 (2.326)
Nearest Center Vientiane			15.551*** (7.443)	24.312** (38.994)
Nearest Center Champasak			5.846*** (3.186)	5.282 (10.826)
Nearest Center Battambang			6.007** (4.621)	13.706 (25.480)
Nearest Center Siamriap			4.005** (2.405)	4.924 (9.973)
Nearest Center Kedah			22.536*** (10.872)	13.332 (32.313)
Nearest Center Kelantan			121.106*** (51.028)	25.040 (60.950)
Nearest Center Pattani			76.251*** (34.054)	36.890 (86.579)
District Geographical Controls	No	No	No	Yes
Observations	870	870	870	870

*** p<0.01 ** p<0.05 * p<0.1; negative binomial coefficients reported as incidence rate ratios; robust standard errors clustered at the provincial level in parentheses

Appendix Table 3. Determinants of Lethal Civil Conflict Events in Thailand, 1970-2015 (OLS Estimates)

	(1) Baseline	(2) Add 1960 District Population Density	(3) Add Provincial Language, Religion, and Economic Controls	(4) Add Distance to Provincial Center	(5) Add Indicator for Presence of Military Base	(6) Add Indicators for Closest Bordering Country
Dependent Variable: Number of Lethal Civil Conflict Events						
VARIABLES						
Distance to Closest Historical Tributary Center (km 100s)	-0.884 (0.659)	-0.875 (0.666)	-1.071* (0.567)	-2.037* (1.037)	-2.228* (1.176)	-1.987* (1.119)
Distance to Bangkok (km 100s)	3.364*** (1.184)	3.372*** (1.178)	-0.067 (0.950)	0.311 (1.981)	0.005 (1.911)	-0.372 (1.854)
District Distance to Border (km 100s)	2.029 (1.530)	2.130 (1.569)	1.853 (1.276)	4.700* (2.474)	4.604* (2.501)	4.707* (2.467)
District Population Density, 1960		-0.005 (0.007)	-0.004 (0.007)	-0.006 (0.016)	-0.002 (0.016)	-0.005 (0.016)
Provincial Percent No Thai Language, 1960			0.413*** (0.108)	0.843*** (0.215)	0.857*** (0.214)	0.854*** (0.217)
Provincial Percent Muslim, 1960			0.028 (0.045)	0.089 (0.097)	0.081 (0.095)	0.086 (0.096)
Per Capita GPP, 1973			0.006 (0.014)	0.005 (0.032)	0.009 (0.029)	0.008 (0.032)
Distance to Amphoe Muang District (km 100s)				-4.280 (4.868)		
Military Base in District					-3.026 (2.320)	
Closest Neighboring Country Malaysia						2.249 (5.260)
Closest Neighboring Country Cambodia						-5.020 (3.087)
Closest Neighboring Country Laos						-3.185 (2.688)
Closest Tributary Center Indicators	Yes	Yes	Yes	Yes	Yes	Yes
District Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	510	510	510	510	510	510
Adjusted R-squared	0.332	0.331	0.411	0.346	0.346	0.343

*** p<0.01 ** p<0.05 * p<0.1; robust standard errors clustered at the provincial level are in parentheses.

Appendix Table 4. Placebo Tests

VARIABLES	(1) Mean Luminosity (0-63), 2010	(2) Buddhist Temples per 1,000 People in District, 2011	(3) Mosques per 1,000 People in District, 2011
Distance to Closest Historical Tributary Center (km 100s)	0.258 (1.034)	-0.020 (0.053)	-0.003 (0.031)
Distance to Bangkok (km 100s)	1.171 (1.353)	0.030 (0.082)	0.212*** (0.049)
District Distance to Border (km 100s)	-0.712 (1.344)	0.225*** (0.072)	0.068** (0.031)
Nearest Center Nan	-2.894 (2.955)	0.132 (0.124)	0.086 (0.090)
Nearest Center Lampang	-7.257 (4.544)	-0.076 (0.118)	0.126* (0.074)
Nearest Center Lamphun	-5.555* (3.046)	-0.088 (0.117)	-0.027 (0.062)
Nearest Center Vientiane	-2.402 (6.133)	1.121*** (0.406)	0.359** (0.166)
Nearest Center Champasak	-3.079 (6.620)	1.422*** (0.492)	0.214 (0.204)
Nearest Center Battambang	-4.708 (6.375)	1.021* (0.511)	0.233 (0.250)
Nearest Center Siamriap	-5.525 (6.278)	0.964* (0.524)	0.307 (0.200)
Nearest Center Kedah	-27.270** (12.503)	0.630 (0.479)	-1.238** (0.485)
Nearest Center Kelantan	-24.224* (12.283)	0.653 (0.475)	-0.937* (0.500)
Nearest Center Pattani	-23.681* (12.158)	0.741 (0.474)	-0.884* (0.520)
Constant	343.869* (170.514)	0.445 (8.017)	9.639** (4.181)
District Geographical Controls	Yes	Yes	Yes
Observations	510	510	510
Adjusted R-squared	0.273	0.707	0.725

*** p<0.01 ** p<0.05 * p<0.1; robust standard errors clustered at the provincial level are in parentheses.