Poverty and conflict in Thailand's Deep South

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Abstract

Thailand's so-called Deep South has experienced much deadly violence since the early 2000s. This article investigates its determining factors in the context of the larger civil unrest/civil war literature—work on Southeast Asia being sparse and work on Thailand almost non-existent. The focus is on 37 sub-provincial districts of four of Thailand's 77 provinces covering the years from 2012 to 2019. Centering on descriptive statistics with additional panel regressions, it is found that reduced poverty incidence, increased educational attainment for males, and increased district-level per capita income are all associated with reduced conflict intensity (a smaller number of conflict-related deaths). In contrast, ethno-religious backgrounds and certain geographic features are not associated with either increases or decreases in conflict-related deaths.

Thailand's "Deep South" is predominantly populated by Malay-Muslim people (the majority of Thais identifying as Buddhists). Consisting of 4 provinces (out of 77), the region has been restive for many decades, and ongoing violence since the early 2000s has cost over 7,000 lives. This has resulted in a state of overt military presence, surveillance, and interference in daily life not seen anywhere else in the country. This article examines the region's politically motivated violence by drawing on the literature on the economics of civil war. It finds that reduced poverty incidence, increased educational attainment for males, and increased district-level per capita income are all associated with reduced conflict intensity as measured by a smaller number of conflict-related deaths. In contrast, ethno-religious background and certain geographic features are not associated with either increases or decreases in conflict-related deaths.

The next section of this article provides a political and economic background to the Deep South. This is followed by a brief review of the literature and descriptively and analytically tests its relevance to the Thai context. The final section concludes by reprising the key themes of this article.

Thailand's Deep South

Thailand's southernmost region spans the provinces of Pattani, Yala, and Narathiwat as well as some parts of Songkhla (see Figure 1). Often referred to as the country's Deep South, it is a region in which a tense relationship between Thai security forces and Malay Muslim communities can be traced back to the beginning of the 20th century when the Muslim sultanate of Patani was forcibly incorporated into Thailand. With its distinctive historical background and ethno-linguistic and ethno-religious identity, the region is home to more than 2 million people, mostly Muslim, and accounts for about 3% of Thailand's Buddhist-centric total population.[1]

Despite long-standing misgivings, it was not until early 2004, when a group of people seized a large number of weapons from one of Narathiwat province's military camps, that the simmering conflict escalated into open violence. According to the NGO Deep South Watch (DSW), between January 2004 and August 2020 around 20,000 incidents have been recorded, leaving about 7,000 people dead and 13,000 injured. The number of such incidents at first declined only gradually but then saw a sharp drop in 2008 due to a Thai policy of

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increased military and special law enforcement presence (as well as increased security expenditure). An additional large decrease in incidents is observed after 2013 when a peace process was established (see Figure 2).

Of all the conflict-related incidents, those caused for identifiably separatist motives dropped from about 70% in 2013 to about 47% in 2019. Even though the total number of incidents is dropping, the large percentage with unidentified causes creates uncertainty among the regions' people, and skepticism over just who the perpetrators are.

A note on language, the term "incident" means incidents with casualties as well as casualty-free events. Further, the press, and at times scholars, refer to an "insurgency" and to "insurgents." These are politically-laden terms since, as noted, much of the region was taken by force and "insurgents" are often simply Deep South local people whose ancestors inhabited the land before it was taken. That said, there are suggestions that at least some perpetrators have permanently fled or temporarily slipped across the modern-day, densely forested, and generally ill-patrolled Thai-Malay border—from where they return to stage attacks.

Annual per capita income in the Deep South is only approximately THB 77,000 (USD 2,400)—in Narathiwat province it is only THB 62,000 (USD 2,000). In contrast, Thailand's average gross provincial product (GPP) per capita in 2018 was THB 237,000 (USD 7,500). Figure 3 shows the incidence of poverty across three of region's four provinces (Songkhla is not included as some districts of this province are relatively rich). Narathiwat and Pattani have been among Thailand's 10 poorest provinces (out of 77) for more than a decade. Other provinces in the South are relatively prosperous, which has overshadowed the Deep South's need for economic assistance. That said, Figure 4 shows that the depth of the poverty in the Deep South has resulted in the South (as a whole) having the Kingdom's highest rate of poverty incidence (making little to no progress over the past 10 years).

Thailand's Deep South has experienced much deadly violence since the early 2000s. Examination of the region reveals that reduced poverty incidence, increased educational attainment for males, and increased district-level per capita income are all associated with reduced conflict intensity. Despite often-touted opinion, ethno-religious background is not significant.

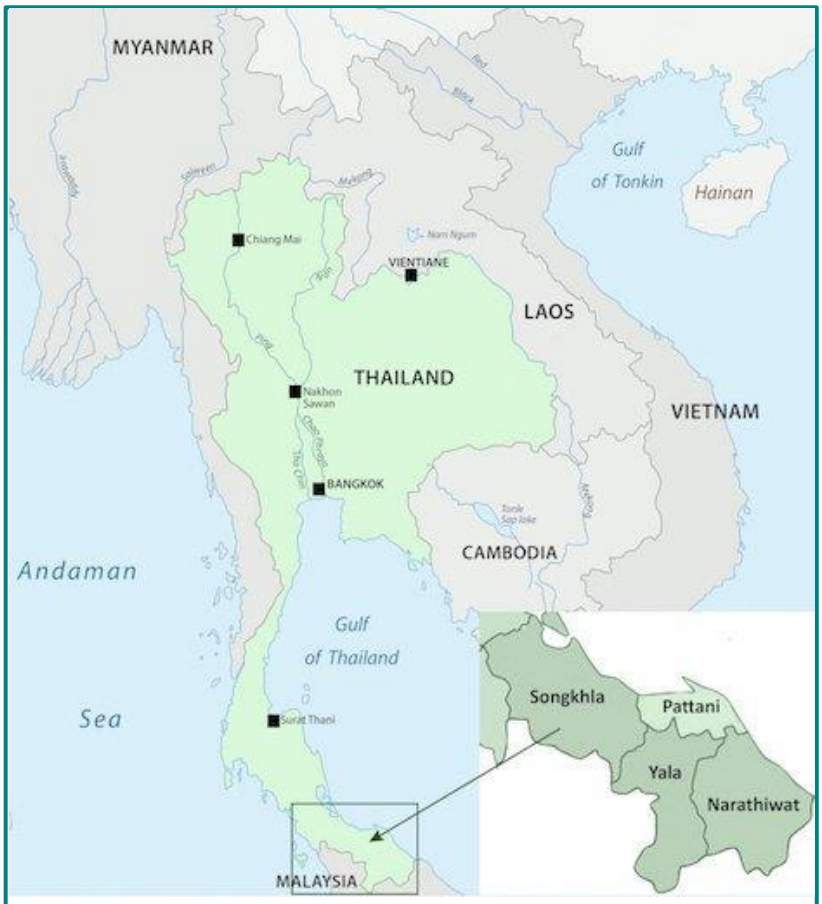

Figure 1: Map of Thailand's Deep South.
Source: https://www.blackpeakgroup.com/2019/06/security-risks-in-southern-thailand-from-origins-to-current-situation/.

Literature review

In 1998 Collier and Hoeffler published "On Economic Causes of Civil War" which became the touchstone for the ensuing "greed versus grievance" debate among scholars and policymakers. The article posits that low

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opportunity costs may prompt impoverished young men to join a rebel movement. This, in part, led to the formulation of a "conflict trap" theory that holds that poverty and conflict not only are inextricably linked but that they create a mutual feedback loop, resulting in: Destruction of infrastructure; elevated security risks; and declines in education, economic activity and well-being. The theory was further developed to include an increased likelihood of a given conflict's continuation, recurrence, escalation, and diffusion. The trap is most serious for low-income countries.

Despite the bi-directional relationship between poverty and conflict noted in the literature, this article is interested only in the direction from relative socioeconomic deprivation to violent conflict. The literature has pinpointed several relevant factors that are briefly discussed in the following subsections, namely poverty, general economic conditions, education, ethnoreligious-linguistic polarization, and geography.

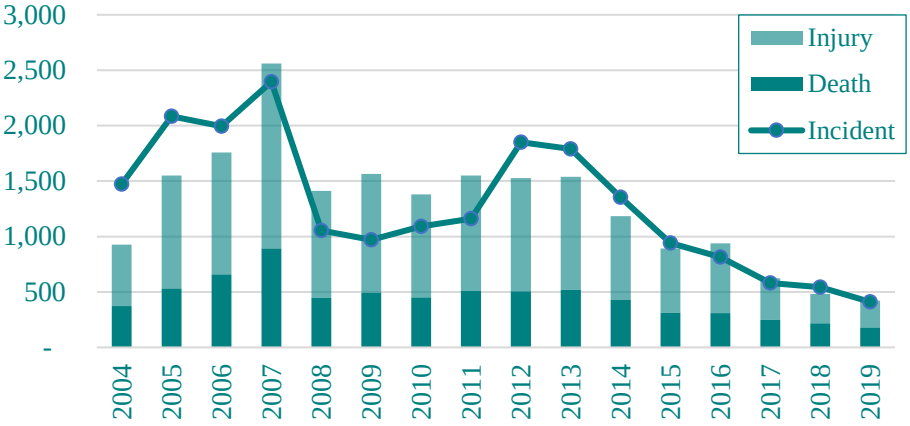

Figure 2: Number of casualties and incidents in the Deep South, 2004-2019.
Source: Deep South Watch (DSW).

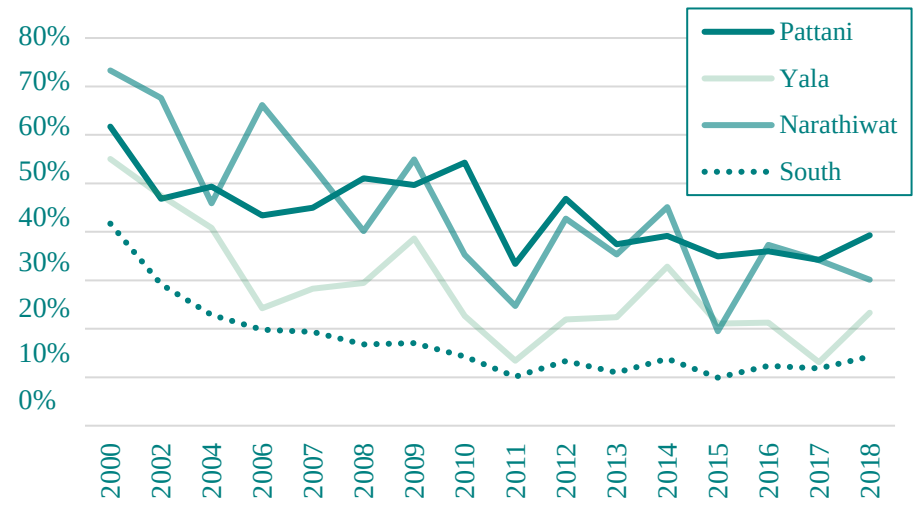

Figure 3: Poverty incidence by province (in percent), 2000-2018.
Note: Detailed description of the data can be found in in Note 3.
Source: Office of the National Economic and Social Development Council (NESDC, 2019).

Poverty

This article has indicated the high incidence of poverty in the Deep South. Among the pioneering studies pointing to poverty as one of the defining causes of civil war, Fearon and Laitin (2003) finds that, on average, the odds of civil war onset increase by 41% for each USD 1,000 reduction in per capita income. More specifically, a country at the 10th percentile of per capita income has an 18% chance of civil war, a median per capita income country has an 11% chance, and only 1% for a country at the 90th percentile.

Likewise, Do and Iyer (2010) finds that the number of casualties per 1,000 population during the Maoist conflict in Nepal was strongly associated with the poverty rate and related socioeconomic development indicators such as the infant mortality rate, literacy, and road length. Poverty, in particular, was a strikingly relevant indicator for both the emergence of conflict and death rates in Nepali districts. A district with a 60% poverty rate was 1.5 times more prone to reach 100

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conflict deaths than a district with a 26% poverty rate. For every 10% increase in the poverty rate, a district experienced around 26 additional conflict-related deaths per 1,000 people.[4]

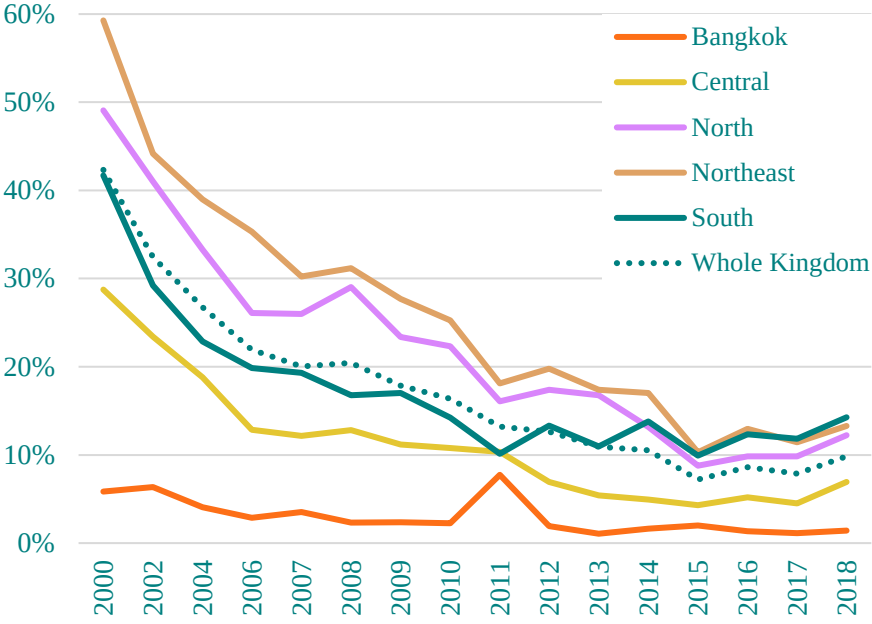

Figure 4: Poverty incidence by region (in percent), 2000-2018
Note: Detailed description of data in Note 2.
Source: Office of the National Economic and Social Development Council (NESDC, 2019).

Economic conditions

Thailand is not commodity-export dependent and therefore has little to no foreign-exchange earning vulnerability to commodity price shocks (a subject much covered in the literature). Berman and Couttenier (2014), however, concludes that while external income shocks can have an insignificant effect on the likelihood of instigating conflict, they affect the occurrence of conflict in the most trade-open regions. This point might be relevant to a tourist-dependent Thailand, but it does not apply to the Deep South, which sees little tourism (despite its natural beauty)—a point briefly addressed in the conclusion section.[5]

Instead, this article focuses on a broad GDP-related measure. Although there is a consensus that GDP per capita and conflict are inversely correlated, the mechanism that drives the correlation is still debated. Fearon and Laitin (2003) states that poorer countries do not have the resource to suppress conflict when it arises. Collier, Hoeffler, and Soderbom (2001) indicates that conflict is enabled by lower opportunity costs for individuals in states with lower per capita income. Between these positions, Dube and Vargas (2013), for example, finds that both mechanisms were present in the long-running Colombian conflict. It is plausible that the Deep South's long-standing and pervasive poverty as well as generalized low per capita income are related to the region's ongoing conflict.

Education

Good quality education equips people with knowledge and skills that widen their market opportunities. In general, educated people are more able than others to form their own views and judgements, thereby possibly reducing their scope for manipulation by conflict initiators. Agbor (2011) points out that individuals and societies can, in time, become more conflict resilient and that children can learn tolerance, respect differences, and become more empathic toward others. Similar to the Do and Iyer (2010) findings on literacy, Collier, Hoeffler, and Soderbom (2001) finds that education measures and performance (such as an increase in male secondary school completion rates) are revealed to have significant conflict prevention or mitigation effects in the early stages of conflicts—i.e., an increase in education substantially reduces the expected duration of a conflict. However, the mitigating influence of education diminishes as conflicts wear on, possibly due to the educated demographic emigrating to non-conflict areas.[6]

Later this article illustrates the lack of male education in the Deep South and examines its relationship with conflict.

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Ethnoreligious-linguistic polarization

Polarization across ethnoreligious-linguistic groups has attracted the interest of many researchers—in part because of its potential to explain a variety of social phenomena including social tension, unrest, revolution, and war. Esteban and Ray (2008) observes that "traditional" income class-based conflict (the "rich" versus the "poor") appears, in recent decades, to have been almost supplanted by conflict couched in ethnoreligious-linguistic terms. They suggest that income heterogeneity within income classes is smaller than is income heterogeneity within ethnoreligious-linguistic groups. This, in turn, they suggest, allows the "rich" *within* a given ethnoreligious-linguistic group to financially induce the "poor" of the same group to supply cheap labor and engage in cross-group conflict with the aim of gaining increased or full access to national-level resources (or resource distribution). Since then, numerous empirical studies have included ethnoreligious-linguistic measures, with as yet inconclusive findings.

Given that the Deep South is dominated by a Malay-Muslim population, whereas most of the remainder of the country is Thai-Buddhist, such polarization is included in this article's analysis.

Geography

The literature has come to routinely take geography and, especially, topography into account, the reason being that difficult-to-access territory can effectively serve as a safe haven for rebels to hide in, bide their time, and prepare future attacks. Researchers often include variables related to forest coverage and mountainous terrain. For example, Collier, Hoeffler, and Soderbom (2001) states that a country with average forest cover experiences longer-lasting conflict than those with little forest cover (or mountains). Similarly, Fearon and Laitin (2003) finds that a country that is about 50% mountainous (in the 90th percentile), with median-level parameters otherwise, has a 13.2% chance of civil war onset over the course of a decade. An otherwise "identical" country has only a 6.5% chance on war onset if it is not mountainous (in the 10th percentile). On a cautionary note, however, Pickering (2011) warns against using a broad statistical brush to paint all "mountain people" as bellicose.[7]

Without sufficiently granular district level topographic/forestry data, this article uses the nature of a district's border as a proxy for provision of hidden insurgent access.

Data and methods

A panel dataset was constructed that included the 12 districts of Pattani, the 8 districts of Yala, the 13 districts of Narathiwat, and 4 of the 16 districts of Songkhla. The data covers the 8 years from 2012 to 2019. Data on conflict-related incidents are drawn from DSW. Further data came from the Information System for Basic Minimum Needs (BMN), compiled by the Department of Community Development in the Ministry of the Interior. Descriptive statistics were generated to provide summative background information and to provide some initial insights. Exploratory fixed-effects, random-effects, and between-group means regressions helped to distinguish any unobserved characteristics that may affect conflict incidents in the Deep South (varying across districts as well as across time periods). The term "exploratory" is used due to the short timespan covered by the data. The resulting findings do not run counter to intuition.[8]

The estimated model takes the following form:

$$(1) \qquad Conflict\ intensity_{it} = \beta_0 + \beta_1 Xs_{it} + u_i + e_{it},$$

where *Conflict intensity* is the number of deaths per 1,000 people per district i (i = 1, …, 37) at time t (t = 2012, …, 2019). *Xs* reflects a set of characteristics, namely: Poverty incidence; education level of the male population; per capita income; an ethno-religious polarization index; and whether a given Deep South district is bordered by the sea and/or is adjacent to Malaysia. β_0 is a constant term, β_1 is a regression coefficient, u denotes a fixed effect of district i, and e denotes an error term that contains the effect on district i and time t. Note that except for time-invariant variables like geography, one-year lagged explanatory variables are used in accordance with the extant literature.

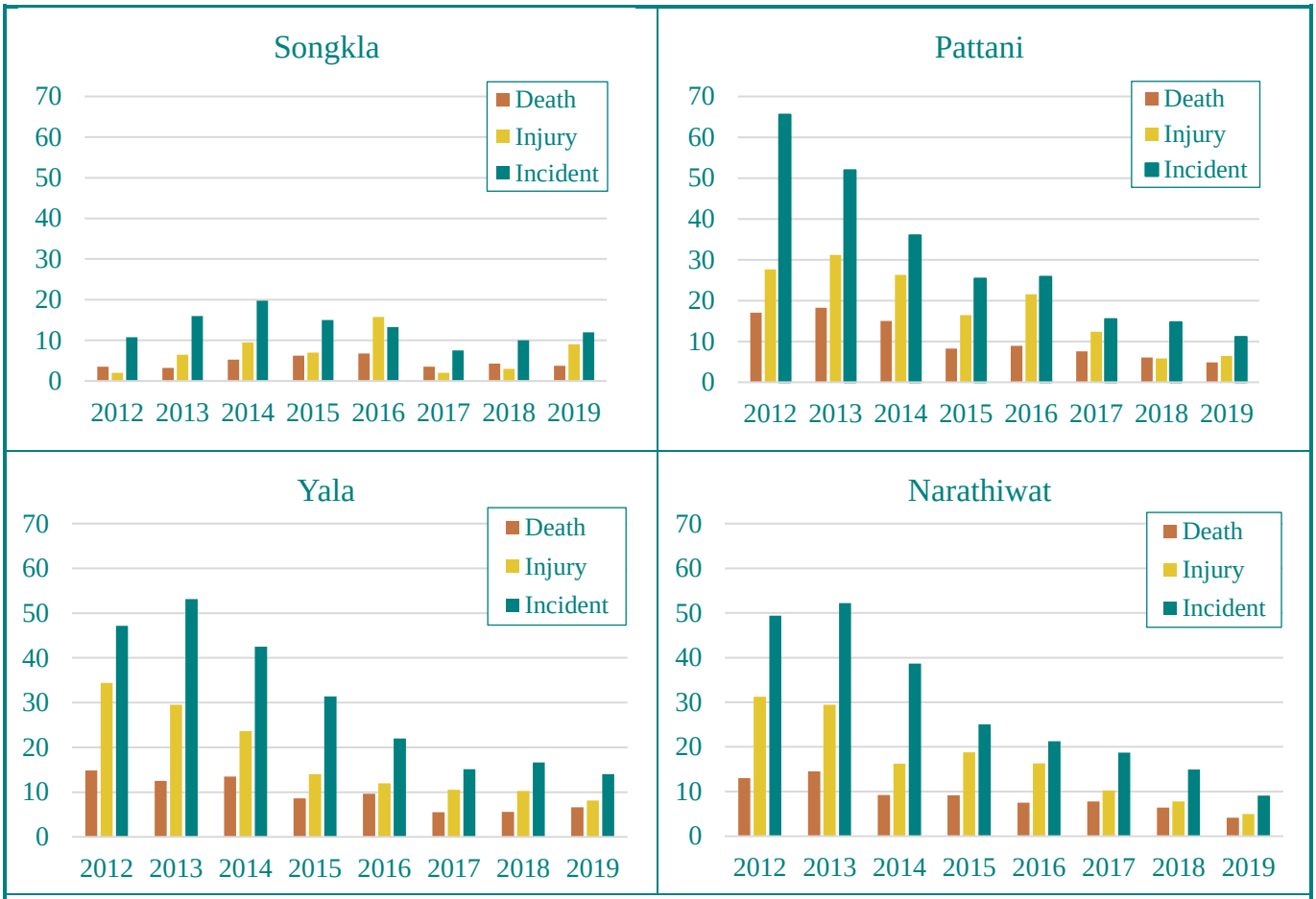

Figure 5: Number of deaths, injuries, and incidents by province, 2012–2019.
Source: Deep South Watch (DSW).

Descriptive statistics

Yala province has the largest number of incidents. Figure 5, however, shows that the number of deaths and injuries are highest in Pattani province, suggesting a more intense conflict situation there. In all, the 37 districts located in the Deep South experienced an average of 0.2 conflict-related deaths per 1,000 people between 2012 and 2019, equating to about 9 deaths per year (see Table 1). Nevertheless, the variation in deaths across these districts is large, with the highest intensity of 1.28 deaths per 1,000 population, or 22 deaths annually, observed in the Kapho district in Pattani province in 2012. In contrast, the Nathawi district in Songkhla province has a near zero per 1,000 people (equivalent to 2 deaths annually).[9]

Poverty is measured as the percentage of households with annual household-based per capita income below THB 30,000 (USD 950) for 2012–2016 and THB 38,000 (USD 1,200) for 2017–2019. As already shown, the South as a whole is the poorest region of Thailand and, within the South, Pattani province is the poorest of all. The poverty surge observed in these provinces in 2017 is the result of the 2017 poverty income threshold increase. A steady reduction in the average poverty rates thereafter indicates some absolute improvement since then, but still not relative to the nation as a whole.[10]

Turning to education in the Deep South, less than a quarter of males have completed secondary education (or higher). The highest proportion is in Songkhla province (25.2%) and the lowest in Narathiwat province (22.1%). However, province-level averages hide substantial

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Table 1: Descriptive statistics

Variable	*Description*	*Obs*	*Mean*	*Std Dev*	*Min*	*Max*
Conflict intensity	Number of conflict-related deaths per 1,000 population	296	0.1962	0.1704	0.0000	1.2819
Death	Number of conflict-related deaths	296	9.2095	7.9518	0.0000	46.00
Injury	Number of conflict-related injuries	296	16.5101	19.6702	0.0000	165.00
Incident	Number of conflict-related incidents	296	27.9932	25.5148	2.0000	149.00
Population	Number	296	50,202.7	22,204.5	11,979	100,633
Poverty	Proportion of households with per capita income* > THB 30,000 for 2012-2016 > THB 38,000 for 2017-2019	296	0.8922	1.1964	0.0000	7.1700
Male schooling	Proportion of males who have attained secondary education or higher	296	23.2286	5.4103	10.4000	40.3800
Income	Household per capita income	296	57,082.9	9,656.1	37,284	94,383
ln(Income)	Natural log of household per capita income	296	10.9389	0.1620	10.5263	11.4551
Polarization	Ethno-religious polarization index**	296	0.4659	0.3446	0.0072	0.9949
Sea	Dummy variable for a district located by the sea	296	0.2703	0.4449	0.0000	1.0000
Malaysia	Dummy variable for a district adjacent to Malaysia	296	0.3243	0.4689	0.0000	1.0000

Notes: * See note 10, where "household per capita income" is explained. **The index is computed as $4 \sum s_i^2 (1 - s_i)$, where s_i is the proportion of religious group *i* in the population.

variations across districts; especially so in Yala province, where district variation ranges from 40.4% to just 11.3%. In sum, poor and un/undereducated males generate a potential pool of "conflict workers" due to the, presumably, low opportunity cost of engaging in conflict activities. This impression is reinforced by the income averages that reveal the Deep South is, again, Thailand's laggard.

In 2019, Narathiwat, Pattani, and Yala, respectively, had average per capita incomes of THB 56,436 (USD 1,792), THB 61,058 (USD 1,938), and THB 65,584 (USD 2,082), and thus were the first, the third, and the sixth poorest provinces—in contrast, the highest provincial per capita income is THB 152,801, while the average is THB 81,280.[11]

As mentioned, the Deep South's majority population

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is Malay-Muslim. In contrast, their nation-wide population share is rather small (about 2 million, out of about 66.5 million people in Thailand). Surprisingly, however, the descriptive data show considerable variation in the ethno-religious polarization index, which measures the degree to which individuals in a population are "mixed" across different ethno-religious groups. Across the 37 districts, a minimum value of just 0.007 (almost no mixture) is found with a maximum value of 0.99 (a very thorough mixture). In particular, the four districts in Songkhla province in the dataset score average polarization indices as high as 0.91, implying far more diverse ethno-religious groupings there.

Finally, geographic features like forest coverage and mountain ranges are mentioned in the literature as potential "hide-outs" and refuges for people perpetrating acts of violence. Unfortunately, while easily accessible satellite image maps show very densely forested mountains and sparse road networks across the Deep South, quantified data on forest cover or mountainous terrain at the district level are so limited that they could not be used. Instead, information on whether a district borders on the sea and/or shares a land border with Malaysia was used. There are plenty of media reports about insurgents slipping back and forth across the Thai-Malay border. Of the 37 districts, 10 are bordered by the sea and 12 are adjacent to Malaysia.12

Empirical results

Turning to the exploratory panel regressions, the number of deaths, injuries, and incidents against poverty incidence were plotted across time. A positive correlation between conflict and poverty is easily observed in the earlier years of the dataset, regardless of the choice of conflict variable, but the relationship vanishes toward the latter years (see Figure 6). This suggests the presence of time-variant factors underlying the poverty-conflict relationship. While the descriptive data show considerable variation across provinces and districts, data on time-variant district-level variables are limited. Nonetheless, exploratory panel regressions were attempted to learn, if nothing else, if they clearly refuted the descriptive impression about a link between relative socioeconomic deprivation, education, geography, and violent conflict.

A Hausman test suggests the use of a fixed-effects regression model as more appropriate than a random-effects model. But since a fixed-effects model cannot deal with dummy variables, a between-regression model was also run to help capture the potential influence of geography in particular. So, in all, three models were run, a fixed-effects (within) regression, a random-effects (multiple) regression, and a between-group means (between) regression. Table 2 summarizes the results that, overall, suggest that a district with a low level of socioeconomic development in a previous year experiences intensified violence in a follow-on year (relative to districts that show a higher level of socioeconomic development and achievement).[13]

The between-group means regression in particular records a positive relationship between poverty incidence and the intensity of conflict. Specifically, a 1 percentage point increase in a district's poverty rate in a previous year is associated with an additional 0.032 deaths per 1,000 population in the following year. Given an average population of 50,203 persons per district, this equates to an increase of nearly 2 conflict-related deaths per year. Lagged per capita income and the current-year conflict-related deaths are negatively related. This quantitative finding is that a 1 percent increase in average per capita income level would lower conflict-related deaths per 1,000 population by 0.372, or 19 deaths per year.

The fixed-effects and random-effects estimations suggest a strong inverse association between educational attainment and the intensity of conflict (less education means more conflict). If the relationship is symmetric, this possibly suggests that by encouraging the male population to complete secondary education (or higher), a statistically significantly lower number of conflict-related deaths might then be seen in subsequent years. However, depending on where one sets the cutoff point, this link is statistically insignificant for the between-group means model. This somewhat tenuous finding may be due to the rather small variation in male educational status across time. Also, information on specifically

Figure 6: Poverty incidence (in percent) and number of casualties, 2012-2019.
Sources: Deep South Watch (DSW) and Information System for Basic Minimum Needs (BMN).

Islamic-based education, quite different from the dominant Thai-based education model, is not included in the dataset.

Including the ethno-religious polarization index into the models reveals that polarization in the Deep South is (probably) not a statistically significant variable—casting doubt on the oft-heard argument in national media that it is the ethnic background and different religious beliefs of those who live in the Deep South that are among the key factors responsible for the ongoing violence. The finding echoes those made in other country studies in the literature.

Finally, regarding geography, districts bordering the sea and/or Malaysia likewise does not affect conflict intensity. However, when including the geography variables in the random-effects and between-group means regression models, the role of poverty incidence in determining conflict intensity in the following year becomes statistically prominent, unlike in the fixed-effects regression model where both geographical variables are omitted. This may suggest a biased, or at least inconsistent, poverty coefficient in this model.

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Table 2: Results of regression analysis

	Conflict intensity		*Conflict intensity*		*Conflict intensity*	
Independent variable	*(1) Fixed-effects (within regression)*		*(2) Random-effects (GLS regression)*		*(3) Between-group means (between regression)*	
	Coefficient	*Std. Err.*	*Coefficient*	*Std. Err.*	*Coefficient*	*Std. Err.*
Poverty (lag-1)	0.010	(0.011)	0.020**	(0.009)	0.032**	(0.014)
Male schooling (lag-1)	-0.011**	(0.003)	-0.004*	(0.002)	0.005	(0.004)
ln(Income) (lag-1)	-0.148**	(0.075)	-0.176**	(0.072)	-0.372*	(0.207)
Polarization (lag-1)	0.110	(0.172)	0.006	(0.045)	0.010	(0.065)
Sea	*Omitted*		-0.040	(0.031)	-0.048	(0.032)
Malaysia	*Omitted*		-0.022	(0.031)	0.007	(0.031)
Constant	1.992**	(0.802)	2.201**	(0.765)	4.115*	(2.203)
Number of obs.	259		259		259	
Number of groups	37		37		37	
Within R-squared	0.1134		0.0894		0.0214	
Between R-squared	0.0007		0.2361		0.3862	
Overall R-squared	0.0345		0.1304		0.1107	
Log Likelihood						
Prob (F statistic)	0.0000		0.0000		0.0163	
Hausman Test	13.55					
Prob > chi2	0.009**					

Notes: * Statistically significant at 10%; **statistically significant at 5%.

Conclusion

Taking its main cues from the extant literature, this article explores factors governing the ongoing violence in Thailand's Deep South, the country's southernmost region. Using data from Deep South Watch and Thailand's Ministry of the Interior's Information System for Basic Minimum Needs, this study (exploratory as it is) is pioneering in that, to the best of the authors' knowledge, it is the first time such work has been carried out for the region—a region in which violence has cost many thousands of lives and continues to mar Thailand's tourism and direct foreign investment-dependent international image. While the number of violent events has declined over time, this apparent reduction in violence has been achieved by effectively garrisoning large population segments, suppressing (if perhaps not repressing) the local population, and limiting education and investment opportunities. The Deep South is environmentally pristine and contains numerous archeological and contemporary Malay-Muslim cultural treasures. As such, it is a potential "hotbed" for both western-style ecotourism and for *halal* tourism (tourism

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facilities in accordance with Muslim traditions and beliefs). However private investment levels are low, and travelers are routinely warned by governments (Thai and non-Thai) not to even enter the region due to security concerns.

Collier, Hoeffler, and Soderbom (2001) points out that there can be substantial differences between variables that *initiate* violence and those that *prolong* it. Ethnicity-related factors and the size of relevant diasporas, along with geographic factors, are among the significant variables that can initiate violent conflict, but they tend to have no bearing on its duration. But the exploratory panel regressions did not find either ethnoreligious-linguistic polarization or geography to have (statistically) contributed to the violence. Instead, the results are driven by socioeconomic deprivation. It is not wholly unreasonable to believe that rather than focusing on possibly negotiating and/or reconciling divisive historical and cultural issues between Thai citizens of different heritages, more immediately effective advances might be made by lessening the economic hardship that the people of the Deep South face at the individual, household, and district levels. That said, more data collection and research is advisable to firm up, or challenge, the initial results reported here.

Notes

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1. "Thailand's Deep South" shall be referred to as simply "the Deep South" for the remainder of this article. Patani: Jitpiromsri, Waitoolkiat, and Chambers (2018). Muslims: NSO (2020) and DOPA (2020).
2. Seizure: Jitpiromsri, Waitoolkiat, and Chambers (2018). Incidents: DSW (2020); Jitpiromsri (2016).
3. The latest data available from NESDC (2019) are for 2018. This province-based dataset is different from the district-level data used here in the empirical analysis. The NESDC's (2019) poverty incidence (Figures 3 and 4) is calculated based on the Household Socioeconomic Survey (SES) (a national survey). Due to the data sampling method SES employs, this dataset can be used to represent national or provincial situation, but not sub-provincial, district data. What is reported here are the official government province-level numbers normally seen in the literature. Poverty incidence at the district-level, on the other hand, is calculated based on the basic minimum needs (BMN) measure which is a sub-provincial dataset collected on every household. Rather than using the national or local poverty line, BMN set the poverty threshold at THB 30,000 which then changed to THB 38,000 in 2017.
4. Indicators: Along with district-specific geographic conditions such being mountainous or forested areas.
5. Commodities: For example, Collier, Hoeffler, and Soderbom (2001); Bruckner and Ciccone (2010); Dube and Vargas (2013).
6. Education: Nicolai and Triplehorn (2003).
7. Fearon and Laitin (2003).
8. Songkhla: The 4 districts are Chana, Nathawi, Thepha, and Sabayoi. They border on or are close to Pattani and Yala. Another district, Sadao, would normally be included as among the Deep South districts as well but due to many missing observations it was dropped from the analysis. BMN: the BMN is not a publicly available dataset.
9. Deaths: These are the min/max numbers of deaths for 2012. In other years, several districts experienced zero deaths for the whole year.
10. Income: In this article per capita income is not calculated as ordinarily understood. Instead, "household-based per capita income" is calculated as the average income of all members in a household or, for short, household per capita income. Poverty rate reduction: Poverty incidence mentioned here is calculated based on the BMN. Figures 3 and 4, which show a slightly different picture, are based on the NESDC's (2019) poverty incidence—see Note 2.
11. Per capita income: BMN.
12. Insurgency: For example, Chongkittavorn (2019); Voice (2018). Borders: Districts with both a sea and a land border are not coded separately coded.
13. Socioeconomic development: As measured by higher poverty incidence, lower average incomes, and by a lower educational status of the male population.

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