Protoinsurgencies, Repression-Driven Contagion and Escalation to Civil War Onset

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Abstract

The escalation of militarized interstate disputes or MIDs into interstate wars has been extensively studied using opportunity and willingness frameworks that focus on how macro environmental possibilities and constraints influence micro level choices and decisions. In this article we conceptualize and operationalize protoinsurgency formation as a civil war equivalent to MIDs. Just as most MIDs do not escalate to interstate war, most proto-insurgencies never transition from terrorism to guerrilla operations, never control territory, never establish secure bases, and never engage in direct combat with military units. Our theoretical focus is on how repression creates contagion effects that push proto-insurgencies into making these tactical transitions. Using a simultaneous equations approach, we find that the unobservable variables influencing proto-insurgency formation and escalation to civil war onset are significantly correlated. They are outcomes of the same process but distinguishable. We argue that proto-insurgency formation is driven more by grievances associated with persecution such as denial of access to justice, regime corruption and mid-range levels of repression (not targeted against the proto-insurgency but against a larger identity group). Proto-insurgency escalation to civil war onset is driven by high levels of state repressive violence directed against the proto-insurgency area of origin. This leads to protoinsurgency dispersion and the displacement of surrounding population segments. This in turn devolves repressive violence to a larger number of smaller administrative units, creates the structural foundation for guerrilla warfare, and establishes the supply and demand conditions to offer sanctuary to the displaced in return for support for a now viable insurgency.
Introduction

The onset of inter-state war has been extensively modeled using opportunity and willingness frameworks (Most and Starr 1989) where opportunity represents the macro-level constraints and possibilities faced by actors in their present environment, and willingness refers behavioral choices made in response to situations at the micro-level. As with wars between nations, civil wars are only possible where a government and rebel organization have some “minimum war-fighting capacity” and a corresponding “willingness to fight” (Most and Starr 1989: 80). The militarized interstate dispute (MIDs) literature tells that only a small percentage of MIDs ever escalate to an actual war between nations and that different processes are involved in the generation of MIDs and their escalation to war (Jones, Bremer and Singer, 1996: 197).

We expect a similar pattern for civil wars. As Bartusevicius and Gleditsch (2019: 226) note, “civil conflict research has traditionally focused on armed conflicts and paid little attention to incompatibilities that do not see violence.” Less attention has also been paid, we would argue, to incompatibilities that do see violent acts, but fall short of reaching the accepted battle deaths thresholds of what constitutes civil war. Most civil wars begin with attacks by small groups who wish to ignite a chain reaction of events leading to insurgency and civil war – but only a small number of groups succeed in that task. Once a civil war is observed, researchers retroactively fit a date of onset, only for those groups that succeed. Had the group failed (that is, no growth, no escalation to civil war) that early phase of violence would not mark the beginning of anything.

At a very general level, the entire quantitative onset literature could be summarized as an effort to predict those insurgencies that succeeded in reaching civil war, using data that only includes
insurgencies that succeeded. Young (2016) refers to certain onset models as “big bang” models, where there is no civil war in the nation in year t0 and then a full-blown civil war the next year (t1). All country-years from t0 back in time are treated, implicitly, as equally peaceful. But clearly civil war onset is not an event that emerges spontaneously in a nation because it has a sufficient mix of structural factors. We are seeking the conceptual flip side of onset which is not the absence of onset but the presence of an ‘almost-insurgency.’ Intuitively we know that the number of opposition groups that fail to escalate their fight is substantially greater than the number that succeed. However the process of trying and failing has been left out of the equation in most civil war onset models.

The empirical onset literature measures the ‘risk’ of experiencing onset of civil war as a function of a country having a certain mix of social, economic, demographic, and political attributes that, statistically, are associated with a higher risk of civil war onset. The risk of civil war in a given nation in a given year becomes a function of baseline scores on those variables identified as key predictors of civil war onset and, second, whether their scores on these variables change from year to year in a direction that increases the risk of civil war onset, compared to the level of risk in previous years (Hegre et al. 2013). However, even among those nations sharing the relevant structural attributes, onset is an extremely rare event. Hegre et al. (2013: 251), for instance, report that between 1970 and 2009, in only 0.04 percent of country-years did a nation transition from “no conflict” to “civil war.”

The main contribution of this article is an alternative way of modelling the risk of onset whereby we put together a ‘risk set’ of proto-insurgencies by attempting to identify insurgencies in their earliest possible phases. We conceptualize and operationalize the proto-insurgency concept, creating a population of ‘opportunities’ for proto-insurgency escalation to civil war. Our modelling strategy is then aimed at distinguishing between proto-insurgency formation and proto-insurgency escalation to
civil war onset even though both are endogenous outcomes in the same process with joint causes and different causes. This would be most akin to how the international relations literature has approached MIDs and wars between nations. Just as the processes that generate MIDS differ from those that lead to the escalation of MIDs to interstate war, it is reasonable to suspect that the processes by which proto-insurgencies emerge might be governed by some similar and some different causal processes from those that govern their escalation to major civil war. This is especially likely given the fact that most never escalate to major civil war, just as most MIDs never escalate to interstate war.

The task of explaining civil war onset, then, becomes a matter of first identifying the proper risk set – those nations that experience episodes of low-level anti-government violence short of civil war (i.e., proto-insurgency) – and then identifying the conditions associated with their escalation or failure to escalate to major civil war. In the empirical analysis, we find that the unobservable variables influencing proto-insurgency formation and escalation to the onset of civil war are correlated, and we estimate them using simultaneous equations.¹ When estimated jointly, variables that are significant in both equations affect disruption of peace through two related but distinct theoretical pathways of proto-insurgency formation and proto-insurgency escalation to civil war onset.

**Defining the Risk Set for Civil War**

The starting premise of our framework is the re-conceptualization of civil war ‘onset’ as the start of a rapid tactical and strategic transition by both actors which escalated to civil war - as opposed to the start of a conflict. Viewed in this way, onset also marks an ending point of a prior phase of successful

¹ With only one or two exceptions, the small number of previous studies that take a process-oriented approach to modelling civil war onset have used separate equations.
proto-insurgency development (as well as a beginning point). As commonly operationalized, a conflict reaches ‘civil war’ when the warring government–rebel dyad surpasses a high threshold of accumulated battle-related deaths, usually 1000 deaths. Reaching such a high threshold requires that some portion of the fighting is ‘conventional’ or ‘symmetrical’ in nature; that is, it involves direct military engagements between opposing military forces along territorial fronts. Once this threshold is met, it is typical for the time span of the conflict to be more or less back-dated as civil war to the date when a much lower battle deaths threshold was reached (25 deaths in the case of UCDP), although this is typically only one or two years on average. Hence onset is synonymous with the rapid transition from a proto-insurgency into a viable insurgency that was capable of reaching civil war. If onset represents that important point of transition to a viable insurgency, how do we identify insurgencies before that point? Galula (1964:4) notes the challenge of identifying an insurgency before it is seen as an insurgency, as

“…its beginnings are so vague that to determine exactly when an insurgency starts is a difficult legal, political, and historical problem…Until the insurgent has clearly revealed his intentions by engaging in subversion or open violence, he represents nothing but an imprecise, potential menace to the counterinsurgent and does not offer a concrete target that would justify a large effort.”

The coding rule implied here by Galula would be difficult to improve upon: an undifferentiated group becomes a differentiated proto-insurgency when they begin to engage in overt violent attacks. But, more precisely, what type of political violence would best identify a proto-insurgency?

As Byman argues (2008: 170), “[m]ost terrorist groups can also be conceived of as proto-insurgencies” in that they “already use violence, and they seek to gain the other characteristics of an insurgent movement but are too small or are otherwise incapable of conducting large-scale guerrilla operations…” Findley and Young (2012: 287-8) have shown that a large majority of all
terrorist attacks take place within the spatial-temporal context of civil war episodes. Mapping over 50,000 geo-coded acts of terrorism (from the Global Terrorism Database) onto civil war locations (as defined by the UCDP Armed Conflict Dataset), they find that “most incidents of terrorism take place in the geographic regions where civil war is occurring” documenting the “prominent use of terrorism before, during, and after civil war in a diverse set of conflicts worldwide” (290) (see also Polo and González 2020; Stanton 2013).

Findley and Young (2012: 287-8) argue that attrition and provocation are the dominant strategies for using terrorist violence before civil war, while intimidation and outbidding strategies are used during the course of a civil war to gain compliance from local populations, and spoiler terrorism is clustered in the aftermath of civil war to influence peace processes.² In a pre-civil war context, attrition would refer to the ability of a proto-insurgency to use terrorist violence to erode people’s perception of the strength of the state. Attrition terrorism is also intended to persuade potential supporters among the population that the rebels have the capacity to challenge the state militarily and that supporting the rebels is not an act of futility. Provocation terrorism, on the other hand, involves the use of terrorist violence to provoke an overreaction on the part of the government toward the group and its known and suspected civilian supporters in the hope that widespread and indiscriminately targeted repression will drive civilians to the terrorists. Blankenship (2018) found that states do often respond to terrorist violence with repression and that “this propensity is … related to the frequency of terrorist incidents.” He also found that low capacity states are more likely to respond to terrorist attacks with repression.

² They draw from Kydd and Walter’s (2006: 51) typology of strategic terrorism (attrition, intimidation, outbidding, spoiling, and provocation).
Defining and Measuring Proto-insurgency

Premise two of our argument is that if proto-insurgencies can be defined by the predominant use of terrorism in a pre-civil war setting, then identifying a population of successful proto-insurgencies is simply a matter of examining the anterior phase before onset, with a focus on the precursory forms of violence used by proto-insurgencies. This section provides proof-of-concept so to speak. We use the parameters of pre-onset terrorist violence as the basis for operationalizing proto-insurgency candidates more broadly. Based on what we can observe and measure in known protoinsurgencies, we create the search terms for findings unknown protoinsurgencies. Working from a list of known onsets, we can quickly obtain a list of known proto-insurgencies, by demarcating the 5 or 10 year period of time before each onset. However, this will be a list of only successful proto-insurgencies. We would still need to identify the rest of the population: proto-insurgencies that failed to escalate to civil war. Our task is to define the empirical search terms for finding the entire population of proto-insurgencies, successful or not. To construct these search parameters, we examine the average number of terrorist attacks in the time period before civil war onset using annual data on terrorist attacks from the Global Terrorism Database (GTD; LaFree and Dugan 2008).

GTD is ideal for this task in that it codes all attacks by nonstate actors as “terrorism.” Hence, their definition of terrorism is not limited to attacks on non-combatants but includes certain kinds of attacks that occur in a context of guerrilla warfare or civil war. Our dates for civil war onset are from the Uppsala Conflict Data Project’s (UCDP) Armed Conflict Dataset (ACD; Gleditsch et al. 2002; Themner and Wallensteen 2012). UCDP data are also ideal for this particular task due to their precise and exclusive focus on ‘battle-deaths’ and the low annual
threshold of 25 combat deaths used to mark onset of major civil war (an armed conflict that eventually produced 1000 cumulative battle-deaths [cumulative intensity=1]). This allows us to identify the earliest possible point in which we can confidently say that an insurgency became viable as a candidate for onset to civil war, i.e., our marker of proto-insurgency success.

Figure 1 shows the number of annual GTD attacks in a country in the decade preceding all UCDP onsets of civil war for the time period common to the two datasets. The prevalence of terrorism before onset was very high with close to 80 percent of onsets being preceded by terrorist attacks. The frequency of attacks gradually increased for the whole decade prior to onset. As seen in the figure, ten years prior to onset, there was an average of 28 attacks per year. Five years before onset this number increased to roughly 37 attacks. In the year of onset, there was an average of 44 attacks per year. In the year prior to onset, the average was roughly 40 attacks per year. Generally speaking these ‘pre-onset’ terrorist attacks killed very few people (according to the GTD data). We estimate that less than one percent of these attacks resulted in a fatality.
As a way of identifying all years currently experiencing proto-insurgency conditions we chose 40 attacks per year as our threshold, which yielded a total of 166 country-years where this particular annual threshold of terrorist attacks was met or surpassed outside of any civil war episode. This makes it possible to compare not only those proto-insurgencies that were able to trigger civil war onset from those that were not. We can also compare proto-insurgency years and non-protoinsurgency years with respect to civil war onset. Of the 166 country years with a minimum of 40 attacks, 24 experienced civil war onset. This represents 14 percent of the total number of proto-insurgency years. By contrast, less than one percent of country years without proto-insurgency conditions (i.e., protoinsurgency40 = 0) experienced onset of major civil war. Hence, we can already say at this early point that most proto-insurgencies fail, but what exactly
does failure mean in such a context? What exactly do non-viable insurgencies fail to accomplish? What is insurgency viability?

**Escalation from Proto-insurgency to Civil War**

Premise 3 is that ‘insurgency’ viability can be conceptualized as a causal chain of overlapping aggregate ‘effects’ connecting two endpoints of proto-insurgency and civil war. The most important among these stage-defining-qualities, are the tactical shifts between phases corresponding roughly with movement from terrorism to guerrilla operations/asymmetrical warfare to conventional/symmetrical warfare. In conceptual and applied writings on counterinsurgency (COIN), the causes and consequences of a group’s ability to progress through these stages are put under a rubric of ‘insurgency’. Focusing on strategic goals, Galula (1964:4) defines insurgency as “…a protracted struggle conducted…step by step, in order to attain specific intermediate objectives leading finally to the overthrow of the existing order.” Focusing on tactics, Hamilton (1998:21) defines insurgency as a phase where “political subversion, selective terrorism, and guerrilla operations play an integral, if not primary, role in the outcome.” He adds “Insurgencies do not have the capacity to be a revolution or civil war, but with staying power and continued support can ignite either.” Similarly, Kitson (1971) defines insurgency as a “strength building exercise” whereby over time the insurgents build a formidable military organization that one day might defeat the government using conventional combat strategy and tactics. “[B]ut in the earliest stages” writes Kitson, “….the war is fought by people who strike at a time and place of their own choosing and then disappear” (1971:95). International legal definitions also make insurgency out to be an intermediate phase of violence “against a constituted government that falls short of revolution, rebellion, or civil war” (Scruton 1982:226).
Synthesizing the main elements in these definitions, insurgency viability is the process of forward momentum through predictable stages of rebel group development that are hierarchical, overlapping and have different proportions of tactical violence, strategic goals, aggregate levels of violence, territorial relevance, and socio-political correlates. The stages are hierarchical in that movement from one to another implies an increase in the rebel group’s organizational complexity over time, which in turn translates into increases in the amount of aggregate violence that actor is able to produce. The stages are overlapping in that the mix of qualities that define each stage involve proportional changes that don’t occur all at once. The micro-foundation of proto-insurgency transitions through these stages are individual-level responses to state intervention.

**Government Response to Proto-insurgent Violence**

Premise four of our argument is that protoinsurgency growth is more likely where the government responds to proto-insurgent violence with a heavy mix of repressive rather than accommodative strategies. Repression is intended to intimidate civilians into withholding support from the proto-insurgency and annihilate the proto-insurgent organization itself along with its active participants. Conversely, proto-insurgencies are less likely to escalate to civil war where the government response involves more accommodative and less repressive strategies. Often referred to as the “hearts and minds” strategy, accommodative policies are designed to preempt any shift in the distribution of popular support away from the government and toward the armed opposition by seeking to address grievances among the population that the proto-insurgency seeks to exploit. In nations with large peasant populations, accommodation could be land redistribution or other rural reform programs. For proto-insurgencies motivated by ethno-regional identity,
accommodative policies can include grants of group self-determination in such areas as language, police, education, natural resources revenues. For proto-insurgencies motivated by political persecution of the followers of a particular political movement, the government can engage in various justice-related and anti-corruption reforms.

Alongside accommodation, these same governments can pursue the leaders and active members of the terrorist group using highly selective targeting of police enforcement. Such a restrictive strategy, if maintained, affects only those individuals who can be identified as being involved directly or indirectly in carrying out the terrorist attacks. Targeted state violence of this sort degrade the capacity of the group to carry out additional operations. Segments of the public that might be sympathetic to the group’s cause will begin to doubt the group's prospects for delivering on their promises of a new order. Most importantly, so long as targeting remains selective, citizens can assume that they can avoid becoming targets by refraining from providing any tangible forms of support to the proto-insurgency. Those citizens should be less inclined to provide proto-insurgents with support, overt or covert, because to do so now appears to be more nearly an act of futility that, further, puts the individual at risk of being detected and targeted themselves. As a result, the number of terrorist attacks committed by the group begins to decline, and proto-insurgency growth is halted. Although the proto-insurgency may not disappear for many years, it will not grow into a civil war.

Alternatively, some regime types are more set up for non-accommodation / high repression interventions. Accommodative reforms are harder to push through systems where the governing coalition is narrow and has strong ties to the military and bureaucracies (Bueno de Mesquita et al. 2003, 360–81). Where the political economy of regime type makes reforming the system very
difficult, the ruling class will respond to terrorist challenges against its continued rule with programs of persecution, suppression, and repression. Repressive campaigns start out in the proto-insurgency’s area of origin where the proto-insurgency has the highest levels of active and passive support. When government troops leave, the proto-insurgents filter back in, and a new stage of recovery and recruitment begins. Back in the capital, those in power will rarely be able to resist their appetite for turning up the political persecution of the region identity group or political movement that gave rise to the proto-insurgency. For those residents that see things possibly getting worse and are fearful of the government’s return in the near future, they now have time and space to plan and prepare. An important characteristic of the non-accommodation / high repression approach, is that, once the state goes down that path, repression tends to get more indiscriminate over time and the geographical scope of repressive violence tends to expand over time due to contagion effects and behavioral feedback loops (Kalyvas 2006; Mason and Krane 1989; Mason 2004).

As an example of an accommodative / low repression response, we would point to Spain’s interventions against the ETA (Euskadi Ta Askatasuna). ETA formed as a reaction to the political persecution and discrimination that the Basque region suffered under the Franco regime as punishment for their opposition during the Spanish Civil War. After Franco’s death, the new democratic regime ended the persecution, and the Basque region was granted more autonomy that included control over its own schools and the promotion of the Basque language (Gil-Alana and Barros 2010: 30). According to the Global Terrorism Database, the number of attacks by the ETA peaked in the late 1970s at roughly 160 attacks per year, and after that began to decline as popular support for their violence waned. The Spanish government dealt with its terrorist threat by
employing police tactics aimed at identifying and eliminating active ETA members involved in carrying out the acts of terrorist violence. It avoided the generalized repression intended to intimidate actual, suspected, or potential ETA supporters among the larger Basque population. The absence of indiscriminate state repression, the grants of autonomy to the Basque ethnic group, and the economic prosperity in the region have served to weaken popular support for the ETA, thereby precluding the escalation of the ETA proto-insurgency to a civil war.

The Basque ETA campaign can be compared to the Kurdish campaign of terrorism in Turkey that escalated to civil war. Both groups were based in ethnonationalist autonomy movements and both used campaigns of terrorist attacks. In Turkey, the PKK launched a campaign of terrorist attacks in the aftermath of the 1980 coup that was intended, at least in part, to enable the PKK to compete more effectively for popular support among the Kurdish population. According to GTD, the number of attacks was under 10 a year and progressed to over 100 a year by 1990. According to Tezcůr (2015: 256), the government engaged in indiscriminate repression in PKK areas that “fueled emotions of insecurity, anger, and revenge that translated into higher levels of recruitment into the PKK”, enabling them to escalate to civil war (see also Gurses (2018) on the role of harsh repression in the PKK case).

**From Proto-Insurgency to Civil War**

Premise 5 is that harsh state repression of the proto-insurgency’s area of origin leads to the dispersion of protoinsurgents and their supporters into surrounding population segments which are later targeted by the state – creating a feedback process. Our particular focus is on repression-driven contagion and the relevance of proto-insurgency proximity to repressed population segments. There is no shortage of case studies showing that state repression is usually
counterproductive. In their comparative volume on insurgencies in Spain, Nepal, Peru, Sri Lanka, Northern Ireland, and India, O’Leary and Silke concluded: “[T]he result in almost every situation of generalized repression has been an increase in the intensity of the violence and an increase in wider support for the insurgents” (2007: 409). Similarly there are no shortage of empirical studies in which increasing state repressive violence is followed with progressively more violent tactics by groups (White 1989, 1993; Mason 2004; Araj 2008; Berg 1992; Goodwin 2001; Khawaja 1993 Kerkvliet 1977; Florez-Morris 2007; Brockett 2005; Kalyvas 2006; Walsh and Piazza 2010; Polo and González 2020; Beitler 2004; Gurses 2019).

The theoretical challenge is to explain the mechanisms responsible for such drastic and sudden transitions from low-casualty terrorism campaigns to major civil war inside small windows of time. What is perhaps most remarkable about the window of time in-between UCDP’s coding of onset (25 battle-related deaths) and civil war (cumulative intensity=1000 battle-related deaths), is how small the window is: less than three years in almost all cases and less than two years in most cases. This suggests a rapid expansion in the geographical scope of repression as well as the targeting of new population segments. We argue that displacement and the dispersion of a proto-insurgency and surrounding populations has three main effects. First, the geographical dispersion of insurgencies and the demands it puts upon the state creates the future structural foundations for guerrilla warfare. Since the state’s power resides almost completely in the centralized projection of military force, it is always to the insurgent’s advantage to disperse the state’s centralized military force. Dispersion creates a win-win situation for insurgents: if they disperse to new areas and the government chooses not to pursue, they benefit with a safe haven; if they disperse to new areas and the military follows, they spread out the state’s forces, thus
removing the state’s main advantage of concentrated projection of fire power. Dispersion is necessary for conducting surprise attacks on small isolated bands of government troops, which is the essence of guerrilla warfare.

At the same time that it is becoming more dangerous to be a counterinsurgency soldier, the geographical dispersion of the insurgency means that the ratio of insurgents and active supporters to non-insurgents and neutrals is decreasing. In other words, insurgents are becoming more difficult for counterinsurgents to identify and distinguish from the general population. When sent to a new village or town where the proto-insurgents are thought to be hiding/residing, the state’s counterinsurgency troop now face a new targeting dilemma: how to distinguish the far greater number of uninvolved civilians from insurgents and those providing them with active but covert support. This creates a principal-agent problem for the counterinsurgency command. Ordinarily, they would prefer that their agents in the field confine their use of violence to those identified as providing active support to the proto-insurgence. However, the average soldier in the field has a different set of incentives. Mason (2004: 155) describes this the “counterinsurgency dilemma.”

The overriding desire of the soldier in the field is to survive the mission. All too often this leads counterinsurgent units to engage in overkill. The standards of evidence they use to distinguish the guerrilla supporter from the uninvolved civilian are rarely sensitive to the need to avoid punishing neutrals. Instead their treatment of civilians is dictated by their own desire to survive the mission, which all too often comes to mean eliminating any civilians whom they suspect might pose a threat to the soldiers’ own lives.

The result is often mass killings and mass detainment. Those detained are pressured or tortured to provide names which leads to the next round of detainees that are pressured to do likewise; thus creating a never-ending chain of new targets. At this point a total withdrawal of
one's support to the proto-insurgents would not necessarily ensure one’s immunity from state repression (Mason 2004).

The dilemma confronting citizens who have not been actively involved in supporting the proto-insurgents is that they may no longer be able to avoid involvement in the conflict. Mason (2004: 156) notes that, when the government’s campaign of repressive violence becomes indiscriminate in its selection of targets (a function of the counterinsurgency dilemma), this becomes a turning point, as

the probability of an uninvolved peasant becoming a victim of state-sanctioned violence is no longer strictly contingent upon his or her own covert or overt support for the rebels. Refraining from supporting the rebels no longer exempts one from being detained, or killed. Under these circumstances, all that the rebels need to do in order to win the support of [civilians] caught in the crossfire between rebels and regime is to offer them sanctuary from counterinsurgent violence.

A second effect of the geographical dispersion of a proto-insurgency is that it decentralizes who is committing repressive violence to a larger number of smaller administrative units or locales. As the internally displaced flee to new areas, towns, cities, or regions, they will be picked up by police or military as suspected insurgents since they are from the insurgency’s area of origin and match an insurgent stereotype. Hence as displacement continues, so does the geographical expansion of repressive violence in the country. Third, the dispersion of the insurgency is needed to establish the supply and demand conditions for offering sanctuary as a selective incentive for active participation in the movement. The ability of the proto-insurgents to offer sanctuary requires the geographical dispersion of protoinsurgency members and the displacement of population segments sympathetic to the insurgents. Only in the presence of harsh state repression will individuals who fit
the insurgency’s recruitment profile, in terms of class, ethnicity and birthplace, migrate in sizable numbers throughout a region or nation, where both agents of the state and agents of the insurgency are waiting. When and where it becomes increasingly difficult for the average person to avoid state repressive violence and a rebel group exists that is able to offer protection as a selective incentive in exchange for support, rebel recruitment will prosper. The combination of harsh state repression with the ability of the rebels to provide safe havens to potential victims of that repression contributes to insurgency growth by making it easier for the rebels to recruit new members.

The result of all three of these contagion effects put together is one large feedback loop where forced migration (resulting from repression in one part of the nation) leads not only to the dispersal of rebels but to the spatial expansion of state repression as well. State repression focused on the insurgency’s area of origin serves to transplant a successful dynamic of recruitment to other (adjacent) geographical areas. Sustained indiscriminate repression helps solve a proto-insurgency’s problem of finite expansion opportunities. This is the principal way, we believe, that groups are able to expand geographically into areas of a country or region where they had no prior presence before. By this dynamic the armed opposition movement can “graduate” from proto-insurgency to guerrilla warfare and civil war.

The case of Sendero Luminoso in Peru illustrates some of the repression-driven dynamics discussed above. Sendero Luminoso was small Maoist-inspired student group formed in the late 1960s in Ayacucho by University Professor Abimael Guzmán. Sendero engaged in sporadic acts of terrorism in the 1970s with little reaction by the state until the transition from a military regime to democracy and the election of Fernando Belaunde Terry (1980-1985) as its first president. Shining Path’s campaign of terrorist attacks began in Ayacucho, where its members were well
integrated with certain segments of the local population. In 1982, the Ayacucho region was declared an emergency zone (EMZ), and a large specialized contingent of armed forces (Sinchis) entered Ayacucho (Smith 1992:133). Strong records that in the first four years, 7,126 people were killed in the provinces of Sendero’s origin (1992:92). In his analysis, Strong (1992:93) noted that “Despite all the armed forces’ torture and massacres and burning down of villages, the number of Shining Paths attacks in the Ayacucho department in 1984 …were double those in 1982.” Berg (1992) observed, first hand, Sendero’s evolving relationship with the peasantry of the Andahuaylas province both before and after the arrival of the state’s counterinsurgency forces. In 1982, before the military had had arrived, Berg (1992: 96) wrote that, “the peasants have a great deal of sympathy for the actions of Shining Path…but not a great deal of active support.” Returning to the area four years later, Berg found high levels of active support for Sendero. “One indication of this…” he remarks (1992:96) “…is the changing terminology used by peasants when referring to the Shining Path. In 1982 they were known as “terrorist” (terroristas, terros, terukuna) or sometimes, sarcastically, as los universitarios. In 1985, in contrast, they were often called “comrades” or “buddies” (comaneros).” Although Sendero engaged in its own share of repression, Berg (1992) notes that Sendero violence was much more selective than that of the police or military. As one villager put it: “When the guerillas struck, it was against people whose “crimes” were well known…On the other hand, the police arrested and interrogated blindly…” (1992:98).

The Peace Commission later estimated that by 1985 fifty thousand forced migrants had left the region and settled in Ica, Huancayo, Lima, and other areas. Once relocated to a new locale, Smith notes that “carrying a voting identification card with Ayacucho marked as birthplace was a
guarantee of two weeks in the security police’s prisons and even torture” (1992:133). Smith writes that Sendero had a policy of responding to those individuals picked up by security forces with “house calls” where they would offer help and support, starting a relationship of reciprocity between Sendero and internally displaced peasants. By 1985, Smith (1992:134) notes that Ayacucho was no longer the region with the most insurgent activity. Manrique (1998:198) notes that “During the same period that Shining Path was forced into a general retreat in Ayacucho by the Armed Forces’ genocidal tactics...there was a marked increase in terrorist actions in the central sierra.” Similarly, Long (2001:165) notes that the city of Huancayo “…had become a centre of violence...filling up with refugees from the surrounding southern highland regions, where Sendero had its garrisons.” With respect to the ability to provide sanctuary, Palmer (1992) noted in his study that of the peasant communities who supported Sendero, the alliances only lasted as long as the state’s military forces were kept at bay by the rebel group. When Sendero was unable to protect a community, “the insurgents lost their momentum in the area” (Palmer 1992:5). Isbell (1992:72) tells a similar story about the village of Cancha who gave Sendero wide support in its first two years, but then withdrew it when the military presence became too large in the area for Sendero to be able to provide effective protection in that location.

The Peruvian case also supports the construct validity of our arguments main concepts and the feasibility of using GTD and UCDP onset data to capture protoinsurgency formation and escalation dynamics. According to UCDP, Peru reached civil war onset in 1982. The Global Terrorism Database records 224 terrorist attacks in the 5 years leading up to onset (1977 to 1981). The overwhelming majority of these attacks were bombings in which no one was killed or injured (there were 17 deaths over the five year span). Only 2 percent were aimed at the ‘military’ and 6...
percent aimed at ‘police.’ Clearly in between these phases there was a tactical shift in the type of violence that was produced; otherwise onset could never have been reached in 1982 and civil war violence in 1983. The case further shows that these ‘combat’ deaths are not being captured in GTD. In the next section, we turn to implications of the argument on estimation and research design.

**Argument Summary and Implications on Estimation Choice**

We argued that proto-insurgency escalation to civil war is a causal chain of aggregate effects which we have rooted in a micro-foundation of individual-level responses to state repression. Because a proto-insurgency is unlikely to be directly targeted by the state before it announces its presence and makes itself a target with its use of terrorist violence, it follows that proto-insurgency formation is a grievance-driven dynamic motivated by witnessing rather than directly experiencing regime persecution, corruption, and generalized repression. On the other hand, proto-insurgency escalation to onset, we argue, is driven by the movement being directly targeted by the state, which produces repression-driven contagion effects. The engine of the progression forward in proto-insurgency escalation to civil war onset is the perpetual movement of individuals from high repression domains to low repression domains (a domain here can be spatial or behavioral). We argue that insurgency activity met with harsh repression tends to be transplanted rather than diminished. It follows that spatial shifts and tactical shifts are fundamentally related: as insurgents seek out areas of low repression, they have to adapt their tactics. Rather than a tactical shift resulting in a parallel geographical move consistent with the use of the tactic -- such as irregular warfare in rural environments - a group's tactical changes are often an adaptation that resulted from repression-driven displacement. We now pivot to the question of how best to model the process just described.
Research Design and Measurement

The determining factor in estimation choice is whether protoinsurgency formation and escalation to civil war onset are separate, sequential outcomes, or endogenous variables in the same system where the effect of exogenous factors on endogenous factors changes across stages of development/transition. As can be gleaned by the variable relationships charted in Figure 1, our argument is clearly that protoinsurgency formation and escalation to onset are endogenous variables in the same system. This calls for simultaneous equations where we, in effect, try to model the impact of exogenous variables on endogenous variables as a system, where the relationships among exogenous and endogenous variables in one equation impacts those in the second equation.

Figure 1 presents the two equations where the disturbance terms are represented by $\zeta_1$ and $\zeta_2$. As seen in the figure, each equation contains exogenous variables that either explain both protoinsurgency and conflict onset (the two endogenous variables) and variables that are unique to each equation. The curved line between the two disturbance terms indicates the correlation among them. In a SUR model, higher correlation among the error terms of the different equations (and higher multi-collinearity between the regressors) has been shown econometrically to result in even greater efficiency of the parameter estimates, as more information can be used to describe the overall system (Yahya et al. 2008; Judge et al. 1988). We should also note that econometrically it is beneficial to have the presence of unique variables in each equation estimated with SUR as it adds information to the matrix of disturbances, contributing to more efficient estimation of

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3 We do not lag the independent variables as we are trying to model as close to real time as possible the effect of exogenous on endogenous variables in our model. Simply put, we believe that state violence and proto-insurgency violence in 1983 would explain 25 battle deaths in 1983.
coefficients. SUR does not assume a diagonal matrix for disturbances of the two equations and uses information from the off-diagonal elements of the disturbances matrix.

**Figure 1. Path diagram of the seemingly unrelated regression (SUR) model**

With the exception of Öberg, Möller and Wallensteen (2009) and Melander, Möller and Öberg (2009), of the small number of empirical studies that have sought to model escalation to civil war onset as a multiple equation process, all have used separate equations rather than simultaneous
equations. Several use Heckman selection models which are two separate equations (non-simultaneous). While multiple single-equation models representing phases or dimensions of violence by one actor can be estimated separately, the single-equation approach is inefficient from a statistical point of view if the dimensions of violence (and hence the equations) are endogenous outcomes in the same system (Judge et al., 1988) sharing a common error structure with non-zero covariance.

**Dataset and Model Structure**

We estimate the two equations using a bivariate probit model (Marra and Radice 2017) and a cross-sectional time series dataset of 110 developing nations with country-year as the unit of analysis. For the dates of major civil war onset, we use the Uppsala Conflict Data Project’s (UCDP) Armed Conflict Dataset (ACD; Gleditsch et al. 2002; Themner and Wallensteen 2012). UCDP codes the start of a major civil war as the first year that deaths from political violence surpassed the 25 deaths threshold (STARTDATE2) in a conflict that eventually reaches a cumulative intensity of 1,000 deaths in at least one year. To avoid conflating the violence that

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4 Bartusevicius and Gleditsch (2019) use two-stage models to distinguish between conflicts with and without contested incompatibilities. The dependent variable in their second stage is a 5-point scale of whether the incompatibility became “militarized.” Regan and Norton (2005) examine protest, rebellion, and civil war in three separate single-equation models. Hendrix and Salehyan (2012) examine protests, riots, strikes, coups, and organized violence using eleven single-equation models. Young (2012: 522) estimates three separate equations of repression, dissent activity, and onset in the third. Rost (2011) uses a Heckman selection model of onset (using Sambanis’ 2004 civil war list) with repression as the dependent variable in the first stage. Also using a Heckman model are Blanton and Apodaca (2008) who assess the impact of globalization on intrastate conflict within developing countries (1990–1996). Cunningham et al. (2017) use a two-stage model to examine dissident claims and the escalation to violent and nonviolent collective action. Hultquist (2017) jointly estimates state repression (E1) and battle-deaths (E2) inside of ongoing civil wars, as opposed to escalation to onset.

5 The sample is middle income countries and below. The period under examination is 1981 to 2010. The beginning date is the first year for which data are available from the CIRI Human Rights Data Project (Cingranelli and Richards 1999), and the end date is the last year for which data are available for one or more independent variables.
leads to civil war with the violence resulting from civil war, we dropped all country-years with active armed conflict following the year of onset. Once a conflict ended in a nation, it reentered the dataset as being eligible for a new civil war onset. This produces a sample comprised only of country years outside of minor and major civil conflict episodes, as defined by UCDP. Countries that never experienced civil war onset are right-censored.

We measure proto-insurgency violence using the Global Terrorism Database (GTD; LaFree and Dugan 2008). GTD is a database of domestic and international terrorist attacks around the world from 1970 through 2010. The record for each attack contains information on the date, location, weapons, target, casualties, and the perpetrator. GTD codes attacks by non-state actors as “terrorism.” This includes attacks that occur in a context of civil war, although they do not code battle deaths or attacks that occur in battle or in a combat operation. In all, over 82,000 attacks took place over the period of study, allowing us to create a count variable of the number of attacks per year in each nation. In our previous inductive examination of GTD attacks that took place before all UCDP onsets, we found that close to 80 percent of UCDP onsets (STARTDATE2) were preceded by terrorist attacks, and the frequency of attacks gradually increased in the decade prior to onset. Before onset, there was an average of 44 attacks per year. From the count variable, we created a range of binary variables marking whether or not a particular annual threshold was exceeded. For the analysis, we use protoinsurgency40 as the binary dependent variable in the first equation of the analysis, indicating that at least 40 attacks took place within that year. We chose this threshold on the grounds that the annual number of attacks in the five year period before civil war onset was roughly between 35 and 45 attacks. As mentioned, there were 166 country years with proto-insurgency conditions (protoinsurgency40 = 1).
State repressive violence is measured using the CIRI Human Rights Data Project’s physical integrity index. The CIRI index is a 9-point additive scale of the frequency of four different indicators of violations of physical integrity rights: (1) torture, (2) extrajudicial killings, (3) disappearances, and (4) political imprisonment. We reversed the scale so that higher scores represent higher levels of state repression and log-transformed the variable in the proto-insurgency equation to fit a linear model to predict proto-insurgency formation. We also created the variable Increase in Attacks which is the percentage change in the number of proto-insurgency attacks from one year to the next.

We gauge political persecution with measures of access to justice and regime corruption - from the Global State of Democracy Indices, IDEA 2020 (Coppedge et al. 2020). Access to justice is an ordinal variable with (0) indicating that secure and effective access to justice is non-existent and (4) indicating that secure and effective access to justice is almost always observed. The indicator is converted to interval by a Bayesian item response theory measurement model (Pemstein et al. 2021). We add the indicators for access to justice for men and women to obtain a global measure. Regime corruption captures the extent to which political actors use political office for private or political gain and is on the interval scale (0-1). The willingness of the state to engage in accommodative actions to help avoid conflict escalation is captured by the indicator: group inequalities in civil liberties from the same source. A score of (0) indicates that some members of some social groups enjoy much fewer civil liberties than the general population and (4) indicates that members of all salient social groups enjoy the same level of civil liberties. Social groups are groups distinguished by language, ethnicity, religion, race, region, or caste. Higher scores suggest that group-level accommodations were made with respect to demands in the past and are more likely to be made if new demands are raised. The

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control variables that we include are those that Dixon (2009) found to have a relatively high degree of consensus as antecedents of civil war onset across the 46 studies that he reviewed. The control variables come mostly from the Quality of Government Dataset (QOG; Teorell et al. 2013) and Hegre and Sambanis (2006). Table 1 in the Appendix shows correlations among variables.

Findings

Table 1 presents the results of our analysis of the relationship between proto-insurgency violence, state repressive violence, and civil war onset. In Model 1 the first equation has proto-insurgency as the dependent variable (measured as at least 40 attacks in a country-year). The second equation in Model 1 has the onset of major civil war in a country year as the dependent variable. A Lagrangian multiplier test shows that there is significant correlation (p-value = 0.031) among the two equations (Silvey 1959), justifying our choice for estimating them jointly. In other words, the unobservable variables influencing proto-insurgency formation and escalation to onset are correlated. Model 2 presents the results of bivariate probit models on proto-insurgency formation and escalation to civil war onset with country fixed effects. Values of log-likelihood and Akaike Information Criterion (AIC) suggest that Model 1 (without country fixed effects) is a better fit for the data than Model 2. Hence we interpret the results of Model 1 (however the coefficient on all variables of interest are significant and in the expected direction when including country fixed effects).

The findings from Model 1 show that, when estimated simultaneously, the variables that are significant in both equations affect disruption of peace through the two theoretical mechanisms,

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7 GDP per Capita (QOG); Ethnic fractionalization (QOG); Mountainous terrain as percentage of overall territory (Hegre and Sambanis 2006); Population in Thousands (QOG); Democracy is a 21 point positive scale taken from the PolityIV project (Marshall and Jaggers 2002); Peace Duration is years since last major civil war coded by the authors; Oil exports greater than 1/3 of all exports (Hegre and Sambanis 2006).

8 Table 2 in the Appendix presents estimation results for separate biprobit models.
associated with proto-insurgency formation and onset of civil war. Proto-insurgency formation is not confined to the set of weak nations that “big bang” civil war onset models identify as being at high risk for civil war. We find that proto-insurgency conditions are more likely given higher levels of state repression. Figure 2 shows the increase in the probability of seeing proto-insurgency conditions for each unit increase in the level of state repression. Increasing repression from the lowest values up to (6) increases the probability of protoinsurgency violence, while higher values than (6) are not associated with any changes in probability. Proto-insurgency conditions are also more likely in countries with less access to the justice system and with higher degrees of regime corruption. To capture the non-linear relationship between these variables and proto-insurgency, the squared, cubed, and biquadratic terms are also entered in the model. Figures 1 and 2 in the Appendix present the predicted effect of these variables on proto-insurgency. Regime corruption is negatively and non-linearly related to proto-insurgency, with lower values of corruption associated with about one-third lower values of proto-insurgency, compared to higher values of corruption. These results can be explained by the placating role of patrimonial relations when elites use private office for personal gain, co-opting potential dissent. In highly corrupt regimes, however, an increase in corruption has a smaller impact on co-opting potential dissenters and reducing terrorist attacks.

Among the control variables, we find that proto-insurgencies are more likely in nations with larger populations, which is consistent with Blanton and Apodaca (2007) and Hendrix and Salehyan (2012). GDP per capita is significant but positive, which matches Regan and Norton (2005) but stands in contrast to the consistent negative relationship found in “big bang” onset studies reviewed by Dixon (2009). GDP per capita is not significant in the selection equation of low-level conflict in Blanton and Apodaca (2007) and GDP per capita is not significant in any of the ten models of low-level conflict in Hendrix and Salehyan (2012:43-44). Young (2012) does not include GDP per capita in his
model of dissident activity. In Model 1, peace years is significant and negatively associated with proto-insurgency conditions. Proto-insurgencies are less likely to emerge with each passing year of peace since the last civil war episode. Hendrix and Salehyan (2012), Blanton and Apodaca (2007), and Young (2012) do not include a peace year count variable. Except for population, none of the other conventional indicators associated with civil war onset are significant predictors of proto-insurgencies. No significant results were found for proto-insurgency and regime type. This matches Blanton and Apodaca (2007:607) and Hendrix and Salehyan (2012:43-45). Young (2012) and Regan and Norton (2005) find positive and significant results for democracy and dissident activity (Figure 3 in the Appendix presents the predicted effect of democracy on proto-insurgency). We do not find significant results for ethnic fractionalization and proto-insurgency violence. This is consistent with Young (2012:524, Table 1) and with Blanton and Apodaca (2007:607), and is at odds with Regan and Norton (2012, Model 2, Rebellion). We do not find proto-insurgencies associated with any "resource curse" (consistent with Regan and Norton (2005) and with Young (2012)). Finally, mountainous terrain is not significant in protoinsurgency formation.

In the Onset equation in Model 1, we find that the onset of major civil war is associated with a very parsimonious set of factors when simultaneously estimated with proto-insurgency formation: except for peace years, basically none of the Dixon consensus variables reach statistical significance. The only significant predictors of civil war onset are high repression and low accommodation as measured by larger group–level inequalities in civil liberties. Figure 3 shows changes in the risk of civil war onset for each unit increase in the nation’s repression score (CIRI), using a smooth term. Higher values of repression are linearly associated with high predicted probability of civil war onset. The finding on state repression and onset conforms the findings of Young (2012) using the Political Terror Scale (PTS), Rost (2001) using PTS and CIRI, and Regan and Norton (2005) using a
discrimination and repression measure from Minorities at Risk. Among the control variables, mountainous terrain and democracy levels are positively associated with onset, while number of peace years is a negative predictor of onset. Figures 4 and 5 in the Appendix present the effect of group-level inequalities in civil liberties and democracy on conflict onset.

Putting the overall findings of the two equations together, we find that when first accounting for the presence or absence of repression and the willingness of the state to accommodate grievances over group-level inequalities, onset is no longer strongly predicted by poverty, population size, ethnic fragmentation, or oil dependency. Our interpretation of these results is that the measures of "state weakness" that are depicted as predictors of civil war onset in most studies of that phenomenon were to a large degree predicting how the state will respond to protoinsurgency terrorism, and it is that response - repression in particular - that affects the risk of civil war onset. The human rights literature points to the exact same set of attributes as the civil war onset literature to explain which nations are most likely to engage in widespread abuse of physical integrity rights.

**Conclusion**

In this article we examined protoinsurgency formation and protoinsurgency escalation to civil war as jointly produced but distinguishable phases of insurgency development. The results reveal large differences with previous single-equation models of onset. Our interpretation is that the structural antecedents of civil war cataloged by Dixon were predicting state repressive violence more than onset; these are the exact same variables that the human rights literature has identified as predictors of widespread state repression of physical integrity rights (Poe and Tate 1994; Poe, Tate and Keith 1999; Richards, Gelleny and Sacko 2001). Human rights studies find that weak states with civil war, lower levels of economic development, large populations, and lower levels of democratization engage in
significantly greater human rights abuses. Overall the analysis suggests that the risk set of countries experiencing the kind of proto-insurgency violence that usually precedes civil war is much more diverse than the domain of poor weak authoritarian states that conventional civil war onset models describe. Our findings parallel the rich qualitative literature on civil war from the last several decades that addresses how opportunity structures for mobilization, the mobilization capabilities of dissident groups, and the state’s response to such mobilization affect the risk of civil war onset (e.g., Tilly 1978; McAdam, Tarrow and Tilly 1997). As Goodwin (2001:245) notes in his qualitative study of successful and unsuccessful revolutionary movements: “[T]he “root cause” of armed rebellions that seek the overthrow of the state – as distinct from other forms of political conflict – is not poverty, exploitation, or inequality per se. Rather, armed revolutionary movements result from the violent suppression of the peaceful political activities of aggrieved people who have the capacity to rebel.”

Future research could explore this escalatory process using a dyadic framework. What determines whether some government-rebel dyads in the same country escalate to civil war while others do not? However, this will require documenting that a protoinsurgency group was targeted directly or not directly by the state which is a very difficult task. All nations that experience civil war onset did not experience an antecedent campaign of terrorist violence. Why? Much of this is due to a lack of coverage particularly in African countries. However, another path to onset could involve the escalation of non-violent opposition movements – although it is unclear to us how a movement could tactically adapt so quickly. ‘Quick’ militarization might also be the result of defection of elements of the state security forces, as occurred in Libya and, to a lesser extent, Syria in 2011 (Sharif 2021). Perhaps a recent history of militarization is also key here. On this point, our findings show that “peace years” is significantly related to the emergence of proto-insurgencies as well as escalation to onset. This suggests some refinement to Collier et al.’s (2003) notion of the "conflict trap." Having a recent
civil war translates into having more opportunities for escalation, with each one of those opportunities having a much higher probability of escalation. Chenoweth and Stephan (2011) identify a set of conditions under which such movements produce desired outcomes without violence. The same framework used in this paper could be used to explore under what conditions a nonviolent social movement is likely to shift strategies to armed violence. Chiang (2021) finds that the effect of repression is conditional on whether the opposition uses violent versus nonviolent tactics. Exploring the feedback loops of protest, terrorism, repression, and civil war is needed if we are to build empirical models of the civil war process that better fit the rich qualitative and theoretical literature on the subject that preceded the last two decade’s empirical studies.

References


<table>
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<tr>
<th></th>
<th>Model 1</th>
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<th>Model 2</th>
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<tbody>
<tr>
<td>State repression (log for proto-insurgency)</td>
<td>1.302*** (0.000)</td>
<td>0.237*** (0.000)</td>
<td>1.769*** (0.000)</td>
<td>0.315 *** (0.000)</td>
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<tr>
<td>Increase in attacks (%)</td>
<td>- (0.065)</td>
<td>0.0519† (0.127)</td>
<td>-</td>
<td>0.132 (0.000)</td>
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<td>Access to justice</td>
<td>-61.375*** (0.001)</td>
<td>-</td>
<td>-18.53 (0.155)</td>
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<td>Access to justice biquadratic</td>
<td>-47.620* (0.017)</td>
<td>-</td>
<td>-44.03** (0.009)</td>
<td>-</td>
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<td>Group civil liberties (log)</td>
<td>- (0.000)</td>
<td>-0.663*** (0.000)</td>
<td>-</td>
<td>-0.481** (0.002)</td>
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<tr>
<td>Regime corruption</td>
<td>-30.839*** (0.000)</td>
<td>-</td>
<td>-20.16*** (0.000)</td>
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<td>Regime corruption biquadratic</td>
<td>-13.326* (0.004)</td>
<td>-</td>
<td>-7.731* (0.035)</td>
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<td>GDP per capita (log)</td>
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<td>-</td>
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<td>Ethnic fractionalization</td>
<td>-0.423 (0.286)</td>
<td>0.276 (0.362)</td>
<td>-</td>
<td>-</td>
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<td>Mountainous (%)</td>
<td>0.006 (0.190)</td>
<td>0.006* (0.039)</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Population size (log)</td>
<td>0.419*** (0.000)</td>
<td>0.100 (0.032)</td>
<td>-</td>
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<td>Democracy (1-21)</td>
<td>29.310 (0.000)</td>
<td>0.035** (0.005)</td>
<td>-</td>
<td>-</td>
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<td>Democracy squared</td>
<td>-11.655 (0.023)</td>
<td>-</td>
<td>-</td>
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<td>Peace years</td>
<td>-0.031*** (0.000)</td>
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<td>Oil dependency</td>
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<td>Country fixed effects</td>
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<td>0.000 (0.000)</td>
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Significant codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘†’ 0.1; robust standard errors in parentheses; not showing regime corruption squared and cubed terms, which are not significant at the 0.1 level; also not showing access to justice squared and cubed terms, with only the squared term significant at the 0.05 level; theta = 0.359 (0.048,0.627); tau = 0.234 (0.030, 0.431); total edf = 32

Figure 2 The effect of State Repression on Proto-insurgency (smooth-function estimates)
Figure 1. Predicted effect of regime corruption on proto-insurgency (higher values = lower corruption) (smooth function estimates)

Figure 2. Predicted effect of access to justice on proto-insurgency (higher values = higher access to justice) (smooth function estimates)
Figure 3. The Effects of Repression on Civil War Onset (higher values = greater repression) (smooth function estimates)
Figure 4. Predicted effect of group civil liberties on conflict onset (higher values = higher equality among groups) (smooth function estimates)
Figure 5. Predicted effect of democracy on conflict onset (smooth function estimates)