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The Empiricists' Insurgency

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Abstract

Research on insurgency has been invigorated during this past decade by better data, improved methods, and the urgency of understanding active engagements in Iraq and Afghanistan. This “empiricists’ insurgency” reinforces a classic literature on the essential role of civilians while challenging older theories about how they affect conflict outcomes. It provides a general framework describing “irregular” insurgencies (where government capacity exceeds rebel capacity), which is analytically cohesive and empirically tested using subnational data from multiple conflicts. The new research provides guidance on intervention design, including governance improvement, development programs, and rules of engagement. The design of interventions matters: Some key evidence comes from measuring the effects of misguided policies. The framework may enable better conceived and implemented interventions, including foreign engagements with and without troop deployment, depending on the type of insurgency and mindful of political limitations. We position these findings in the literature and highlight directions for future research, including legal aspects of countering insurgency.

INTRODUCTION

Imagine a typical environment faced by government forces (or their allies) in a modern insurgency, perhaps a village in Afghanistan or the Philippines, where rebels ambush government patrols or deploy improvised explosive devices (IEDs) to attack them. Preparations for these insurgent actions are likely to be observed by civilians, community members who could anonymously report the insurgents to government forces.¹ Those tips from civilians raise the government's chances of controlling the village. They allow government forces to leverage their advantage in technology and equipment in order to effectively pursue insurgents who could otherwise vanish into the population. Both government forces and insurgents therefore have strong incentives to influence civilian tips through a variety of methods. Both sides therefore might attempt to provide services of value to noncombatants, while avoiding gratuitous civilian casualties.

In many senses that stylized narrative would be familiar to a reader of the classic literature on twentieth-century insurgency, but new data and methods allow a more precise understanding of current insurgencies. Examining first the similarities, classic references dating back to at least the communist revolution in China all describe conflicts in which winning the cooperation of the local population is a tactical objective (Clutterbuck 1966, Galula 1964, Kalyvas 2006, Mao 1937, Thompson 1966). West's (2003) personal account, *The Village*, from Vietnam, describes this setting in very clear detail. These conflicts would all be irregular (or asymmetric), by which we mean that the government forces have a clear advantage over rebels in coercive capacity (i.e., munitions, manpower, equipment, air support, or communications) that can be applied to control territory. The US Army field manual designed to guide counterinsurgency strategy in Iraq and Afghanistan shares that "hearts and minds" logic (Kilcullen 2006, US Army 2007). A shared theme in the classic literature is that treating insurgencies as conventional warfare is deeply misguided because it neglects the consequential role that civilians play in sharing information (Mao 1937, Nagl 2002, Popkin 1979). That argument reappears more recently in the cross-national analysis of Lyall & Wilson (2009), who link the replacement of foot patrols with the use of mechanized vehicles to poor information collection and ultimate failure of counterinsurgents.

Before we dive into a framework, analysis, and data, note that the scenario described is specific in certain ways. Most importantly, it describes irregular insurgencies, not subnational conflicts in which the balance of capacity between the government and rebels is more symmetric. **Table 1** provides examples of symmetric and irregular conflicts. We follow Kalyvas & Balcells (2010) in arguing for the importance of this distinction.

Irregular Conflict

Irregular tactics allow rebel groups to persist in fighting stronger governments despite their weakness, by blending back into the civilian population after an attack (Arreguín-Toft 2001, Lyall & Wilson 2009). The willingness of civilians to silently accept that reintegration is a critical resource for insurgents. If civilians inform about the rebels' identity and location, then the government can bring to bear its advantage in capacity to act decisively.

From a policy perspective, irregular conflict characterizes most subnational conflicts in which the United States and other Western governments are likely to be involved, even after Afghanistan,

¹Why assume that civilians provide tips only to the government and not to rebels? They may well supply information to rebels, but we emphasize the tips provided to the government because a key implication of asymmetry is that information is far more valuable to governments than it is to rebels, as it complements capacity. A more general approach would allow information sharing with both sides, and measure net information sharing with the government; that would not affect testable implications.

Table 1 Types of subnational conflict^a

Civilians provide	Balance of forces	
	Irregular (rebel < government)	Symmetric (rebel ≈ government)
Information, anonymous	Afghanistan, Iraq, and Philippines (Berman et al. 2011a,b; Biddle et al. 2012) Algeria (Galula 1964) China (Mao 1937) Guatemala (Stoll 1993) Malaya (Clutterbuck 1966, Thompson 1966) Vietnam (Popkin 1979, Kalyvas & Kocher 2009, West 2003)	
Information, attributable	Greek civil war (Kalyvas 2006)	
Recruits or other resources	Colombia (Dube & Vargas 2013)	Azerbaijan (Kalyvas & Balcells 2010) Bosnia (Kalyvas & Balcells 2010) Congo (Kalyvas & Balcells 2010) Georgia (Kalyvas & Balcells 2010) Liberia (Ellis 1999, Lidow forthcoming) Rwanda (1994) (Kalyvas & Balcells 2010) Somalia (1991 (Kalyvas & Balcells 2010)

^aThe classification of conflicts into irregular and symmetric comes from Kalyvas & Balcells (2010), who graciously shared their data, except where a different reference is provided (but nowhere disagrees with the Kalyvas & Balcells classification). For a discussion of the role of civilians in Colombia see discussion in text.

if only because Western intervention tends to create asymmetry. Irregular conflict has decreased since the end of the Cold War, as is especially well-documented across African cases (e.g., Reno 1999). Yet it has become the most common form of subnational conflict, accounting for 54% of conflicts between 1944 and 2004 (Kalyvas & Balcells 2010). In the conflicts in which the West has intervened recently—the NATO operation in Libya in 2011 and the French-led intervention in Mali in 2013—local information allowed intervening parties to effectively use their asymmetric advantage to target combatants, recalling the logic of our motivating example.

In contrast, in conventional (i.e., symmetric) insurgencies, government and rebel forces have comparable capacities. An example is the Liberian civil war, in which both sides had low capacity (Lidow forthcoming). In conventional conflicts, even if governments or rebel groups receive information, they generally cannot use it to create an overwhelming advantage. For instance, knowing who the opposing commander is, or where he is, is of little value if he is in a well-protected bunker too far behind enemy lines to be targeted with available means. In these symmetric subnational conflicts, both sides may still use violence for similar ends as in conventional interstate wars (e.g., Balcells 2010), but information is less useful operationally (Ellis 1999, Reno 1999). Western intervention in Iraq and Syria against (self-proclaimed) Islamic State (IS) would convert a conflict that now has both symmetric and asymmetric fronts into a more asymmetric contest. The gruesome execution of the accused informers in Iraq in February of this year indicates a sensitivity to information flow by IS symptomatic of asymmetric conflict (Variyar 2015).

The Role of Civilians

Among irregular insurgencies, the framework is circumscribed by two additional assumptions that the classic literature is sometimes vague about: (a) the consequential action of noncombatants is information sharing, rather than supplying resources, recruits, or shelter to combatants; (b) information can be shared anonymously, without endangering the civilian who relays it.² Those assumptions position us in the set of subnational conflicts in the top left corner of **Table 1**. Importantly, we also make the strong assumption that neither side actively targets civilians through coercion or intimidation. This may seem an unusual starting point, given the emphasis in the literature on civilian massacres (e.g., Kalyvas 2012); however, the recent literature has less to say about that disturbing phenomenon—perhaps for lack of evidence—so we focus first on the strategies of combatants, and then return to discuss targeting of civilians within that broader context. We also discuss below how the scope of this framework might be expanded by allowing attributable information sharing (with both the government and rebels), taxation, extortion, and repeated interactions.

Our objective is to review the recent empirical literature on irregular insurgency, which suggests that a framework built on these assumptions is relevant; discuss the relationship of that framework with the literature, both current and classic; speculate on the relevance to future conflicts and to policy; and suggest directions for future research. We concentrate on conflict at a local level, which will be less compelling if the national government decides not to contest that particular location. These political choices circumscribe the effectiveness of counterinsurgency. We return to that scope limitation and its policy implications below. We emphasize recent subnational quantitative results which Blattman & Miguel (2010) argue are critical to a research agenda that aspires to develop and test theories of civil conflict—although qualitative research will also be needed to fill some of the gaps we identify in the literature.

INSURGENCY FOR EMPIRICISTS: A BASE FRAMEWORK

Figure 1 provides a schematic description of irregular insurgency under these assumptions. Government forces and rebels attack each other, as in conventional models of conflict.³ The combatants could be fighting over territory, striving for some other policy concession, or simply trying to capture economic rents (this analysis is not sensitive to changing our assumptions about combatants' objectives). The importance of civilians' ability to provide tips to the government is a defining aspect of this literature. Civilian information about the identity or location of rebels, or even about local terrain and customs, makes government attacks much more effective at controlling territory (by capturing, killing, or intimidating rebels). We call this an information-centric framework.

Why would civilians share information with the government? Because doing so could deliver control of their neighborhood to an entity that advantages them. Civilians might have underlying attitudes and beliefs,⁴ formed by norms, grievances, ethnic or religious identity, and available

²Another clear scope limitation is that civilians are assumed to respond to incentives. If not, in an irregular conflict in which civilians can take consequential actions and are irrevocably committed to one side, combatants may resort to forced resettlement (e.g., Zhukov 2014), ethnic cleansing, or even genocide to gain and maintain control of territory.

³We have modeled only the violent interactions between governments and rebels. Although this useful simplification produces important insights and reflects much of the literature, governments may pursue other tactics—for example, offering concessions or allowing political participation (Cunningham et al. 2012, Daly 2014, Matanock 2013, Powell 2013, Staniland 2013)—which may change the balance of power or even end the conflict.

⁴The literature sometimes distinguishes between attitudes (preferences and feelings) and beliefs (about facts). For example, a citizen could empathize with the government but expect it to be a terrible provider of security (especially if it loses), and

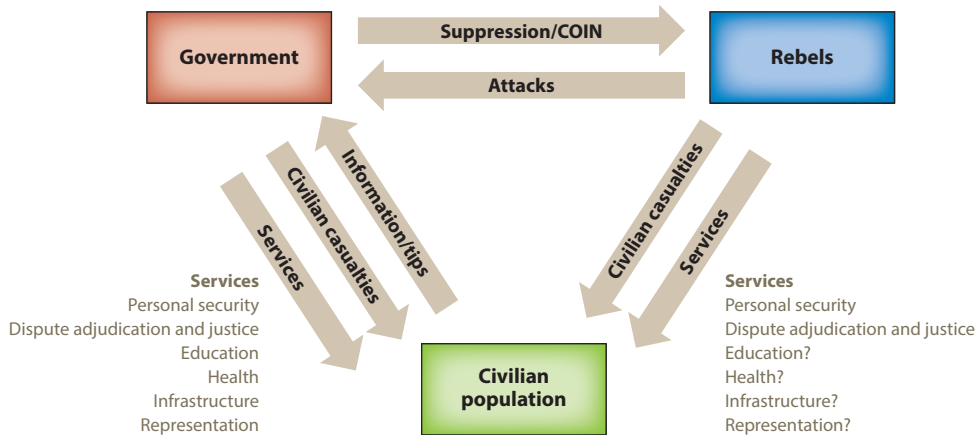


Figure 1

Information-centric insurgency. The boxes represent the three protagonists: government forces, rebels, and noncombatants (local community members). Arrows represent actions. Abbreviation: COIN, counterinsurgency.

information, which may or may not be pliable. Assuming that these attitudes and beliefs do not commit them irrevocably to supporting one side or another, information-sharing can be influenced by the combatants' actions: services provided by either the government or rebels and the extent to which government and rebel attacks endanger noncombatants. The government and the rebels, mindful of the consequential choice that civilians will make in sharing information, will therefore divert resources from conflict with each other in order to provide services to civilians. Services might include personal security, dispute adjudication and justice, education, health, infrastructure or even representation.

Attacks by government forces or rebels may inadvertently harm civilians, as represented by the arrows labeled "civilian casualties" in **Figure 1**. Here again it is in the interest of combatants to avoid harming civilians, who might in turn punish combatants by modulating their information sharing.

Civilians can share information through anonymous tips. (We will revisit the anonymity of tips and how it influences the safety of civilians.) The anonymity of tips is an increasingly relevant assumption as mobile phone networks become more pervasive, as they are already in Afghanistan and Iraq. The greater the flow of information from civilians to the government, the higher the probability that a rebel attack will fail, and so the fewer attacks rebels will attempt.

The framework shown in the figure can be formally modeled as a three-sided game (Berman et al. 2011b), which is useful to verify internal consistency and to generate testable implications. Those implications are intuitive. Before we lay them out, note that the framework can be usefully generalized in many ways: Civilians could share information with rebels; civilians may be irreconcilable with the government or the rebels; information sharing could be attributable, so that combatants (both rebels and government) might punish civilians for sharing information; both sides could tax (or extort) civilians; civilians could share information out of gratitude for past acts; the interaction could be repeated; and so forth. We explore some of these extensions below and discuss how they change the implications of the base framework.

therefore rationally cooperate with rebels. This survey has little to add on that point, so henceforth we refer to both attitudes and beliefs as "attitudes." We revisit this distinction in the Suggestions section below.

The framework has five major testable implications (taking the assumptions as given for now):

1. Both the government and the rebels have an incentive to provide services, an incentive that increases with the value of information shared.
2. Service provision by the government will reduce rebel violence because it increases information sharing with the government, which in turn increases the risk of failure for rebels, should they attack. A related implication is that projects that are (*a*) created to address the needs of the civilians in the local community and (*b*) conditioned on information sharing by the community (i.e., revoked when information is not shared) will be more effective in reducing violence. In practice, smaller projects are more likely to have these characteristics than larger projects, both because they are more likely to be developed in consultation with the local community and because they are more easily revoked. A further implication is that innovations that increase the value of projects to residents will amplify the projects' violence-reducing effect (e.g., including development professionals or community input in design and implementation).
3. From the government's perspective, providing security and providing services are complementary activities, for two reasons. First, the greater the security that the government can offer service providers, the more effective service provision will be. Second, following on the asymmetry assumption, the greater the capacity of government forces to suppress rebels, the more value they obtain from tips that flow as a result of service provision.
4. Civilian casualties reduce civilian support for whichever side caused the casualties, allowing the other side to increase its efforts—either attacks (for rebels) or attack suppression (for the government). This occurs because casualties influence the calculation of civilians in deciding whether to share tips.
5. Innovations that make anonymous tips to the government easier for civilians can reduce rebel violence. These are often technical innovations.

RECENT EVIDENCE

The volume of data now available on subnational conflict has generated an unprecedented opportunity for empirical analysis. The surge in data is due to improvements in collection, subnational conflicts in Afghanistan and Iraq, and an increased willingness of government agencies to share data with researchers.

We now compare, in turn, the five predictions of the base framework to recent empirical findings. Overall, the information-centric framework described in **Figure 1** performs well when tested using data from Iraq, Afghanistan, and other asymmetric conflicts.

Governments and Rebels Both Provide Services

The framework's first prediction is that both the government and rebels will provide services in any territory they control, to induce information sharing. Importantly, their motivation need not be concern for the wellbeing of civilians; they could care only about the value of civilians in providing information. A clear example is service provision by US forces in Iraq and Afghanistan under the Commanders Emergency Response Program (CERP). These development funds, which were spent on projects chosen by battalions and brigades, were disproportionately allocated to communities with the highest predicted levels of violence (Adams 2014, Berman et al. 2011b), rather than those with the largest population or the greatest economic need. Another example is the implementation of land reform in Colombia, which was concentrated in areas where violence posed the greatest risk to elites (Albertus & Kaplan 2013).

Rebel provision of services is also apparently widespread, but has not until recently been systematically documented⁵ [the US counterinsurgency manual refers to it only in passing (US Army 2007)]. For example, using retrospective surveys, Heger (2010) documents community services provided by the Irish Republican Army; Keister (2010) describes services provided by the Moro Islamic Liberation Front and the Moro National Liberation Front in the southern Philippines; and Magaloni et al. (2014) report on services provided by drug-trafficking organizations in Mexico. Flanigan (2008) uses personal interviews to document provision of similar sets of basic municipal services by the Liberation Tigers of Tamil Eelam (LTTE) in Sri Lanka and Hezbollah in Lebanon. Berman (2009) describes, using secondary sources, the provision of services by Hamas, Hezbollah, the Mahdi Army, and the Taliban. These sources and anecdotal evidence suggest that when rebels control territory, they typically provide at least some form of security and dispute adjudication services to noncombatants, apparently at low cost to themselves. New research on rebel institutions attempts to explain systematic variation in such provision (e.g., Arjona 2014, Arjona et al. forthcoming, Huang 2014).

Government Service Provision Reduces Rebel Violence

Second, the framework implies that service provision by the government will reduce rebel violence, if it in fact makes civilians better off.⁶ Direct evidence for that implication again comes from the CERP projects in Iraq and Afghanistan. Because CERP projects were typically conducted in consultation with local communities, we think that they generally did improve the welfare of civilians. Projects in both countries were remarkably cost-effective in reducing violence: Berman et al. (2011b) estimate that in Iraq a dollar of CERP spending per capita reduced violence by 1.6 incidents per 100,000 residents over a half year. During the period of highest violence during US involvement in Iraq, incidents averaged 59 per 100,000, which would have cost \$37 per capita to remediate at this rate. Adams (2014) replicates a qualitatively similar result for CERP spending in Afghanistan for the 2011–2013 period. Albertus & Kaplan (2013) show that, where implemented, land reform also reduced violence in Colombia.

The related implication that small projects are most effective at reducing violence also finds support in the data. In Iraq, the violence reduction associated with a dollar of CERP spending per capita is about five times larger for projects budgeted at less than \$50,000 than for those with larger budgets (Berman et al. 2011b). In Afghanistan as well, Adams (2014) finds that small CERP projects are significantly more violence reducing.

Assuming that development expertise makes projects more valuable to residents, we can test indirectly whether more valuable projects are more violence reducing. Berman et al. (2013b) interact spending in three development programs [small CERP, large CERP, and one US Agency for International Development (USAID) program] with the presence of a Provisional Reconstruction team in the same district. Those teams include 9–15 development experts from USAID and other

⁵An exception is a careful study of land redistribution and other service provision by Maoist rebels in China (Hinton 1966).

⁶Recent work theorizes that different types of rebel group structures, organizations, and constellations produce variation in violence against the government. Scholars have investigated the effectiveness of counterinsurgency campaigns against that violence (an entire review could be written, but, for example, see Cunningham et al. 2012, Metternich et al. 2013, Shapiro 2013, Staniland 2014). This research suggests that some rebels may be less susceptible to disruption of their leadership structure, even if attacks are foiled. Similarly, various government structures, organizations, and constellations also produce variation in the effectiveness of their counterinsurgency campaigns (this could constitute another review, but, for example, see Long 2010 and Lyall & Wilson 2009 on military culture and practice). Much of this work suggests that deviation from implementing a strategy of using conditional incentives to produce information undermines the counterinsurgency campaign, even if those deviations yield other benefits.

agencies living locally and advising on projects. In all three cases, expertise increases the violence-reducing effect of a dollar of spending, and the increase is large and statistically significant for small CERP projects.⁷

Not all programs or economic activity reduce violence in this framework, as we will see in the discussion of extortion, predation, and taxation below. The general question of what kind of programs reduce violence is related to the complementarity between security and economic activity, which we turn to now.

Security and Services Are Complementary

The framework's third prediction is that security spending and development spending are complementary in reducing violence. Evidence from the CERP data in Iraq, as well as another USAID program, support that prediction: The violence-reducing effects of the programs are indeed enhanced by local troop strength (Berman et al. 2013b). In fact, in the absence of troops in the same district, none of the development programs we studied (which are quite cost-effective on average) achieved statistically significant violence reduction. We revisit the question of insecure development projects below.

Civilian Casualties Reduce Civilian Support

Given the evidence that civilians reward combatants for service provision, it should not be surprising that they also punish combatants for generating civilian casualties, the fourth prediction of the theory. That prediction is tested in several recent research papers. Condra & Shapiro (2012) find that in Iraq both coalition (allied and Iraqi) and rebel forces suffered increased attacks in the weeks following civilian casualties that they generated. Condra et al. (2010) find the same for civilian casualties caused by international forces in Afghanistan, though not for Taliban forces. That finding is consistent with survey evidence on civilian attitudes toward combatants in Afghanistan, which indicates that in Taliban-dominated areas international forces are blamed more than are Taliban forces for their respective casualties (Blair et al. 2014, Lyall 2013).

Anonymity Increases Information Flow

The evidence so far can be interpreted as consistent with a framework in which civilians reward or punish combatants through a variety of mechanisms. An implication specific to the information-sharing mechanism is the fifth prediction: Innovations that make anonymous tips easier to provide will increase their provision. That prediction is directly tested with data on the introduction of cellular phone coverage in an area. Cellular coverage enables tip sharing with government forces and benefits those forces by reducing rebel violence. This was demonstrated during the conflict in Iraq, where the expansion of cellular coverage into peripheral areas had the predicted violence-reducing effect (Shapiro & Weidmann 2015).

SCOPE OF THE FRAMEWORK

With an empirically tested framework in hand, it is natural to ask what scope of subnational conflicts it can help us understand within the vast literature on insurgencies and civil wars (for

⁷International interveners do not always increase effectiveness, perhaps because their expertise is not effectively developed or deployed (e.g., Autesserre 2014).

recent reviews see Blattman & Miguel 2010, Kalyvas 2012). In this section, we interrogate the assumptions of that base framework, use them to create a taxonomy of subnational conflicts, and then see if the insights carry over to other categories when we relax assumptions. **Table 1** illustrates our approach. The framework we describe assumes (a) that the role of civilians is in choosing whether to provide information, as opposed to providing some other support; and (b) that information sharing is anonymous, situating the base framework in the top row of the “irregular” conflict column. Taking this approach to scope, our interest is in knowing whether the insights still apply if we stray out of the top left box—for instance, when information sharing is attributable (as in the Greek civil war) rather than anonymous (as in Afghanistan or Iraq).

Attributable Information and Targeting Civilians

We begin with two assumptions best relaxed simultaneously: unattributable tips and no targeting of civilians. If information shared is attributable (as opposed to anonymous), the civilian sharing it faces the risk of retaliatory violence.⁸ Anonymous information sharing was assumed above in order to provide a simple, fairly realistic description of the setting in Iraq and Afghanistan, where a civilian could call a tip line without being identified⁹ (and measures of retaliatory violence were not available). Although empirical evidence on anonymous tips is by its nature hard to come by, recall that empirical support for the information-centric theory comes from the suppressive effect of the availability of cellphone coverage on violence in Iraq (Shapiro & Weidmann 2015).

Yet attribution and retaliation play a critical role in the literature on irregular conflicts, most importantly in the control–collaboration model, which originated to explain spatial variation in the use of indiscriminate (as opposed to selective) violence (Kalyvas 2006).¹⁰ In that model, selective violence provides more effective incentives, and so it is preferred by combatants and used more in areas in which they have better control—and hence more tools to motivate collaboration. That prediction is validated both by data from the Greek civil war and in analysis of violence perpetrated by both the Vietcong and US forces during the Vietnam War (Kalyvas & Kocher 2009). More recently, Lyall (2009) finds that Russian troops in Chechnya fired artillery indiscriminately on civilians in local communities, and that this gruesome tactic successfully suppressed attacks on Russian forces. Recent research also suggests that collective punishment is most effective when the potential support populations and the geographic combat areas are small (Downes 2007). Interestingly, in analyzing the more recent case of Israeli suppression of Palestinian rebel groups during the Intifada, Bhavnani et al. (2011) find that Israeli counterinsurgents use a higher proportion of selective violence than the model predicts, even in areas that they do not control.¹¹ The authors attribute that deviation to an overwhelming asymmetric advantage in the capacity of Israeli counterinsurgents to gather information and act on it.

⁸Alternatively, communities could protect themselves from retribution (by both government and rebel forces) through dispute resolution and brokered agreements, as documented in Colombia (Kaplan 2013).

⁹Anonymous tip lines do present the problem of separating signal from noise. Anecdotal evidence suggests that insurgents will use tip lines to generate misinformation and noise, given a chance.

¹⁰Note that targeting civilians to influence their cooperation, in this context, is still distinct from a model of terrorism, in which civilians are targeted in order to induce some political change (e.g., Crenshaw & Pimlott 1997, de Figueiredo & Weingast 2001, Shapiro 2013). Pape et al. (2014) seeks to integrate logics of control and coercion to build a general model of civilian targeting by militant groups.

¹¹Empirical research on Colombia and Vietnam is generally supportive of the control–collaboration model, though with caveats: Most notably, Colombian paramilitaries gain information from rebel defectors rather than from civilians (Vargas 2009); and government selective violence in Vietnam may have been complemented by the threat of indiscriminate violence (Douglass 2012).

What happens in the information-centric framework if a civilian must flag down a soldier to share information, exposing himself to possible attribution? The probability of being identified and punished introduces a cost of information sharing. That cost would reduce civilians' incentives to share tips, but not eliminate them, since the benefits of supplying tips might be quite large when information is scarce. In that expanded framework, combatants would still have incentives to compete in service provision and to avoid civilian casualties, in order to incentivize tips, and those efforts would be rewarded in the sense of suffering fewer attacks. The main implications of the base framework are not qualitatively changed by allowing attributable information sharing, even though civilians are less likely to share tips if they can be identified and punished.

Although the information-centric framework and the control-collaboration model both revolve around information sharing by civilians, the former emphasizes the benign policy implications for service provision by combatants, whereas the latter draws out the coercive implications for intimidation and violence (both indiscriminate and selective). An omnibus framework would allow both, and it appears that nothing in either approach precludes combatants simultaneously using both service provision and violence to influence civilian choices. We know of no systematic study, but survey evidence indicates that the Irish Republican Army, for instance, did both simultaneously (Heger 2010), and anecdotes suggest that the same is true of all service-providing rebel groups. We return to the question of targeting civilians below, in our discussion of rule of law.

Attribution also has tactical implications. When civilians can provide support anonymously, the government (or rebels) might prefer to reward them with local public goods, rather than providing individual payments that would identify the supporter, in effect choosing indiscriminate over selective rewards. If the government has an advantage over the rebels in the cost of public good provision, it will then better be able to suppress rebel violence in the case of anonymous support. On the other hand, should the government have a cost advantage in protecting civilian supporters, it will be advantaged in the case of attributable support. Elections provide a form of attribution at the polling station, as Steele (2011) demonstrates with evidence of postelection displacement in neighborhoods supporting a rebel-affiliated party in northwest Colombia and Balcells & Steele (2012) show more broadly in Colombia and Spain.

Allowing for attribution and targeted retribution implies cascade dynamics. If support is attributable, civilians may well keep their preferences private, publicly favoring one side or another only when the act is collective enough to depress the probability of individual punishment. That logic leads to tipping points and cascade dynamics in collective action and preference revelation (Kuran 1991, 1995, 1997; Lohmann 1994). In contrast, in unattributable contexts, individuals with private preferences for one side or the other can act on them even without collective expression.

What If Civilians Provide Resources?

So far we have assumed that the role of civilians is to provide information (or to refuse). Yet much of the theoretical literature on subnational conflict, as well as the classic empirical literature, assumes alternatively that the consequential action of civilians is to provide recruits and other material support (Blattman & Miguel 2010); that is, these approaches are resource-centric. Still other parts of the literature remain vague about what the role of civilians is, such as the counterinsurgency manual (US Army 2007), which can be understood as both information-centric and resource-centric.

The key aspect of information in the base framework is the strong complementarity it has with government capacity, as illustrated in the introductory narrative. If civilians provide recruits or other resources that are not strong complements for government capacity, then the predictions of the information-centric framework will generally not follow. For instance, government service

provision may provoke rather than reduce rebel violence in a resource-centric model, since it may increase the marginal returns to violence by more than it increases the marginal costs.¹²

Opportunity Costs, Predation, and Taxation

Evidence on the primary role civilians might play in irregular conflict is elusive. Certainly rebels were not born combatants, so recruitment must have occurred, but those recruits might not be local and the recruitment of local civilians might not be as important in generating violence as is information. Empirical evidence on the role of civilians is indirect, so analysis requires extending the base framework with specific mechanisms.

The opportunity-cost mechanism posits that the primary means by which civilians influence violence is by voluntarily providing recruits to rebels. If so, increases in employment rates should be associated with declines in violence, and if economic activity increases employment, it should decrease violence as well. This approach operates by bidding up the wages of potential recruits to insurgency, raising the opportunity cost of their time as insurgents, as in Becker's (1968) theory of crime. This variant is conceptually important for policy design because it motivated the "quick intervention" job creation programs that were widely administered in Iraq and Afghanistan, the idea being that they suppressed insurgency by reducing the flow of civilian recruits into rebel forces (US Army 2007). Observationally equivalent is the idea that unemployment creates a grievance, which generates support for insurgents (Brainard et al. 2007).¹³ Alternatively, resources provided by the government, rather than influencing the civilian population to not provide recruits, might actually pay off the active rebels to stop fighting (e.g., Nielsen et al. 2011). Another possibility is that increased economic activity may have an ambiguous effect on conflict because while increasing the opportunity cost of fighting—thus reducing the likelihood of conflict—it also increases the resources that may be contested through violence (Fearon 2008).

Before turning to evidence that links economic activity and violence, it is useful to extend the framework in a way that generates that opposite prediction, by considering a predation mechanism (including both extortion and taxation) (Fearon 2008). The hypothesis is that economic activity will trigger increased violence, as combatants fight to capture economic rents (Collier 2000, Grossman 1999); it is most developed in contest models that consider multiple sectors with different effects (Besley & Persson 2010, Dal Bó & Dal Bó 2011, Dube & Vargas 2013). If we generalize the base framework, extending the role of the government and rebels by allowing them to tax or extort economic rents, then economic activity (be it increased income, aid flows, or private investment, for example) can increase violence: Combatants might use violence to generate revenue, either by fighting to control territory where they can tax or extort, or through taxation or extortion in contested spaces (Berman et al. 2013a).

Turning to evidence, economic activity reducing violence would imply an opportunity-cost mechanism, whereas the opposite implies predation. The empirics have been studied extensively over the past decade. Across countries, per capita income is negatively correlated with subnational violence (Collier & Hoeffler 2004, Fearon & Laitin 2003), and investment predicts stability (Kapstein & Converse 2008), although the causal direction of both those relationships is debatable. Within countries, the evidence is mixed. Humphreys & Weinstein (2008) find that low wages and

¹²An exception is if recruits provide local knowledge, as Felter (2005) documents for counterinsurgents in the Philippines and Lyall (2009) suggests for Chechnya. In that case, the implications of the base framework are retained.

¹³Cross-nationally, some related results, such as the correlation between lower rates of male secondary schooling and increased civil war (Collier & Hoeffler 2004), suggest that this could be the mechanism, but the evidence is not consistent across studies.

poverty predict rebel and government recruitment in Sierra Leone, and Verwimp (2005) shows that poverty predicts perpetration of genocide in Rwanda. Using cross-sectional evidence across subnational regions of Africa, however, Condra (2010) concludes that rebellion is associated with groups emanating from relatively higher-income areas, and, broadening this sample to all states and focusing on geocoded subnational data, Cederman et al. (2011) find that both rich and poor groups, compared to the national average, fight more often than those of middle income. Survey evidence from Pakistan (again including regions with irregular conflict) indicates a positive correlation between economic well-being and support for militants, with especially low support among the urban poor who live in proximity to militants (Blair et al. 2013, Shapiro & Fair 2010).

To deal with causal concerns, one requires exogenous variation in income. A recent survey yields mixed results (Blattman & Miguel 2010): For instance, variation in agricultural production due to rainfall shocks is negatively correlated with violence in sub-Saharan Africa (Miguel et al. 2004), and international coffee prices are negatively correlated with violence in rural Colombia, whereas variation in natural resource income due to international price shocks is positively correlated with violence (Dube & Vargas 2013), the first two findings suggesting a dominant opportunity cost mechanism and the last suggesting predation.¹⁴ One explanation for these mixed results may be that the type of conflict matters, since evidence of a negative correlation of income with violence comes from mostly symmetric conflicts in Africa. Flooding in Pakistan (including in areas with irregular conflict), with consequent economic hardship that triggered relief efforts by the government, is associated with increased support for the government (Fair et al. 2014).

Subnational evidence from the conflicts in Iraq, Afghanistan, and the Philippines in the past decade indicates that increased employment rates in each of those irregular conflicts are positively correlated with violence (Berman et al. 2011a). Predation is one possible explanation. Other possibilities include a causal path from violence suppression to employment, as the means by which violence is reduced (roadblocks, curfews, barriers) reduce labor demand. Alternatively, higher incomes might make tips more expensive for government forces to obtain. Philippine data are particularly useful because they indicate the initiator of attacks. Geospatial data on investments in the Philippines reveal that increases in investment are associated with increases in violent attacks, predominantly government-initiated attacks on rebels—as predicted by the extension of the framework in which the government is motivated to control territory by potential tax revenue (Berman et al. 2013a).

Predation has implications for the effects of development programs. Its logic predicts that aid and other government programs can increase violence if those programs are insufficiently secure. Crost et al. (2014a) find that in Philippine villages, violence increases when a World Bank development project is anticipated. Nunn & Qian (2012) find that increases in food aid due to exogenous variation in US wheat production cause increased political violence within countries already suffering civil conflict. In contrast, Beath et al. (2012) report experimental evidence that service provision improved perceived security without apparent deployment of extra forces, i.e., no evidence of extortionary violence is found. Böhnke & Zürcher (2013) report correlational evidence that aid in Afghanistan is not associated with increased (or decreased) security. Because the outcome measures in both studies are perceptions, rather than incidents, and because both samples were from relatively safe parts of Afghanistan, we see this evidence as neutral on a violence-reducing

¹⁴Ciccone (2011) critiques Miguel et al.'s (2004) estimation of the relationship between rainfall and conflict on methodological grounds; Miguel & Satyanath (2010, 2011) respond by claiming that an effect holds even in specifications suggested by the critique.

mechanism and mildly contradicting the extortion mechanism. Finally, Crost et al. (2014b) report experimental evidence that conditional cash transfers in Philippine villages reduce both violent incidents and insurgent influence. They posit, in contrast to their own findings on development projects increasing violence, that cash transfers to individuals are hard to extort and that they are perceived as conditional on cooperation (see implication 2 in “Insurgency for Empiricists: A Base Framework,” above).

Comparing these empirical results regarding the opportunity-cost and predation mechanisms with those on service provision and complementarity (implications 2 and 3), it seems clear that development programs do not generally suppress violence. This may be particularly true in irregular conflicts, in which insurgents require only a small force, and only at night. By day they could work on “quick intervention” development projects! In fact, in contrast to the violence-reducing properties of CERP spending mentioned above, the vast majority of the \$32 billion of reconstruction spending by the US military in Iraq tracked by Berman et al. (2011b) failed to reduce violence in the district in which it was spent.¹⁵

A more careful conclusion is that reconstruction, humanitarian relief, and service provision can reduce violence in asymmetric conflicts under sufficient conditions. Theory and evidence agree on those conditions: small, well-secured projects that are informed by development experts and perceived by civilians to be conditional on cooperation.

More generally, this collection of micro-based evidence suggests that the role of civilians and the balance of forces appear to be linked. As Balcells (2010) points out in studying the Spanish Civil War, when forces are symmetric and fighting takes place along fronts, information from civilians is of less operational value for taking territory. In that setting, the sheer number of recruits matters more. That logic can explain the diagonal pattern we see in the incidence of cases in **Table 1**, which shows no studies of symmetric conflicts in which information sharing by civilians is emphasized, and only one study (Dube & Vargas 2013) of an irregular conflict (in Colombia) where increases in income reduce violence. (That study may also have an alternative interpretation: Increased income is due to rising prices for legal crops, which shift farmers not only out of insurgency but also out of growing coca—a much more labor-intensive activity than violence—for which the opportunity-cost argument could well apply.¹⁶) Moreover, studies that find a violence-reducing effect of economic activity tend to be studies of symmetric conflicts. A possible overall explanation is that the primary role of civilians in irregular conflicts is to provide information (which strongly complements the capacities of the strong side) so that the opportunity costs of civilians’ time is largely irrelevant. In contrast, in symmetric conflicts, the primary role of civilians is to provide recruits and other resources, so that the opportunity-cost mechanism dominates.¹⁷

Rule of Law and Restrictions on Combatants

We argued above, in discussing the coercion–collaboration model, that information sharing by civilians provides incentives for retaliation and punishment, by both rebels and governments. Yet government forces in modern insurgencies are often bound by rules of engagement with

¹⁵About 11% of US casualties in the Iraq war were personnel conducting reconstruction activities (SIGIR 2012).

¹⁶The same issue of interpretation applies to a parallel finding of depressed maize prices in Mexico inducing increased cultivation of marijuana and opium, resulting in a rise in drug-related violence (Dube et al. 2014).

¹⁷This is not to say that recruitment is unimportant, just that material incentives are not the major mechanism of recruitment for small insurgent groups (for an analysis of characteristics enabling recruitment, see Petersen 2002).

Table 2 Suppression across different rule scenarios

Opponent (Examples)	Rule scenario	Information requirement	Government seeks
Boers in South Africa	No rules	Target/coerce	Security
Taliban in Afghanistan	Rules of engagement	Target	Security
Gangs in United States	Rule of law	Prosecute	Welfare

combatants and civilians. Although recent empirical studies tend to focus on these cases, government forces are sometimes much less constrained. Examples include well-known conflicts such as the Second Anglo-Boer War (Downes 2007, Swinton 1904), genocides throughout the African Great Lakes region (Prunier 2009), and the recent government actions in Sri Lanka against the LTTE. Counterinsurgency strategies unconstrained by rules of engagement range from forced displacement to ethnic cleansing, but we know relatively little about their use (for work exploring this, see, e.g., Hazelton 2011). They account for 20% to 33% of cases, according to different studies (Arreguín-Toft 2001, Downes 2006, Valentino et al. 2004).

How much information flow from civilians is required to implement rules of engagement, or even rule of law? Rule of law requires information sufficient to allow successful prosecution, whereas extrajudicial targeting may require less stringent proof. In this sense, the information-centric approach applies to prosecution of gangs in the United States, or drug-trafficking organizations in Mexico (e.g., see Akerlof & Yellen 1994, Magaloni et al. 2014). As **Table 2** illustrates, informational requirements increase as institutions progress (from top to bottom) to methods more respectful of human rights. Anonymous information sharing also declines if rule of law does not allow witness anonymity.

In all of these cases, information provision remains a central component, although the range of conditions for which the civilians' benefits from information sharing outweigh the costs may change. Drawing on cases in this literature, and on economic theory, we suggest that as rule of law is lost so are property rights, and with them economic efficiency. Under these circumstances, more suppressive counterinsurgency strategies may become relatively more attractive to government forces as local tax revenue may not cover the costs of maintaining full rule of law. The longer-term cost of these strategies is unclear because counterinsurgents may lose their own credibility by shifting to them (Fearon 2008), especially in democracies (Arreguín-Toft 2001, Merom 2003).

SUGGESTIONS

The empiricists' insurgency has generated a burst of evidence-based scholarship, but gaps remain, especially on policy-relevant questions. For instance, theory suggests that project aid should be conditional on cooperation with the government in order to successfully reduce violence, but the nature of that implicit contract is seldom observed. So evidence for conditionality is indirect—we only know that services more easily withdrawn tend to suppress violence, and we have survey evidence that CERP in Afghanistan was conditionally implemented (Berman et al. 2011b). More empirical research on the mechanics of successful project aid in conflict environments would be extremely useful. Specifically, the framework and empirics suggest sufficient conditions: Small, conditional, secure, and well-informed projects are effective. Whether all those conditions are necessary has not been demonstrated.

Evidence for information sharing as an important mechanism is also indirect. This weakness might be corrected with data from tip lines or by using retrospective data on the sources of information flows (see sidebar "Information Technology Enabling Research").

INFORMATION TECHNOLOGY ENABLING RESEARCH

Information technology provides new opportunities for surveys and interventions in conflict environments. For example, Driscoll & Lidow (2014) managed to conduct a representative survey of civilians in the dangerous chaos of Mogadishu in 2012. They used satellite imaging to generate a sampling frame and a combination of passive GPS and real-time surveying over the mobile network to validate enumerator locations while protecting the safety of their enumerators in the midst of high levels of violence. Blumenstock et al. (2014) investigate whether mobile money (cellphone-based transactions) provide an alternative to using ATMs and carrying cash in insecure environments; they find that access to currency (i.e., cashing out) remains the vulnerable part of the mechanism. Callen et al. (2014b) demonstrate the effectiveness of mobile phones in governance improvement, to monitor medical employee absence in clinics, and to communicate absences in real time to administrators. The new pervasiveness of mobile networks, even in irregular conflict environments, could revolutionize the nature of information sharing, institutional innovations, and “big data”-based research.

The new emphasis on attitudes of civilians underlines the importance of measuring them. Recent research has explored experimental methods for measuring attitudes, as well as actions, in the context of insurgency. Expressed preferences differ across different measures, depending on how intrusive they are (Blair et al. 2013, Blair et al. 2014, Lyall et al. 2013, Matanock & García-Sánchez 2013, Rosenfeld et al. 2014). Questions remain on measurement, especially as to which expressed preferences accurately affect actions.

Given these measurement difficulties, we know very little about attitude changes. Preferences might be stable, particularly at extremes, so that governance improvements and violence are able to shift only the attitudes of moderates. Downes (2007), among others, argues that this is the case, whereas other theories suggest that all attitudes can be influenced by combatants' territorial control, or at least their expected territorial control, as in Kalyvas (2006). Some evidence suggests that attribution of blame and credit, beyond attitudes, is affected by existing preferences (for example, on airstrikes in Afghanistan, see Lyall 2013).

The literature sometimes distinguishes between attitudes (preferences and feelings) and beliefs (about facts). Higher CERP spending is anecdotally tied to more tips and empirics show a resulting decrease in attacks. Although evidence of CERP success may indicate attitudes changing (the winning of hearts and minds), the data do not rule out the alternative possibility that CERP spending causes civilians to believe, or expect, that CERP providers are competent and are thus likely to continue governing. That alternative evokes a conditional compliance equilibrium (e.g., Levi 1997). In designing programs, it would be useful to know whether their success is due to inducing cooperation, changing attitudes, or signaling competence.

Experimental evidence now indicates that exposure to violence induces an extreme preference for certainty in the economic choices of residents of conflict zones (Callen et al. 2014c). Implications for political choices made by civilians, including information sharing, remain unexplored.

More broadly, the base framework, and the literature generally, treats combatants and their foreign allies as a unitary entity,¹⁸ despite frequent evidence of disagreement about preferences, strategy and methods—between NATO Afghanistan and the Karzai government, for instance.

¹⁸For exceptions, see Barnett & Zürcher (2008), Ghani & Lockhart (2009), and Lake (2010) on statebuilding, and Padro i Miquel & Yared (2012) on agency among allies practicing counterinsurgency.

(In fact, a disproportionate amount of recent evidence comes from two conflicts—those in Iraq and Afghanistan—featuring external counterinsurgents, an imbalance that future empirical studies will surely correct.) Returning to **Figure 1**, imagine a box labeled “Allies” sitting above “Government” and a second such box above “Rebels,” allowing an analysis of those relationships. When threatening to draw down assistance, for example, foreign allies trade off the stability of the local combatant against its compliance in counterterrorism, control of ungoverned spaces, and quality of governance. We know very little about the responsiveness of combatants to incentives provided by foreign allies, or why foreign allies sometimes abandon conditionality in those relationships. Research along those lines is well motivated by current policy concerns, in supporting Iraq versus IS for instance.

The relationship between allies and combatants is a macro-level question, so it is worth emphasizing that the base framework is limited in scope to the micro level of a village or district. Reducing violence locally may be necessary but cannot be sufficient to decide a larger insurgency. Broader expectations about the future quality of government, support by allies, and the resilience of power-sharing deals and truces might be equally important (Fearon 2004, Leites & Wolf 1970, Walter 2002). The local success of counterinsurgency against Sunni rebels in the “Anbar Awakening” in 2006–2007 (Biddle et al. 2012) and its dramatic unraveling in 2014 provide an example of the dangers of partnership with a local ally that has weak motivation to control parts of its own territory.¹⁹

These macro-level questions are less suitable for analysis by empiricists, for lack of large subnational samples, yet individual expectations of macro variables are still consequential, and these are measurable. For instance, in a dynamic setting, a forward-looking civilian who knows that the foreign ally will eventually depart—along with its support for the local ally—may largely discount current development assistance (which practitioners call “renting hearts and minds”). Campaign success may also influence expectations (e.g., Gelpi et al. 2005/2006). In that context, the challenge for interveners would be how to signal a long-term commitment to a local ally. How that signal is perceived locally is an empirically tractable question.

To expand that example, past research indicates that the level of commitment of international interveners has important implications for efficacy (Matsuzaki 2012), but is this due to expectations about future control or about what (conditional) resources the interveners provide while on the ground? Those questions will likely become even more important as the United States and its allies withdraw from Afghanistan and focus on smaller, more cooperative missions, such as the recent French military assistance in Mali or interventions to guarantee election-based power-sharing bargains (Matanock 2013, 2014). Those critical research questions, which have been developed carefully through case studies and comparative analysis, have micro-level implications that could be empirically investigated using the new tools for measuring attitudes.

Can a temporary intervention in conflict environments induce the type of persistent improvements in governance that would change civilian expectations? That is a motivation for community-driven development (CDD) programs in more secure environments (Mansuri & Rao 2004) and for several dozen ambitious democracy and governance enhancement experiments in conflict and postconflict environments (Moehler 2010). For instance, experimental evidence on a CDD in

¹⁹Governments may have incentives not to attempt to control all of their territory, and foreign interveners even stronger incentives. Some studies provide evidence on micro-level support in both domestic and foreign interventions (e.g., see Blair et al. 2013, 2014; Lyall et al. 2013; Matanock & García-Sánchez 2013; Shapiro & Fair 2010; but see also studies on US opinion during these conflicts, such as Gelpi et al. 2005/2006). New theories are needed on how local support can lead to sustained and successful counterinsurgency efforts. The domestic politics of potential interveners, including different actors’ perceptions of the stakes, is important (e.g., Sanaei 2014).

postconflict Liberia shows improvements in measures of local social cohesion (Fearon et al. 2009). On the other hand, Casey et al. (2012) and Humphreys et al. (2014) find no effect of CDD interventions on local institutions in postconflict Sierra Leone and Congo, respectively, and an anticorruption experiment in Pakistan indicates that public employee absence is a symptom of political rents accruing to entrenched patronage networks (Callen et al. 2014a). Experimental evidence from Afghanistan suggests that electoral corruption can be reduced using a mobile phone-based intervention (Callen & Long 2015), and that doing so improves both attitudes toward government and willingness to share information with it about rebel activities (Berman et al. 2014) when measured a few months later. In general, this literature shows mixed results for CDD interventions, though more hopeful results for anticorruption and dispute-resolution treatments. Evidence of longer-term treatment effects on outcomes or even on expectations remains absent, at least for now (Moehler 2010).

Finally, although it is intuitive to imagine extending the base framework to a repeated interaction in which the government, rebels, and civilians maximize their long-term well-being, that model has not yet been solved technically. In that respect, much of our intuition about how expectations are formed, how signals might matter, and how capacity building affects current choices, for instance, has not been checked for internal validity.

CONCLUSIONS

Newly available data and methods have enabled a wave of new research activity. We have surveyed only the highlights. [The Empirical Studies of Conflict (ESOC) project, in which both authors participate, provides links to some of this research; for a more complete list of recent papers, see esoc.princeton.edu.] That research, a small insurgency in itself, has led to a firmer understanding of irregular (asymmetric) conflicts, organized around an empirically tested framework that seems to explain most cases. That framework threatens to overturn the logic of many established policies, which is based on scattered anecdotes and intuitions. In particular, the role civilians play in asymmetric conflict, and the kinds of policies that influence their behavior are now much better understood. The framework described here suggests fruitful avenues for further research on governance, rule of law, attitudes, dynamics and agency between allies.

Over the last decade, while Western militaries were slow to shift from conventional approaches to a model that recognized the consequential actions of civilians, aid organizations were also slow to recognize that development program designs, however effective they may be in secure environments, might be wasteful or even violence inducing in insecure locations. In particular, in asymmetric conflict environments, evidence-based analysis prescribes a shift away from job-creation programs based on an opportunity-cost model and toward those based on an information-centric approach, which emphasizes governance and service provision. These conclusions may be particularly salient in noncoercive “boots off the ground” interventions in future conflicts.

The inferential power of these empirical studies, enabled by access to high-quality data, invites a reconsideration of the data infrastructure available to researchers on subnational conflict—especially in light of the controversial outcomes of costly multinational interventions in Iraq and Afghanistan. Had better data been available sooner for research, we believe that better-informed decisions could have been made at the tactical, strategic, and public policy levels. Nongovernmental organizations such as Iraq Body Count, Shahuda, and the South Asia Terrorism Portal now provide high-quality data. Initiatives such as AidData and ESOC have the potential to provide a valuable public service by aggregating information from many newly available sources in a single user-friendly site, enabling advances in research and policy analysis. The academic community and

funders of research—both purely academic and policy oriented—might consider ways of building out those initiatives.

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LITERATURE CITED

- Adams G. 2014. *Conflict of interest: military-led development insights from Afghanistan for warfighters, development practitioners, and policy makers*. Masters thesis, Harvard Univ.
- Akerlof G, Yellen J. 1994. Gang behavior, law enforcement and community behavior. In *Values and Public Policy*, ed. H Aaron, T Mann, T Taylor, ch. 7. Washington, DC: Brookings Inst.
- Albertus M, Kaplan O. 2013. Land reform as a counterinsurgency policy: evidence from Colombia. *J. Confl. Resolut.* 57:198–231
- Arjona A. 2014. Wartime institutions: a research agenda. *J. Confl. Resolut.* 58:1360–89
- Arjona A, Kasfir N, Mampilly Z, eds. Forthcoming. *Rebel Governance in Civil War*. Cambridge, UK: Cambridge Univ. Press
- Arreguín-Toft I. 2001. How the weak win wars: a theory of asymmetric conflict. *Intl. Secur.* 26:93–128
- Autesserre S. 2014. *Peaceland: Conflict Resolution and the Everyday Politics of International Intervention*. New York: Cambridge Univ. Press
- Balcells L. 2010. Rivalry and revenge: violence against civilians in conventional civil wars. *Intl. Stud. Q.* 54:291–313
- Balcells L, Steele A. 2012. *Warfare, political identities, and displacement in Spain and Colombia*. Madrid: Cent. Estud. Avanzados Cienc. Soc.
- Barnett M, Zürcher C. 2008. The peacebuilder's contract: how external statebuilding reinforces weak statehood. In *The Dilemmas of Statebuilding: Confronting the Contradictions of Postwar Peace Operations*, ed. R Paris, T Sisk, pp. 23–52. New York: Routledge
- Beath A, Christia F, Enikolopov R. 2012. *Winning hearts and minds through development? Evidence from a field experiment in Afghanistan*. Work. Pap. No. 2011-14, Dep. Polit. Sci., Mass. Inst. Technol.
- Becker G. 1968. Crime and punishment: an economic approach. *J. Polit. Econ.* 76:169–217
- Berman E. 2009. *Radical, Religious, and Violent*. Cambridge, MA: MIT Press
- Berman E, Callen M, Felter JH, Shapiro JN. 2011a. Do working men rebel? Insurgency and unemployment in Afghanistan, Iraq, and the Philippines. *J. Confl. Resolut.* 55:496–528
- Berman E, Callen MJ, Gibson C, Long JD. 2014. *Election fairness and government legitimacy in Afghanistan*. Natl. Bur. Econ. Res. Work. Pap. 19949
- Berman E, Felter J, Kapstein E, Troland E. 2013a. *Predation, taxation, investment and violence: evidence from the Philippines*. Natl. Bur. Econ. Res. Work. Pap. 19266

- Berman E, Felter JH, Shapiro JN, Troland E. 2013b. Modest, secure and informed: successful development in conflict zones. *Am. Econ. Rev. Pap. Proc.* 103:512-17
- Berman E, Shapiro JN, Felter JH. 2011b. Can hearts and minds be bought? The economics of counterinsurgency in Iraq. *J. Polit. Econ.* 119:766-819
- Besley T, Persson T. 2010. State capacity, conflict, and development. *Econometrica* 78:1-34
- Bhavnani R, Miodownik D, Hyun Jin Choi. 2011. Three two tango: territorial control and selective violence in Israel, the West Bank, and Gaza. *J. Confl. Resolut.* 55:133-58
- Biddle S, Friedman JA, Shapiro JN. 2012. Testing the surge: Why did violence decline in Iraq in 2007? *Intl. Secur.* 37:7-40
- Blair G, Christine Fair C, Malhotra N, Shapiro JN. 2013. Poverty and support for militant politics: evidence from Pakistan. *Am. J. Polit. Sci.* 57:30-48
- Blair G, Imai K, Lyall J. 2014. Comparing and combining list and endorsement experiments: evidence from Afghanistan. *Am. J. Polit. Sci.* 58:1043-63
- Blattman C, Miguel E. 2010. Civil war. *J. Econ. Lit.* 48:3-57
- Blumenstock J, Callen M, Ghani T. 2014. *Violence and financial decisions: evidence from mobile money in Afghanistan*. Work. pap., Dep. Polit. Sci., Univ. Washington, Seattle
- Böhnke JR, Zürcher C. 2013. Aid, minds and hearts. The impact of aid in conflict zones. *Confl. Manage. Peace Sci.* 30(5):411-32
- Brainard L, Chollet DH, LaFleur V. 2007. The tangled web: the poverty-insecurity nexus. In *Too Poor for Peace? Global Poverty, Conflict and Security in the 21st Century*, ed. Brainard L, Chollet D, pp. 1-30. Washington, DC: Brookings Inst.
- Callen M, Gulzar S, Hasanain A, Khan Y. 2014a. *The political economy of public employee absence: experimental evidence from Pakistan*. Work. pap., Dep. Polit. Sci., Univ. Calif. Los Angeles
- Callen M, Gulzar S, Hasanain A, Khan Y, Rezaee A. 2014b. *Personalities and public sector performance: evidence from a health experiment in Pakistan*. Work. pap., Dep. Polit. Sci., Univ. Calif. Los Angeles
- Callen M, Isaqzadeh M, Long JD, Sprenger C. 2014c. Violence and risk preference: experimental evidence from Afghanistan. *Am. Econ. Rev.* 104:123-48
- Callen M, Long JD. 2015. Institutional corruption and election fraud: evidence from a field experiment in Afghanistan. *Am. Econ. Rev.* 105:354-81
- Casey K, Glennerster R, Miguel E. 2012. Reshaping institutions: evidence on aid impacts using a preanalysis plan. *Q. J. Econ.* 175:1755-1812
- Cederman L-E, Weidmann NB, Gleditsch KS. 2011. Horizontal inequalities and ethnonationalist civil war: a global comparison. *Am. Polit. Sci. Rev.* 105:478-95
- Ciccone A. 2011. Economic shocks and civil conflict: a comment. *Am. Econ. J. Appl. Econ.* 3:215-27
- Clutterbuck R. 1966. *The Long, Long War: Counterinsurgency in Malaya and Vietnam*. New York: Praeger
- Collier P. 2000. Rebellion as a quasi-criminal activity. *J. Confl. Resolut.* 44:839-53
- Collier P, Hoeffler A. 2004. Greed and grievance in civil war. *Oxf. Econ. Pap.* 56:563-95
- Condra LN. 2010. *Ethnic Group Rebellion against the State: Perils of the Periphery*. San Diego, CA: Inst. Global Confl. Coop. (IGCC)
- Condra LN, Felter JH, Iyengar RK, Shapiro JN. 2010. *The effect of civilian casualties in Afghanistan and Iraq*. Natl. Bur. Econ. Res. Work. Pap. No. 16152
- Condra LN, Shapiro JN. 2012. Who takes the blame? The strategic effects of collateral damage. *Am. J. Polit. Sci.* 56:167-87
- Crenshaw M, Pimlott J. 1997. *Encyclopedia of World Terrorism*. Armonk, NY: Sharpe
- Crost B, Felter JH, Johnston P. 2014a. Aid under fire: development projects and civil conflict. *Am. Econ. Rev.* 104:1833-56
- Crost B, Felter JH, Johnston PB. 2014b. *Conditional cash transfers, civil conflict and insurgent influence: experimental evidence from the Philippines*. Work. pap., Dep. Polit. Sci., Univ. Colorado
- Cunningham KG, Bakke KM, Seymour LJM. 2012. Shirts today, skins tomorrow: dual contests and the effects of fragmentation in self-determination disputes. *J. Confl. Resolut.* 56:67-93
- Dal Bó E, Dal Bó P. 2011. Workers, warriors, and criminals: social conflict in general equilibrium. *J. Eur. Econ. Assoc.* 9:646-77

- Daly SZ. 2014. State strategies in multi-ethnic territories: explaining variation in the former Soviet Union and Eastern Bloc. *Br. J. Polit. Sci.* 44:381–408
- de Figueiredo R, Weingast B. 2001. *Vicious cycles: endogenous political extremism and political violence*. Presented at Am. Polit. Sci. Assoc. Annu. Meet., Washington, DC
- Douglass RW. 2012. *Hearts, minds, or bodies: the strategy of selective violence in civil war*. Work. pap., Dep. Politics, Princeton Univ.
- Downes AB. 2006. Desperate times, desperate measures: the causes of civilian victimization in war. *Intl. Secur.* 30:152–95
- Downes AB. 2007. Draining the sea by filling the graves: investigating the effectiveness of indiscriminate violence as a counterinsurgency strategy. *Civil Wars* 9:420–44
- Driscoll J, Lidow N. 2014. Representative surveys in insecure environments: a case study of Mogadishu, Somalia. *J. Survey Stat. Methodol.* 2:78–95
- Dube O, Vargas JF. 2013. Commodity price shocks and civil conflict: evidence from Colombia. *Rev. Econ. Stud.* 80:1384–1421
- Dube O, Garcia-Ponte O, Thom K. 2014. *From maize to haze: agricultural shocks and growth of the Mexican drug sector*. Work. pap., Dep. Polit. Sci., New York Univ.
- Ellis S. 1999. *The Mask of Anarchy: The Destruction of Liberia and the Religious Dimension of an African Civil War*. New York: New York Univ. Press
- Fair C, Kuhn P, Malhotra N, Shapiro J. 2014. *Economic Shocks and Civic Engagement: Evidence from the 2010–11 Pakistani Floods*. Princeton, NJ: Princeton Univ. Press
- Fearon JD. 2004. Why do some civil wars last so much longer than others? *J. Peace Res.* 41:275–301
- Fearon J. 2008. Economic development, insurgency, and civil war. In *Institutions and Economic Performance*, ed. E Helpman, pp. 292–328. Cambridge, MA: Harvard Univ. Press
- Fearon JD, Humphreys M, Weinstein JM. 2009. Can development aid contribute to social cohesion after civil war? Evidence from a field experiment in post-conflict Liberia. *Am. Econ. Rev. Pap. Proc.* 99:287–91
- Fearon JD, Laitin DD. 2003. Ethnicity, insurgency, and civil war. *Am. Polit. Sci. Rev.* 97:75–90
- Felter JH. 2005. *Taking guns to a knife fight: a case for empirical study of counterinsurgency*. PhD thesis, Stanford Univ.
- Flanigan ST. 2008. Nonprofit service provision by insurgent organizations—the cases of Hizballah and the Tamil Tigers. *Stud. Confl. Terrorism* 31:499–519
- Galula D. 1964. *Counterinsurgency Warfare: Theory and Practice*. Westport, CT: Praeger
- Gelpi C, Feaver P, Reifer J. 2005/2006. Success matters: casualty sensitivity and the war in Iraq. *Intl. Secur.* 30:7–46
- Ghani A, Lockhart C. 2009. *Fixing Failed States: A Framework for Rebuilding a Fractured World*. Oxford, UK: Oxford Univ. Press
- Grossman H. 1999. Kleptocracy and revolutions. *Oxf. Econ. Pap.* 51:267–83
- Hazelton JL. 2011. *Compellence and accommodation in counterinsurgency warfare*. Masters thesis, Brandeis Univ.
- Heger L. 2010. *In the cross-hairs: examining the factors that make terrorists likely to attack civilians*. PhD thesis, Univ. Calif. San Diego
- Hinton W. 1966. *Fanshen: A Documentary of Revolution in a Chinese Village*. Berkeley: Univ. Calif. Press
- Huang R. 2014. *The wartime origins of postwar democratization: civil war, rebel governance, and political regimes*. Unpublished manuscript, Texas A&M Univ.
- Humphreys M, Sanchez de la Sierra R, Van der Windt P. 2014. *Social engineering in the tropics: case study evidence from East Congo*. Work. pap., Dep. Polit. Sci., Columbia Univ.
- Humphreys M, Weinstein JM. 2008. Who fights? The determinants of participation in civil war. *Am. J. Polit. Sci.* 52:436–55
- Kalyvas SN. 2006. *The Logic of Violence in Civil War*. New York: Cambridge Univ. Press
- Kalyvas SN. 2012. Micro-level studies of violence in civil war: refining and extending the control-collaboration model. *Terrorism Polit. Violence* 24:658–68
- Kalyvas SN, Balcells L. 2010. International system and technologies of rebellion: how the end of the cold war shaped internal conflict. *Am. Polit. Sci. Rev.* 104:415–29
- Kalyvas SN, Kocher MA. 2009. The dynamics of violence in Vietnam: an analysis of the Hamlet Evaluation System (HES). *J. Peace Res.* 46:335–55

- Kaplan O. 2013. Protecting civilians in civil war: the institution of the ATCC in Colombia. *J. Peace Res.* 50:351–67
- Kapstein EB, Converse N. 2008. *The Fate of Young Democracies*. New York: Cambridge Univ. Press
- Keister J. 2010. *States within states: the social contracts of armed groups*. PhD thesis, Univ. Calif. San Diego
- Kilcullen D. 2006. Counterinsurgency redux. *Survival* 48:111–30
- Kuran T. 1991. Now out of never: the element of surprise in the East European revolution of 1989. *World Polit.* 44:7–48
- Kuran T. 1995. The inevitability of future revolutionary surprises. *Am. J. Sociol.* 100:1528–51
- Kuran T. 1997. *Private Truths, Public Lies: The Social Consequences of Preference Falsification*. Cambridge, MA: Harvard Univ. Press
- Lake DA. 2010. Building legitimate states after civil wars. In *Strengthening Peace in Post-Civil War States: Transforming Spoilers into Stakeholders*, ed. M Hoodie, CA Hartzell, pp. 29–52. Chicago: Univ. Chicago Press
- Leites N, Wolf C. 1970. *Rebellion and Authority: An Analytic Essay on Insurgent Conflicts*. Chicago: Markham
- Levi M. 1997. *Consent, Dissent, and Patriotism*. Cambridge, UK: Cambridge Univ. Press
- Lidow NH. Forthcoming. *Violent Order: Understanding Rebel Governance through Liberia's Civil War*. Cambridge, UK: Cambridge Univ. Press
- Lohmann S. 1994. The dynamics of informational cascades: the Monday demonstrations in Leipzig, East Germany, 1989–91. *World Polit.* 47:42–101
- Long A. 2010. *First war syndrome: military culture, professionalization, and counterinsurgency doctrine*. PhD thesis, Mass. Inst. Technol.
- Lyall J. 2009. Does indiscriminate violence incite insurgent attacks? Evidence from Chechnya. *J. Confl. Resolut.* 53:331–62
- Lyall J. 2013. *Dynamic coercion in civil war: evidence from air operations in Afghanistan*. Work. pap., Dep. Polit. Sci., Yale Univ.
- Lyall J, Blair G, Imai K. 2013. Explaining support for combatants during wartime: a survey experiment in Afghanistan. *Am. Polit. Sci. Rev.* 107:679–705
- Lyall J, Wilson I. 2009. Rage against the machines: explaining outcomes in counterinsurgency wars. *Intl. Organ.* 63:67–106
- Magaloni B, Matanock AM, Romero V, Díaz-Cayeros A. 2014. *Living in fear: the dynamics of extortion in Mexico's criminal insurgency*. Work. pap., Dep. Polit. Sci., Stanford Univ.
- Mansuri G, Rao V. 2004. Community-based and driven development: a critical review. *World Bank Res. Obs.* 19:1–39
- Mao T-T. 1937. *On Guerilla Warfare*. Urbana: Univ. Illinois Press
- Matanock AM. 2013. *Bullets for ballots: electoral participation provisions in peace agreements and conflict recurrence*. Work. pap., Dep. Polit. Sci., Univ. Calif. Berkeley
- Matanock AM. 2014. Governance delegation agreements: shared sovereignty as a substitute for limited statehood. *Governance* 27(4):589–612
- Matanock AM, García-Sánchez M. 2013. *Controlling hearts and minds? Examining popular support for the military in Colombia*. Work. pap., Dep. Polit. Sci., Univ. Calif. Berkeley
- Matsuzaki R. 2012. *Building institutions under foreign occupation: police reform in colonial Taiwan versus the Philippines*. Work. pap., Dep. Polit. Sci., Stanford Univ.
- Merom G. 2003. *How Democracies Lose Small Wars: State, Society, and the Failures of France in Algeria, Israel in Lebanon, and the United States in Vietnam*. Cambridge, UK: Cambridge Univ. Press
- Metternich NW, Dorff C, Gallop M, Weschle S, Ward MD. 2013. Antigovernment networks in civil conflicts: how network structures affect conflictual behavior. *Am. J. Polit. Sci.* 57:892–911
- Miguel E, Satyanath S. 2010. *Understanding transitory rainfall shocks, economic growth and civil conflict*. Natl. Bur. Econ. Res. Work. Pap. 16461
- Miguel E, Satyanath S. 2011. Re-examining economic shocks and civil conflict. *Am. Econ. J. Appl. Econ.* 3:228–32
- Miguel E, Satyanath S, Sergenti E. 2004. Economic shocks and civil conflict: an instrumental variables approach. *J. Polit. Econ.* 112:725–53

- Moehler DC. 2010. Democracy, governance, and randomized development assistance. *Ann. Am. Acad. Polit. Soc. Sci.* 628:30–46
- Nagl JA. 2002. *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife*. Westport, CT: Praeger
- Nielsen RA, Findley MG, Davis ZS, Candland T, Nielson DL. 2011. Foreign aid shocks as a cause of violent armed conflict. *Am. J. Polit. Sci.* 55:219–32
- Nunn N, Qian N. 2012. U.S. food aid and civil conflict. *Am. Econ. Rev.* 104:1630–66
- Padró i Miquel G, Yared P. 2012. The political economy of indirect control. *Q. J. Econ.* 127:947–1015
- Pape R, Bauer V, Jenkins G, Ruby K. 2014. *Unified Theory of Nationalist Militant Targeting*. Chicago: Univ. Chicago Press
- Petersen RD. 2002. *Resistance and Rebellion: Lessons from Eastern Europe*. New York: Cambridge Univ. Press
- Popkin SL. 1979. *The Rational Peasant: The Political Economy of Rural Society in Vietnam*. Berkeley: Univ. Calif. Press
- Powell R. 2013. Monopolizing violence and consolidating power. *Q. J. Econ.* 128:807–59
- Prunier G. 2009. *Africa's World War: Congo, the Rwandan Genocide, and the Making of a Continental Catastrophe*. Oxford, UK: Oxford Univ. Press
- Reno W. 1999. *Warlord Politics and African States*. Boulder, CO: Lynne Rienner
- Rosenfeld B, Imai K, Shapiro JN. 2014. *An empirical validation study of popular survey methodologies for sensitive questions*. Work. pap., Dep. Politics, Princeton Univ.
- Sanaei A. 2014. *Rationally impatient citizens: Can democracies fight long asymmetric wars?* Work. pap., Dep. Polit. Sci., Univ. Calif. Berkeley
- Shapiro JN. 2013. *The Terrorist's Dilemma: Managing Violent Covert Organizations*. Princeton, NJ: Princeton Univ. Press
- Shapiro JN, Fair CC. 2010. Understanding support for Islamist militancy in Pakistan. *Intl. Secur.* 34:79–118
- Shapiro JN, Weidmann N. 2015. Is the phone mightier than the sword? Cell phones and insurgent violence in Iraq. *Intl. Organ.* In press
- SIGIR (Special Inspector General for Iraq Reconstruction). 2012. *The human toll of reconstruction or stabilization operations during Operation Iraqi Freedom*. Washington, DC: Off. Spec. Insp. Gen. Iraq Reconstr.
- Staniland P. 2013. *Losing control: militarized elections and the politics of violence in South Asia*. Work. pap., Dep. Polit. Sci., Univ. Chicago
- Staniland P. 2014. *Networks of Rebellion: Explaining Insurgent Cohesion and Collapse*. Ithaca, NY: Cornell Univ. Press
- Steele A. 2011. Electing displacement: political cleansing in Apartadó, Colombia. *J. Confl. Resolut.* 55:423–45
- Stoll D. 1993. *Between Two Armies in the Ixil Towns of Guatemala*. New York: Columbia Univ. Press
- Swinton ED. 1904. *The Defence of Duffer's Drift*. Ft. Leavenworth, KS: Combat Stud. Inst., US Army Command Gen. Staff Coll.
- Thompson RGK. 1966. *Defeating Communist Insurgency: The Lessons of Malaya and Vietnam*. New York: Praeger
- US Army. 2007. *Field Manual 3–24, Counterinsurgency Field Manual*. Chicago: Univ. Chicago Press
- Valentino B, Huth P, Balch-Lindsay D. 2004. “Draining the sea”: mass killing and guerrilla warfare. *Intl. Organ.* 58:375–407
- Vargas G. 2009. Urban irregular warfare and violence against civilians: evidence from a Colombian city. *Terrorism Polit. Violence* 21:110–32
- Variyar M. 2015. After Jordania pilot, ISIS burns three Iraqis alive. *Intl. Bus. Times*, Feb. 7. <http://www.ibtimes.co.in/after-jordanian-pilot-isis-burns-three-iraqis-alive-622759>
- Verwimp P. 2005. An economic profile of peasant perpetrators of genocide: micro-level evidence from Rwanda. *J. Dev. Econ.* 77:423–42
- Walter BF. 2002. *Committing to Peace: The Successful Settlement of Civil Wars*. Princeton, NJ: Princeton Univ. Press
- West B. 2003. *The Village*. New York: Pocket Books
- Zhukov YM. 2014. Population resettlement in war: theory and evidence from Soviet archives. *J. Confl. Resolut.* In press. doi: 10.1177/0022002713520590



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