

# Rebel Territorial Control and Civilian Collective Action in Civil War

## Evidence from the Philippines

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Word Count: 11,313

November 29, 2018

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\*Contact: [mrubin@ucsd.edu](mailto:mrubin@ucsd.edu). Research for this article was supported by the National Science Foundation Law and Social Sciences program (Award Number: 1535598) and the Weatherhead East Asia Institute at Columbia University. The author acknowledges the Government of the Philippines Office of the Presidential Adviser on the Peace Process (OPAPP) and Department of Social Welfare and Development (DSWD) for providing data for this research project. Gail Ilagan and the Association of Psychologists Helping Practitioners (APHP) based in Davao City, Philippines were instrumental in collecting the interviews reported in the article. The author acknowledges institutional support from the Center of Peace and Security Studies at the University of California San Diego (UCSD), the Institute for Quantitative Theory and Methods (QuanTM) at Emory University, and the Institute of Philippine Culture at Ateneo de Manila University. The author thanks Page Fortna, Massimo Morelli, Macartan Humphreys, Jack Snyder, Dani Reiter, Oliver Kaplan, Ana Arjona, Laia Balcells, Jim Walsh, Shane Barter, Sarah Khan, Stephanie Schwartz, Egor Lazarev, Rick McAlexander, Nicholas Lotito, Rick Morgan, Megan Stewart, and Nina McMurry for helpful comments. Thanks to participants in the Order, Conflict, and Violence seminar at Yale University (especially Stathis Kalyvas, David Minchin, and Consuelo Amat), the University of Connecticut political economy seminar (especially Shareen Hertel and Lyle Scruggs), the QuanTM speaker series at Emory University, and panel attendees at the 2016 and 2017 APSA and 2017 and 2018 ISA annual meetings.

## Abstract

Under what conditions do rebel organizations control territory during civil war? How do civilians influence the distribution of territorial control? This article introduces a civilian agency theory, emphasizing community collective action capacity (CAC) defined by underlying social network structure, to complement existing explanations of territorial control. I argue communities with greater CAC mobilize information and resources more efficiently, increasing belligerents' incentives to control territory. However, CAC also increases community bargaining power to demand costly investments in governance, partially offsetting these gains. CAC increases rebel control in areas of state neglect. But, as state service provision increases, communities leverage CAC to demand prohibitively costly rebel governance, deterring rebel control. The article tests the theory in the context of the communist insurgency in the Philippines, using military intelligence reports from 2011-2014 to measure village-level communist insurgent territorial control and a household-level census (2008-2010) to measure village CAC. Interviews with village elders in Eastern Mindanao illustrate causal mechanisms and explore alternative explanations.

“At core, all civil wars are a battle for control between a government and its competitors over civilians and the territory upon which they reside” (Arjona 2015, p. 1). Approximately 34% of rebel groups controlled significant swathes of contested territory during intrastate conflict (Cunningham, Gleditsch and Salehyan 2013). Many more control smaller portions of territory or for shorter periods of time, not captured in existing datasets. Territorial control influences a variety of important conflict outcomes: civilian collaboration (Kalyvas 2006) and participation (Humphreys and Weinstein 2008), belligerents’ use of violence (Humphreys and Weinstein 2006, Kalyvas 2006, Weinstein 2007), conflict intensity and duration (Buhaug, Gates and Lujala 2009), rebel governance (Mampilly 2011, Stewart 2018), state-building and economic development. If the distribution of territorial control is as crucial to understanding civil war as the literature suggests, it is essential to understand its origins.

Existing literature privileges structural military, political, identity, and economic factors to explain the distribution of territorial control. Yet, both revolutionary (Guevara 2002 [1961], Mao 2007 [1937]) and counterinsurgency (Galula 2006 [1964], Nagl et al. 2008) doctrine emphasize the strategic necessity of popular support to achieving military success. If they have agency over allocation of resources and their support is essential to victory, civilians possess power to influence belligerent conduct during war.

The argument builds on a burgeoning literature emphasizing civilian agency to influence belligerent conduct during civil war by examining, specifically, the role that civilians play in the process by which belligerents establish control in specific locations within the conflict zone in the first place. I argue community *collective action capacity*, the ability to mobilize collective action to pursue common interests, influences rebel groups’ territorial control and governance, and that its effect is moderated by the community’s *outside options* for protection from violence and access to basic services, primarily from the state.<sup>1</sup>

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<sup>1</sup>Communities may mobilize local resources to assert autonomy from belligerents (Kaplan 2017). For simplicity, and because the state represents the insurgents’ main competitor for territorial control, I focus on the state here.

Rebel organizations face an inherent trade-off: though necessary to extract resources, recruit personnel, and establish bases, seeking territorial control also stretches rebels' scarce resources and increases the risk of confrontation with the state. Collective action capacity affects civilians' power to manipulate this trade-off to serve their interests. The emphasis on rebels' material incentives does not imply that communities' political/ideological preferences do not influence belligerent territorial control, nor that non-material motives (for example historical/symbolic significance) for controlling territory are unimportant. Rather, the theory complements these arguments with attention to the constraint that rebels must weigh these incentives against vulnerability to civilian reactions. Nor does the civilian agency theory negate the possibility that certain rebel organizations, for example those with alternative sources of financing such as natural resource extraction or external support, may be less vulnerable to civilian agency than others (Fortna, Lotito and Rubin 2018). Because even well-financed rebel organizations rely on civilian support and population concealment to move freely through contested territory and avoid counterinsurgents, they are not immune to civilians exercising agency to shape belligerent conduct.

Because communities with greater collective action capacity gather resources and control access to information more efficiently, belligerents prefer to control territory in which communities possess high collective action capacity, all else equal. Nevertheless, collective action capacity may also empower communities to hold belligerents accountable to higher standards of (costly) governance, cutting against expected benefits to territorial control. Indeed, civilians use their control over valuable combat-relevant information to reward (punish) belligerents that promote (violate) community interests (Berman, Shapiro and Felter 2011, Condra and Shapiro 2012, Shaver and Shapiro forthcoming, Wright et al. Forthcoming). As the weaker side in asymmetric conflict, rebels are especially dependent on support, and vulnerable to retribution, from the population.

These countervailing mechanisms imply a conditional relationship. Where the state cannot provide basic services and security (weaker outside options), collective action capacity

*encourages* rebel control. The community accepts rebel control at low investment in governance because even minimal rebel governance improves the status quo. Thus, rebels' surplus benefits associated with higher collective action capacity outweigh the expected governance costs. As community access to state services increases (stronger outside options), collective action capacity *deters* rebel control. The community leverages collective action capacity to hold rebels accountable to prohibitively expensive standards of governance.

I test the theory's empirical implications in a regression framework, using village-level data from the communist insurgency in the Philippines. Armed Forces of the Philippines (AFP) military intelligence assessments measure village-level insurgent territorial control from 2011-2014, providing a rare opportunity to measure the elusive concept of territorial control during conflict with precision.<sup>2</sup> Existing research suggests social network structure shapes information transmission and collective action in situations in which costly individual actions are required to achieve common interests (Chwe 1999, Gould 1993, Jackson, Rodriguez-Barraquer and Tan 2012, Siegel 2009), including protest, revolution, and conflict situations (Chwe 2000, Larson 2016, Larson and Lewis 2018). I measure collective action capacity from its micro-level foundations in kinship networks using a household-level census provided by the Department of Social Welfare and Development. Results are consistent with the theory: in villages with low government service provision, rebel control *increases* in village cohesion, while the effect reverses as access to state protection and services increases. Interviews with village elders from three provinces in Eastern Mindanao illustrate the mechanism linking community social structure to the distribution of territorial control through rebels' expected local collaboration and governance costs, and reveals the theory's advantages over alternative explanations.

The article makes an important contribution to the literature by explaining how civilians shape the distribution of territorial control during intrastate conflict, endogenizing a

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<sup>2</sup>AFP intelligence data were provided to the author by the Office of the Presidential Adviser on the Peace Process (OPAPP).

key explanatory variable in the predominant “control-collaboration” model of armed conflict (Kalyvas 2012). Because the antecedent process of belligerents’ expansion and contraction of territorial control generates the context in which subsequent belligerent conduct takes place, the article yields important insights for the broader literature addressing the origins, conduct, intensity, and outcomes of civil war.

## 1 Existing Literature

Because of the state’s overall military advantage, rebels are generally confined to remote areas in which they possess a *localized* military advantage over state forces. Mountainous terrain, forest cover, swampland and other geographic impediments to moving troops and heavy equipment contribute to the state’s *loss of strength gradient* (Boulding 1962), increasing the costs to counterinsurgent operations and the likelihood of civil war (Fearon and Laitin 2003). State weakness reduces rebels’ costs, and extends the expected time horizon, of territorial control (Humphreys 2005). These structural factors explain why rebels typically control territory in remote areas distant from centers of state power (Buhaug 2010, Holtermann 2016), but cannot account for variation in territorial control within the periphery, nor explain rebel control closer to centers of state power. Explaining belligerent conduct in the periphery is crucial, as civil conflict remains intractable precisely because states cannot project power throughout their sovereign territory.

Rebels seek to control territory rich in economic endowments, especially “lootable” natural resources, to finance the rebellion (Collier and Hoeffler 2004, Le Billon 2001, Morelli and Rohner 2015, Weinstein 2007). Berman et al. (2011) find that rebel violence increases in response to growth in employment and economic activity, possibly because rebels seek territorial control in productive local economies to extract “revolutionary taxes.” Economic development programs (Berman et al. 2013, Crost, Felter and Johnston 2014) and aid to war-ravaged populations (Nielsen et al. 2011, Nunn and Qian 2014) increase local popula-

tions' economic security *and* exposure to violence, without enhancing long-term government territorial control (Sexton 2016).

Scholars have proposed political *interest*-based mechanisms linking community characteristics to variation in territorial control. Where the citizens suffer relative deprivation (Gurr 1970) or low economic opportunity costs associated with rebellion (Collier and Hoeffler 2004, Dube and Vargas 2013, Humphreys and Weinstein 2008), communities may support rebel territorial control. State repression may inspire moral and emotional motivations to rebel (Petersen 2001, Wood 2003). Political and economic exclusion based on ethnic or identity categories, in particular, exacerbate conflict (Buhaug, Cederman and Rød 2008, Horowitz 1985, Wucherpfennig et al. 2012), especially when identity categories correspond to socioeconomic hierarchy (Cederman, Weidmann and Gleditsch 2011, Gubler and Selway 2012). Vertical social ties linking rebels to communities (Sarbah 2014, Staniland 2014), local institutional efficacy (Arjona 2016), organizational capacity (Kaplan 2013, 2017, Parkinson 2013), and the configuration of local political power (Balcells 2017) shape rebel conduct and the costs of territorial control.

A second set of interest-based mechanisms explore how civilian interests and actions may be shaped by conflict processes and belligerent conduct. Berman, Shapiro and Felter (2011) formalize prevailing information-centric counterinsurgency doctrine, emphasizing civilians' agency to influence belligerent control. Their model focuses exclusively on civilians' material incentives, primarily physical and economic security: civilians punish belligerents perpetrating civilian-targeted violence by providing information to their enemy (Berman, Shapiro and Felter 2011, Shaver and Shapiro forthcoming), despite increased risk of being targeted by the perpetrator (Hirose, Imai and Lyall 2017). This article contributes a *capabilities*-based mechanism linking non-combatant community characteristics to the expansion and contraction of rebel territorial control during civil war, emphasizing communities' collective action capacity alongside material interests.

Kalyvas (2006) argues that individuals survive conflict by collaborating with the bel-

ligerent exerting control and denouncing rivals in their community. Balcells (2017) argues that the incentives to denounce rivals are greatest where politically relevant groups approach parity. This article emphasizes community members' incentives and capabilities to pursue security goals by *cooperating* with other, even rival, groups rather than "settling scores" or aggravating communal conflict. Petersen (2001) and Kaplan (2017) highlight underlying community social structure to explain popular participation in resistance against occupying forces and the emergence of community autonomy (self-protection strategies), respectively. Parkinson (2013) demonstrates that family-based and other quotidian social networks influences rebel organizations' resilience and fighting capacity. Shesterinina (2016) highlights how social structure influences individuals' threat perception, driving variation in individual- and group-level mobilization during conflict. Larson and Lewis (2018) find that social network structure influences whether information regarding rebel vulnerabilities reaches the government, with implications for rebel organizational growth and survival. Network fragmentation threatens rebel interests, while community cohesion enhances rebel viability. This article builds on these contributions by explaining how the factors driving civilians' active participation during conflict influences rebel organizations' decisions regarding whether and where to establish territorial control in the first place. I argue that, just as these communication and mobilization mechanisms influence rebel groups' resilience/survival and mobilization in the aggregate, they may be crucial to the antecedent process of territorial control by affecting rebels' ability to move freely through the (populated) conflict zone.

## 2 Civilian-Agency Theory of Rebel Territorial Control

### 2.1 Definitions

Territorial control is defined by a political actor’s ability to move freely, access information and resources, and prevent its enemies’ movement and access in a particular place and time.<sup>3</sup> Territorial control is a continuous concept: a combatant may have partial control if it can restrict, even if not eliminate, its enemy’s movement and access. *Segmented* territorial control corresponds to areas in which one belligerent exercises complete access to resources to the exclusion of the other, while *fragmented* control describes conditions in which two or more belligerents each possess partial access (Kalyvas 2006, Staniland 2012).

Governance is the set of “institutionalized modes of social coordination to produce and implement collectively binding rules, or to provide collective goods,” (Risse 2012, p. 700).<sup>4</sup> Rebel governance, specifically, refers to rebel actors’ provision of rules and goods/services to non-combatant populations.<sup>5</sup> Rebels may provide security from external threats, public safety, resolve disputes, and even basic services such as medical care, education, and access to food and water (Mampilly 2011, p. 17). Alternatively, rebels may govern through dominance, relying on coercive violence to impose social order.

I define collective action capacity as communities’ ability to facilitate joint action in which “groups composed of self-interested and interdependent individuals seek to develop

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<sup>3</sup>This definition incorporates components from Race (1973, p. 277), Kalyvas (2006, p. 210), and Kasfir (2015, p. 26).

<sup>4</sup>Fukuyama (2016, p. 90) notes the variety of definitions for governance used in the literature. But, all definitions share a conceptualization of governance as a form of control that political actors, whether state or non-state actors, exert over social, economic, and political interactions in the constituent population (Kahler and Lake 2004, p. 409).

<sup>5</sup>This definition is similar to that adopted in Arjona, Kasfir and Mampilly (2015, p. 3), which defines rebel governance as “the set of actions insurgents engage in to regulate the social, political, and economic life of non-combatants during war.”

and carry out cooperative plans,” (Ober 2008, p. 7). During civil conflict, community members share an interest in limiting exposure to political violence and extortion by belligerents and maximizing access to essential services. Nevertheless, conflict may intensify distributional conflict over scarce resources and security. Collective action capacity captures the community’s ability to overcome the latter divisive pressures in order to achieve the former shared interests.

Collective action capacity varies with four main community characteristics. First, *generalized trust* reflects the share of community members that believe others will comply with norms governing social interactions, honor commitments, and forego short-term incentives to preserve long term cooperation. Second, *other-regarding preferences* refer to the value individuals assign to community welfare, which influences individuals’ willingness to forego self-interest to promote common good. Third, the *inclusiveness* of local institutions contributes to a community’s experience with consensus-building processes. Broad representation in decision-making processes solidify functioning mechanisms for generating compromise solutions to distributional conflict. Fourth, the *density* of interactions across social group divides, or *cross-cutting cleavages*, contributes to efficient modes of communication and familiarity across group boundaries. For example, individuals may trade in markets, attend houses of worship, and join social organizations with members of other social groups. Routine interaction across cleavages facilitates cooperation and makes non-cooperative behavior easily detected and sanctioned.

Social capital, “the norms and networks that enable people to act collectively” (Woolcock and Narayan 2000, p. 226), represents the social structure underlying these features of collective action capacity. Putnam (2001) distinguishes two types of social capital: “bridging,” referring to social ties across cleavages, and “bonding,” referring to ties within insular groups. Though bonding may also increase broad collective action by enhancing in-group policing (Fearon and Laitin 1996), I focus on bridging social capital. The literature suggests bridging is crucial to cooperation across social cleavage lines to enhance government performance

(Putnam 2001, Putnam, Leonardi and Nanetti 1994), public goods provision (Habyarimana et al. 2009), management of common pool resources Ostrom (1990, 2000), organizing social and political movements (Tarrow 1994), and may reduce incentives for competition between social groups even under a high risk of communal conflict (Varshney 2001).

In the empirical section, I rely on kinship ties to measure bridging social capital in the Philippines. Families are certainly not the only social units, and intermarriages are not the only relationships, relevant to collective action in the Philippines. Communities mobilize through professional or sectoral (farmers, fisherman, and youth) associations, Church, and tribal institutions.<sup>6</sup> Nevertheless, as discussed in greater detail below, kinship ties represent the foundation of daily social, economic, and political life in the Philippines. Because kinship ties may strengthen alternative sources of mobilization, and vice versa, cohesion measured in kinship networks is an appropriate, though imperfect, proxy for collective action capacity.

## 2.2 Rebel and Civilian Interests and Actions

The theory focuses on community-level interaction between rebel personnel and civilians. The local-level rebel actor is a mobile semi-autonomous unit within, and subordinate to, the rebel organization's central leadership. Because they have detailed local knowledge of enemy capabilities and community needs, local units must possess some discretion over decisions regarding where and when to establish territorial control in their operational zones. Rebels derive benefits from *territorial* and *population-based* resources in areas they control. Territorial resources are those for which the rebels do not depend on civilian collaboration to consume. These include lootable primary commodities and natural resources as well as physical geography, which influences the costs and time horizon of control. Population-based resources are derived from local collaboration: financial contributions from households ("revolutionary tax") and access to food, shelter, supplies, and information. Local wealth and economic productivity increase the stock of extractable resources (tax base), and therefore

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<sup>6</sup>Interview with Brigadier General Alejandro Estomo (Ret.) on Sept. 14, 2015.

increase rebels' potential income. Because they are clandestine organizations vulnerable to counterinsurgent reprisals, rebels rely on civilians to hide rebel personnel and equipment from counterinsurgents (population concealment).

The costs to seize and maintain control at least partially offset these gains. Entry costs include sending personnel and resources to assess local conditions, mobilize support, and remove government presence. Governance costs represent the investment in goods and service provision required to maintain local support, monitor community activities, and the coercive apparatus required to establish public order and deter or defeat counterinsurgent challengers.

Communities are comprised of individuals with at least occasionally competing interests. Nevertheless, every community has important dimensions along which members share a common interest; chiefly maximizing access to basic goods and services and minimizing destructive civil war violence. In other words, communal conflict is more costly than peaceful political and economic competition, so communities prefer to avoid folding the insurgency into their local rivalries. This assumption departs from the predominant control-collaboration model (Kalyvas 2006, 2012), which implies that distributional conflict incentivizes community members to compete rather than pursue common interests. The common-interests assumption privileged here does not reject this competitive dynamic, but rather complements existing literature by taking seriously the possible incentives for community members to resist competitive pressures in order to pursue strategic cooperation.

Though they may value community security, I assume rebels prioritize their political goals and organizational survival. Even the strongest rebels cannot survive without some threshold level of support or acquiescence among the local population. I assume rebels are more sensitive than counterinsurgents to community collective action capacity. Because rebels have limited military and administrative resources, they rely on population concealment to remain clandestine, and are therefore especially vulnerable to civilian defection. Counterinsurgents operate in the open, possess greater firepower, are backed by state administrative and financial resources, and can retreat to military bases when under threat. Therefore,

the state enjoys a freer hand in allocating resources to economically or militarily valuable villages, while collective action capacity exercises a critical constraint for rebel investment in territorial control.

### 2.3 Collective Action Capacity, Rebel Governance, and Territorial Control

Community collective action capacity influences rebel returns to territorial control through: 1) the material, political, and military benefits from local collaboration; and 2) governance costs required to maintain community support. Communities with greater collective action capacity provide more valuable collaboration. They mobilize resources (revolutionary taxes), control the flow of information, and internally monitor and sanction defection across social cleavages more efficiently. All else equal, rebels prefer to control territory with high collective action capacity populations.

Because they are interested primarily in physical and economic security, civilians may attempt to hold rebels accountable to adequate investment in protection and service provision. If rebels neglect or threaten community interests, communities may withhold collaboration, provide information to counterinsurgents (Berman, Shapiro and Felter 2011, Shaver and Shapiro forthcoming), and/or engage in (Arjona 2016, Balcells 2017, Kaplan 2017, Scott and Kerkvliet 1986). Collective action capacity enhances the community's ability to enforce rebel accountability. Social ties across cleavage lines decrease the costs of cooperation and increase individuals' willingness to pursue collective goals despite distributional conflict and free-riding incentives. Dense social ties increase the social costs of defection, alienating individuals from community social and economic exchange, and increase the likelihood of punishment by facilitating collective monitoring of individual actions. By enhancing accountability enforcement, thereby raising expected governance costs, collective action capacity also cuts against rebel returns to territorial control.

Whether collective action capacity has a net positive or negative effect on rebel incentives to seek territorial control depends on the community's *demand* for rebel governance:

Table 1: The Conditional Effect of Collective Action Capacity (CAC) on Rebel Governance and Territorial Control

		State Service Provision	
		Low	High
CAC	Low	<ul style="list-style-type: none"> <li>• Collaboration:               <ul style="list-style-type: none"> <li>· Inefficient/Low Value</li> </ul> </li> <li>• Governance:               <ul style="list-style-type: none"> <li>· Weak Enforcement</li> <li>· Low Demand</li> </ul> </li> </ul> <p><b>Rebel Control: Moderate Incentive</b></p>	<ul style="list-style-type: none"> <li>• Collaboration:               <ul style="list-style-type: none"> <li>· Inefficient/Low Value</li> </ul> </li> <li>• Governance:               <ul style="list-style-type: none"> <li>· Weak Enforcement</li> <li>· High Demand</li> </ul> </li> </ul> <p><b>Rebel Control: Weak Incentive</b></p>
	High	<ul style="list-style-type: none"> <li>• Collaboration:               <ul style="list-style-type: none"> <li>· Efficient/High Value</li> </ul> </li> <li>• Governance:               <ul style="list-style-type: none"> <li>· Strong Enforcement</li> <li>· Low Demand</li> </ul> </li> </ul> <p><b>Rebel Control: Strong Incentive</b></p>	<ul style="list-style-type: none"> <li>• Collaboration:               <ul style="list-style-type: none"> <li>· Efficient/High Value</li> </ul> </li> <li>• Governance:               <ul style="list-style-type: none"> <li>· Strong Enforcement</li> <li>· High Demand</li> </ul> </li> </ul> <p><b>Rebel Control: Weakest Incentive</b></p>
		CAC ↑ Rebel Control	CAC ↓ Rebel Control

the level of investment in governance to which the community will (attempt to) hold rebels accountable. The theory proposes community demand for governance depends largely on the community’s outside options, specifically its expectations for state service provision.<sup>7</sup> Strategic communities demand the highest investment in rebel governance that leaves them indifferent to the rebels’ decision whether to seek territorial control; simultaneously deterring predatory rebels while inviting rebels whose investment in governance would improve community security and access to goods and services.

Table 1 illustrates the conditional effect of community collective action capacity on rebel territorial control, given state services. The bulleted items populating each quadrant represent the community characteristics influencing rebels’ incentives to control territory. Under low state service provision, collective action capacity *increases* rebel territorial control. The

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<sup>7</sup>Mampilly (2011) argues, similarly, that a history of state penetration increases civilian demands for rebel governance.

community must be willing to accept rebel control at low investments in governance because the state does not offer competitive services. Rebels identify stronger incentives to control territory in high collective action capacity communities, which yield more efficient (valuable) collaboration but only slightly higher governance costs due to weak community demand. By contrast, under high state service provision, collective action capacity *decreases* rebel territorial control. High collective action capacity communities do yield valuable collaboration, but they also demand prohibitively expensive service provision and retain the capacity to enforce accountability. Though rebels expect inefficient collaboration from low collective action capacity communities, weak enforcement keeps the governance costs sufficiently low.

Generally, state service provision and community collective action capacity are continuous, rather than discrete, variables. As state service provision increases, the community demands steadily greater service provision in exchange for collaboration. As the associated governance costs grow, the net positive effect of collective action capacity on rebel control declines accordingly. Under sufficiently high state service provision, the community demands investment in governance sufficient to deter rebels from seeking territorial control in the first place.

**Hypothesis 1.** *In areas of low state service provision, community collective action capacity increases rebel territorial control. The positive effect of collective action capacity declines, and reverses direction, as state service provision increases.*

### 3 Communist Insurgency in the Philippines

Leveraging pre-existing networks established during the earlier Huk rebellion, the Communist Party of the Philippines (CPP) formed on December 26, 1968. The New People's Army (NPA) formed on March 29, 1969 "to wage a protracted People's War... to overthrow the government and replace it with a 'national democratic' system with a socialist perspective," (Santos et al. 2010). Capitalizing on state neglect to court popular support,

CPP-NPA activity peaked following President Ferdinand Marcos' declaration of Martial Law in 1972 and subsequent consolidation of power under a personalist dictatorship associated with widespread human rights abuses. During the 1980's, the CPP boasted over 30,000 party members while the NPA comprised near 20,000 armed personnel active in 50 provinces and "controlled or influenced about 20 percent of the Philippine population," (Kessler 1989, pg. 28). The CPP-NPA continued the insurgency after the 1986 democratic transition, claiming political elites did not address underlying grievances related to economic inequality and rampant corruption (Abinales and Amoroso 2005, p. 115).

Implementing a classic Maoist insurgency, NPA cadres first establish bases in historically neglected peripheral *barangays* (villages) and incrementally expand territorial control towards urban centers.<sup>8</sup> In some areas, the CPP-NPA provided governance. It established a system of taxation, business ventures, and implemented rural development plans, such as farmers' cooperatives (Kessler 1989, p. 74-75). Even recently, the CPP-NPA has controlled territory by establishing "shadow government" to administer *barangays* and build support networks among the population (Torres Jr 2011, p. 6).

Historical accounts and interviews with AFP personnel suggest the CPP-NPA pays close attention to community social characteristics prior to infiltrating villages. Political operatives first estimate local counterinsurgent strength, assess community access to services, identify victims of social injustice, map social and leadership structure, and estimate the local taxable base (Kessler 1989, p. 66). Occasionally, CPP-NPA personnel conduct a formal community needs assessment, the Social Integration and Class Analysis (SICA), to estimate the costs associated with territorial control in the community.

*SICA... is a process by the NPA of studying the social conditions of the community... they will find out what are the basic services that are lacking in the*

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<sup>8</sup>Interviews with Brigadier General Alejandro Estomo (Ret.) on Sept. 14, 2015; Colonel Ding Carreon on Sept. 18, 2015; and Colonel Jake Obligado on Nov. 12, 2015. See also Torres Jr (2011, p. 6), Santos et al. (2010) and Kessler (1989).

*community... who are influential in the community, the [community] structure. Who are pro-government? Who have predicaments against the government?... They would capitalize on the conditions of the community through that study.*<sup>9</sup>

Data constraints restrict econometric analysis to four years (2011-2014) during President Benigno Aquino III's administration (2010-2016). The preceding Arroyo administration (2001-2010) conducted a heavily enemy-centric "all-out war" strategy against the insurgency. Though it cleared many areas of NPA control, the campaign failed to address political grievances underlying communist support and alienated communities subjected to civilian-targeted violence, leaving cleared villages vulnerable to insurgent re-capture (Santos et al. 2010, p. 29). President Aquino's Internal Peace and Security Plan (IPSP),<sup>10</sup> modeled after the U.S. Government's 2009 Counterinsurgency Guide<sup>11</sup> emphasizes both "civilian and military efforts designed to simultaneously contain insurgency and address its root causes." AFP Peace and Development Teams (PDT) implement the "hold" and "build" phases largely ignored under previous administrations. PDTs remain for 6-12 months to deliver goods and services (economic development and poverty-reduction programs), meet with local leaders, assess community needs, and institutionalize governance structures.<sup>12</sup> The strategic shift to population-centric, even if imperfect, and the concurrent collapse of NPA strength implies a hard test for the theory's predictions regarding the conditions under which community collective action capacity increases rebel territorial control.

### 3.1 Kinship in the Philippines

Much of pre-colonial Philippines was organized socially and politically into groups of families (*barangay*), under the leadership of a local headman (*datu*). Through decades of migration and demographic changes, the *barangay* has persisted as an important unit of local political

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<sup>9</sup>Interview with Colonel Jake Obligado on Nov. 12, 2015.

<sup>10</sup>[http://www.afp.mil.ph/images/pdf/ipsp\\_bayanihan.pdf](http://www.afp.mil.ph/images/pdf/ipsp_bayanihan.pdf)

<sup>11</sup><http://www.state.gov/documents/organization/119629.pdf>

<sup>12</sup>OPAPP representative, Paul Escobar.

administration. Spain's colonial government absorbed the *barangay* into its administrative system and made *datus* the local *cabezas de barangay* (village heads) responsible for collecting tribute from households (Cullinane 1998, p. 285-286).

The family remains the primary social, economic, and political unit in Filipino society (Cruz, Labonne and Querubin 2017), making it the appropriate unit to investigate community collective action capacity. The family “provides employment and capital, educates and socializes the young assures medical care...” and fulfills the basic purpose “to transmit its name, honor, lands, capital, and values to the next generation” (McCoy 1993, p. 7). To secure access basic services and economic security throughout a history of state weakness, families organize into *clans*, “an intricate value system emphasizing reciprocity among individuals... based on blood ties and ritual kin relations... creating a series of overlapping family circles,” (Kessler 1989, p. 22). Within the clan, “behavior... is regulated by ethics and norms that are unwritten and informal, depending for their effectiveness upon internalized sanctions,” (Corpuz 1965, pg. 83). The system encourages cooperation within, and competition across, kin networks (Kessler 1989, p. 22). Inter-clan marriages, then, may enhance bridging capital by increasing trust and communication across clan lines.

### 3.2 Generalizability

The Philippines communist insurgency provides leverage to study the general phenomenon of territorial control in irregular civil wars. Like many conflict-plagued contexts, the Philippines remains a weak state with developing urban centers while state-building lags in the largely rural periphery. Inferences drawn from this case apply most directly to communist insurgencies; including ongoing conflicts in India and Colombia. Despite differences in political philosophies, the conclusions also generalize to other “center-seeking” conflicts, in which rebels attempt to overthrow the incumbent regime by gradually expanding territorial control and cultivating support from a population. Examples include anti-authoritarian movements (e.g. Free Syria Army) and politicized identity or religious insurgencies (e.g. Taliban), at

least in areas populated by co-religionists that may plausibly support either side.

Generalizing the theory to ethno-nationalist conflicts requires further research. Marginalized groups may lack viable options to collaborate with the state, limiting the theory's relevance. However, political allegiances are remarkably fluid even in ethno-nationalist conflicts: communities may choose to align with a state dominated by non-coethnics, especially if security under the state exceeds that expected under coethnic rebels (Kalyvas 2006, 2008). For example, Souleimanov and Siroky (2016) find that, in response to civilian-targeted counterinsurgent violence in their communities, Chechen villagers often mobilized collective action to either pressure co-ethnic Chechen insurgents to refrain from attacking Russian troops or to defect by aligning with pro-Russian Chechen militias.

While the particular measurement strategy may not be useful in other contexts, the importance of kinship networks to collective action is by no means unique to the Philippines. In fact, relationships between family groups are central to a variety of conflicts from Spain and Greece to Iraq and Afghanistan (Kalyvas 2006, p. 179-180).

## 4 Do Civilians Influence Governance Costs?

Does community collective action capacity influence rebel territorial control by increasing community bargaining power to demand investment in governance? Though not a formal empirical test, I draw upon interviews with select village elders from three conflict-affected provinces in Eastern Mindanao<sup>13</sup> to illustrate the civilian agency mechanism. Trained enumerators conducted semi-structured interviews designed to reconstruct the history of community-NPA interactions in the village during the height of the insurgency. I also consider two plausible alternative explanations: 1) prior rebel presence may affect both subsequent rebel control *and* community collective action capacity (endogenous collective action

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<sup>13</sup>75 Villages were selected using a cluster random sampling procedure within the sampling frame of Agusan del Sur, Compostela Valley, and Davao Oriental. The appendix includes additional details regarding data collection.

capacity); and 2) collective action capacity may increase rebel control through predatory means. Due to space constraints, I present illustrative examples from select village cases; for in-depth analysis, see Rubin (2018).

Consistent with the theory, interview respondents asserted that CPP-NPA personnel relied on pre-existing local structures facilitating collective action to secure territorial control. The NPA often depended heavily on the local *datu*'s collaboration to mobilize support throughout the community. Because tribal institutions have deep historical roots, their role is unlikely to be endogenous to conflict dynamics.

**Respondent:** *You see when a datu is convinced to join, he brings the members of his clan with him... that's how the NPA recruits. They don't try to convince many people... they just befriend the datu...*<sup>14</sup>

Furthermore, community social structures also facilitate community efforts to hold CPP-NPA personnel accountable to community interests, rather than merely serving as vehicles for NPA coercive control. The evidence suggests that tribal institutions influence not only the wartime social order, as in Arjona (2016), but also similarly affects rebels' investment in territorial control in the first place.

**Respondent:** *They [reject the NPA] together also. That made the NPA very angry... [The villagers] joined the CAFGU [government-funded civilian protection units].*<sup>15</sup>

Consistent with the theory's emphasis on the advantages associated with territorial control in high collective action capacity communities, pre-existing community organizations streamlined regular collection of revolutionary taxes from the population and enhanced monitoring to keep NPA operatives secure in the village (population concealment). Moreover, tribal institutions are not the only relevant pre-existing social structures; professional organizations, for example, represent alternative foundations underlying collective action capacity.

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<sup>14</sup>Binicalan, San Luis, Agusan del Sur Interview, pgs. 7-8.

<sup>15</sup>Binicalan Interview, pgs. 7-8.

Consider the examples from Baylo, Monkayo and Casoon, Monkayo.

**Enumerator:** Did the residents here have an influence over the NPA?

**Respondent:** *Oh, yes. We were organized into associations. Then they would assign people roles and functions. Like, some would get assigned to be the collector of the revolutionary taxes. Others were tasked to register the associations with government entities or to partner with NGOs. ... First, it was about information. When the soldiers arrived here, it would not be long before the NPA would be told about it... It was impossible I think for them to be caught by surprise.*<sup>16</sup>

**Respondent:** *Every family gave one sardine can of rice and five pesos [monthly]... There were officials... assigned to collect. All the puroks [neighborhoods] had contact persons. Wherever they went here they were safe because they had people everywhere.*

**Enumerator:** Who determined how much each family would give?

**Respondent:** *We did. There was a [Farmers Organization] meeting where it was decided...*<sup>17</sup>

Respondents report organized resistance against NPA personnel (accountability enforcement) in response to violations of community interest. For example, the Binicalan quote above confirms community structures facilitate mobilization to join state-funded civil protection units in order to hold NPA personnel accountable for destructive conduct, such as assassinating local leaders. The quotes from Baylo and Casoon indicate NPA dependence on community organization, suggesting the potential to leverage their collective action capacity as bargaining power. In some cases, community resistance is as simple as providing information to the government, suggesting that the costs associated with holding rebels accountable may be fairly low. In extreme cases, communities mobilize armed resistance themselves. A respondent from Laak, Compostela Valley recalled how the community banded together to drive out the NPA after rebels assassinated a community leader.

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<sup>16</sup>Baylo, Monkayo, Compostela Valley Interview, pg. 3.

<sup>17</sup>Casoon, Monkayo Interview.

**Respondent:** *Our barangay captain at Aginaldo... was murdered. That eventually caused the people of Aginaldo to revolt against [the NPA]... carrying with them deadly bolos [machete]... No NPA confronted us because we were so many.*<sup>18</sup>

## 5 Quantitative Research Design and Results

This section describes the data used to test Hypothesis 1 in a regression framework, specifies the econometric model, and interprets the results. The sample used in the main analysis includes 12472 villages in 569 municipalities. Because the CPP-NPA have not contested territory in the vicinity, the sample excludes the National Capital Region (NCR) and the Autonomous Region of Muslim Mindanao (ARMM), which has experienced a parallel ethno-nationalist conflict.

### 5.1 Data

#### CPP-NPA Territorial Control

Yearly (2011-2014) Armed Forces of the Philippines (AFP) intelligence assessments rank the level of communist insurgent territorial control in each village on a 4-category scale: 0) unaffected 1) threatened, 2) less-influenced, and 3) influenced.<sup>19</sup> The AFP categorize villages based on information (or lack thereof) from local contacts, the presence of communist party-affiliated political committees, and estimates of armed personnel and firearms.<sup>20</sup> “Influenced” villages contain a Barangay Revolutionary Council (BRC), the political leadership cadre formally affiliated with the CPP party branch, as well as social organizations for mass

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<sup>18</sup>Kikomay, Laak, Compostela Valley Interview, pgs. 3-4.

<sup>19</sup>These data are not produced for public consumption, but were generously supplied by the Office of the Presidential Adviser on the Peace Process (OPAPP) for research purposes.

<sup>20</sup>Author interview with former Intelligence Officer, Mark Posadas on Feb. 28, 2015. Definitions in the AFP Summary Conflict-Affected Areas Report provided by OPAPP.

participation. The local NPA “people’s” militia is judged capable of planned attacks on the military or government outposts. “Less-influenced” villages contain weaker participation in party and/or mass organizations and the local militia may be able to conduct targeted attacks only under especially favorable circumstances. In “threatened” villages, CPP-NPA personnel are either at the infant stages of mass organization or are essentially rogue criminal organizations engaged in extortion.

The AFP provides these assessments to peace-building and economic development agencies to note areas to avoid implementing programs for security reasons related to insurgent presence.<sup>21</sup> Therefore, the rankings conform to the definition of territorial control above, measuring NPA access to resources and information (Kalyvas 2006) and its capacity to deter government agents from establishing presence (Kasfir 2015, p. 26). The 2012 assessment does not distinguish between “less-influenced” and “influenced” nor between “threatened” and “unaffected” designations, collapsing to a binary classification. This binary measurement is substantively relevant: many “threatened” villages are those in which NPA units have devolved into criminal bands no longer under central command and control.

Table 2: CPP-NPA Control by Year

	Influence (0-3)				Influence $\geq 2$	
	0	1	2	3	0 & 1	2 & 3
2011	32535 <b>86%</b>	4165 <b>11%</b>	686 <b>1.8%</b>	466 <b>1.2%</b>	36700 <b>97%</b>	1152 <b>3%</b>
2012					36761 <b>97.1%</b>	1091 <b>2.9%</b>
2013	33715 <b>89.1%</b>	3122 <b>8.2%</b>	621 <b>1.6%</b>	394 <b>1%</b>	36837 <b>97.3%</b>	1015 <b>2.7%</b>
2014	36726 <b>97%</b>	562 <b>1.5%</b>	271 <b>0.7%</b>	293 <b>0.8%</b>	37288 <b>98.5%</b>	564 <b>1.5%</b>

No. Villages (excluding ARMM, NCR): 37852

Figure 1a depicts the 1568 villages (4% of the sample) exposed to communist control in

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<sup>21</sup>It is unlikely that assessments reflect bias to favor the AFP’s reputation, since this would put at risk government employees and programs and assessments are classified.

Figure 1: CPP-NPA Control 2011-2014

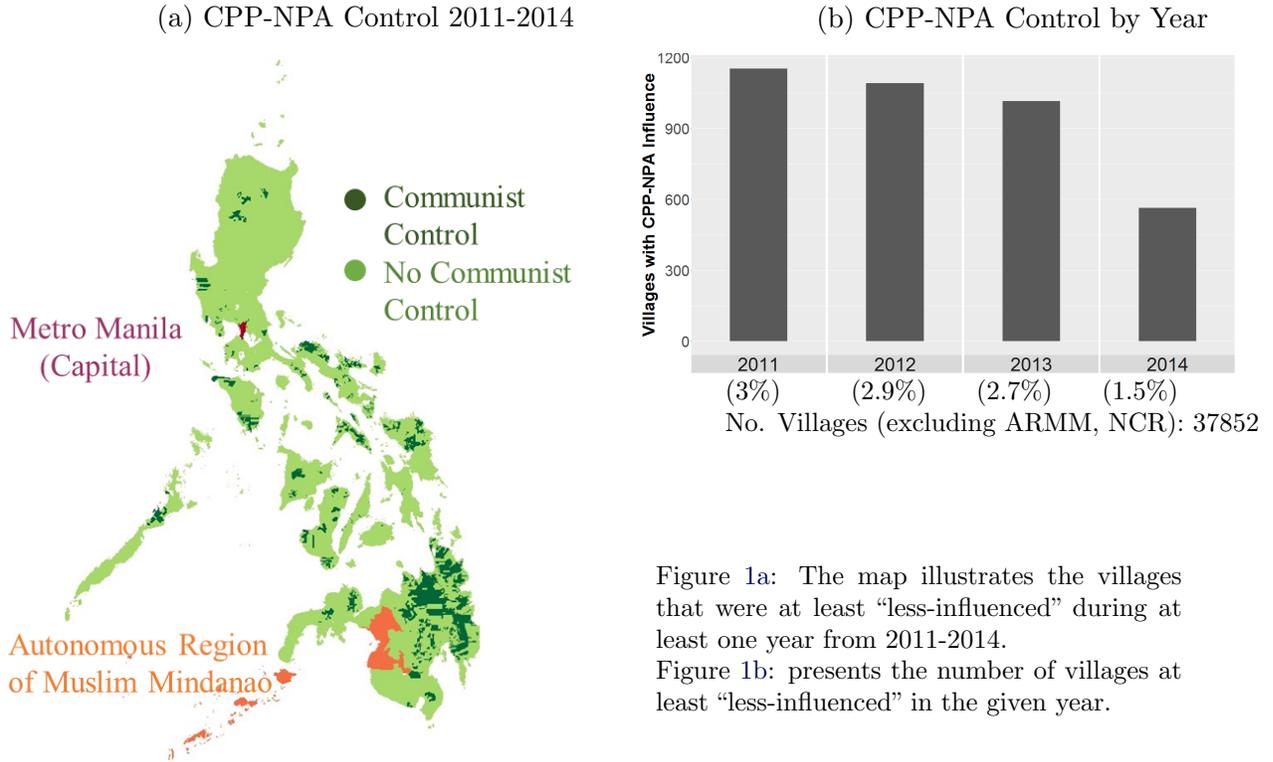


Figure 1a: The map illustrates the villages that were at least “less-influenced” during at least one year from 2011-2014. Figure 1b: presents the number of villages at least “less-influenced” in the given year.

at least one year. Figure 1b and Table 2 demonstrate the number of communist-controlled villages declined precipitously over the panel, from 3% in 2011 to only 1.5% in 2014. Nevertheless, NPA cells still thrive in remote areas, especially in eastern Mindanao, the large southern island with a history of low state penetration and economic exploitation of the indigenous population.

### Collective Action Capacity

To measure collective action capacity, I construct village-level kinship networks using household head family names recorded in a Dept. of Social Welfare and Development (DSWD) census conducted during 2008-2010.<sup>22</sup> Each individual in the census has two family names, following strict conventions: men and unmarried women retain both parents’ paternal family name as the middle and last names and married women replace the mother’s family name

<sup>22</sup>Replication data preserves household anonymity.

with their husband's.<sup>23</sup> A full name, then, represents a marriage between the respective families. I construct village social networks in which each household head's full name defines an edge connecting family nodes.<sup>24</sup> Figure 2 illustrates the measurement process with a hypothetical example of 10 families, A-H. Household 1 represents an edge between Family A and Family B, and so on.

Figure 2: Family Networks from Census Data

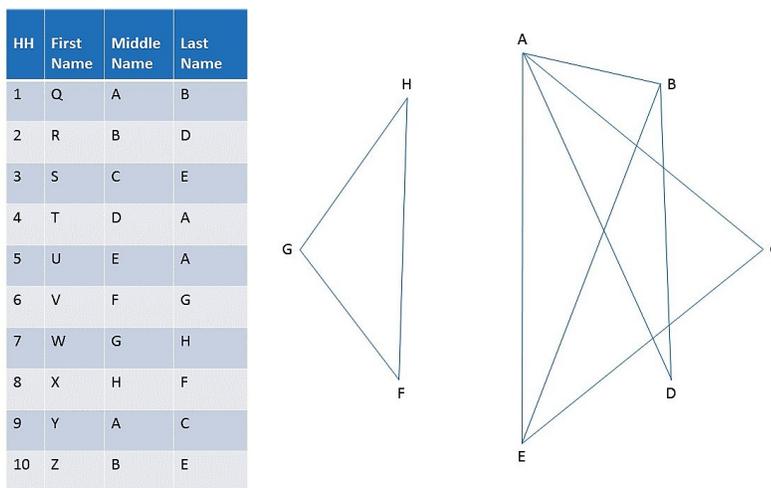


Figure 2. Letters represent distinct families (nodes) in the village networks. Each household head's Middle and Last names represent a network edge.

In 1849, the Spanish colonial Governor, facing difficulty tracking household tax contributions, directed local officials to assign unique surnames to each family in their municipality using a list of approved (Spanish) family names (Abinales and Amoroso 2005, p. 91). This peculiar history of name reassignment along with strict naming conventions suggests households sharing a surname within the same municipality can be confidently identified as members of the same family line (Cruz, Labonne and Querubin 2017).

<sup>23</sup>Legal and cultural constraints on individuals' ability to change their names means naming conventions are nearly universally followed, reducing concerns of bias and measurement error (Cruz, Labonne and Querubin 2017).

<sup>24</sup>This is consistent with the procedure used in Cruz, Labonne and Querubin (2017).

*Modularity* measures divisiveness in network structure (Clauset, Newman and Moore 2004), the inverse of bridging social capital. It uses a community-detection algorithm designed to optimize divisions between groups of individuals in a network and compares the number of observed within-group edges to the *expected* number if edges were distributed randomly. Modularity ranges from  $[-0.5, 1]$ , where positive values indicate that the observed within-group edges exceed the number expected under random assignment.<sup>25</sup> So that results may be easily interpreted, I measure bridging social capital by reversing the scale, creating a “bridging” statistic with range  $[-1, 0.5]$ .

Figure 3 illustrates the differences in network structure that generate variation in the bridging statistic. Figure 3a represents higher network bridging because it contains two intermarriages across family groups (EH and DG), while Figure 3b contains no inter-group connections. Figure 4 illustrates two examples of actual village networks.

Figure 3: Bridging Illustration

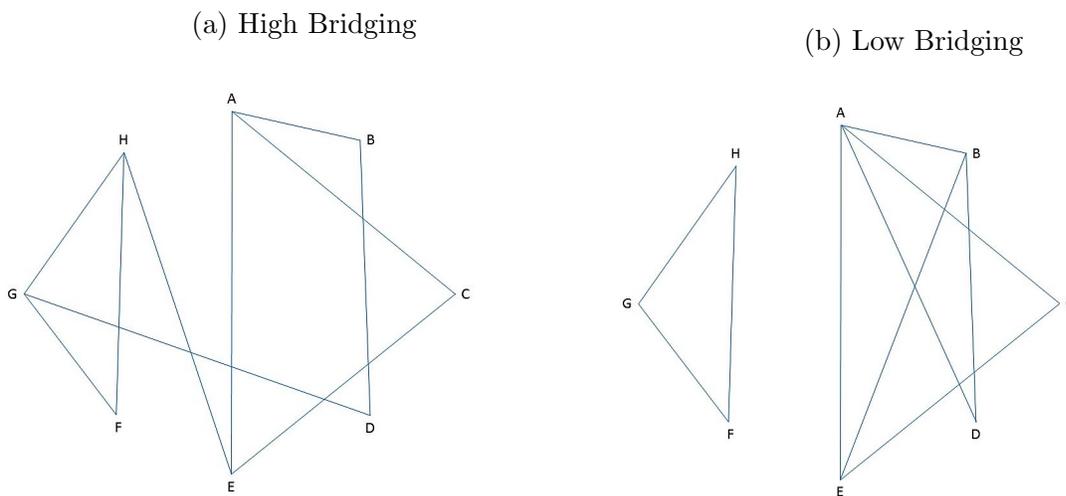


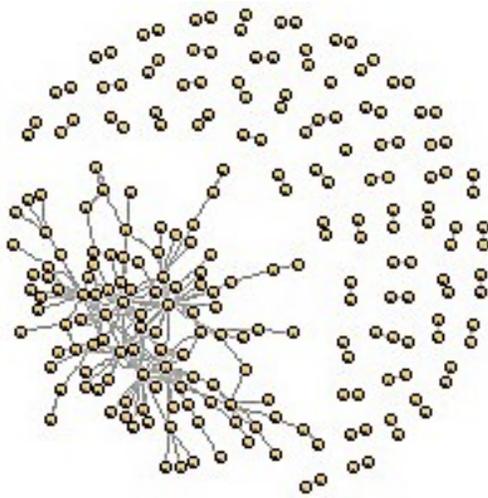
Figure 3. Letters indicate unique family names and line segments represent an marriage connecting two families.

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<sup>25</sup>Modularity is calculated using the *igraph* package in R, <http://igraph.org/r/doc/modularity.igraph.html>, which uses the algorithm proposed in Clauset, Newman and Moore (2004).

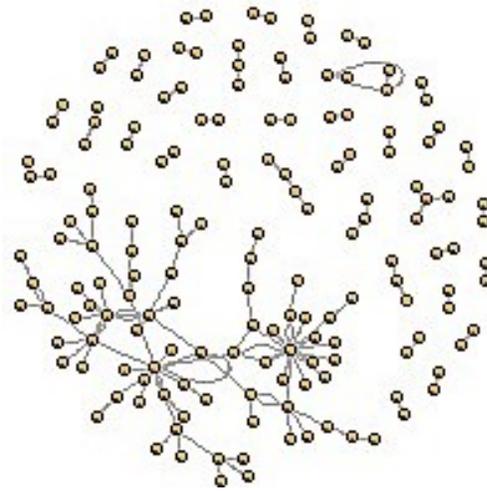
Figure 4: Barangay Network Examples

(a) Nueva Garcia, Loreto, Agusan del Sur



Bridging: 0.907

(b) Caranglaan, Mabini, Pangasinan

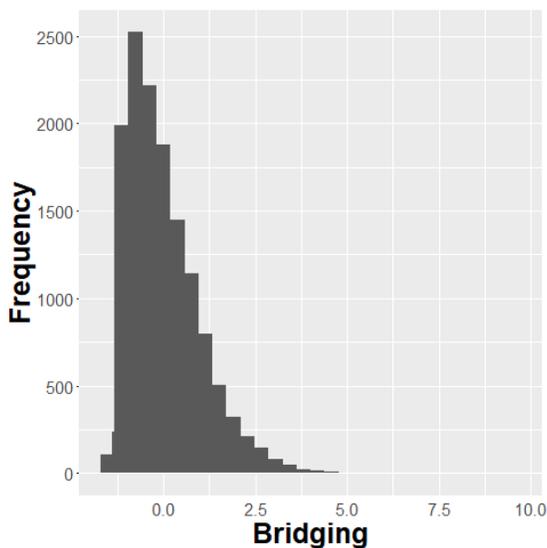


Bridging: 0.631

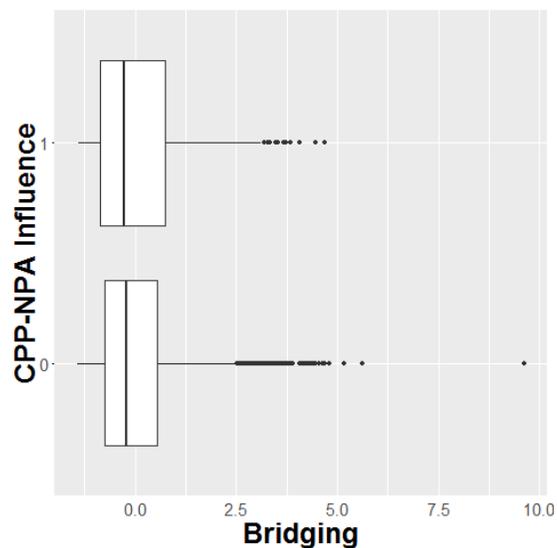
Figure 5a illustrates the distribution of village-level bridging in the sample is concentrated at low values within its range, and exhibits significant variation from 1.43 standard deviations below to 10.64 above its mean. Figure 5b plots the distribution of bridging by CPP-NPA control.

Figure 5: Bridging Summary Statistics

(a) Bridging



(b) Bridging by CPP-NPA Influence



In addition to modularity, the appendix presents results from analyses using alternative network measures of bridging, yielding similar results. Though defining social ties by marriages reflects the social and political importance of clan relations in the Philippines, and may correlate with alternative community characteristics, kinship networks certainly do not capture all aspects of collective action capacity. Nevertheless, community collective action *capacity*, is notoriously challenging to measure, especially at the local level. In the appendix, I present preliminary checks on the family network-based measures by investigating their correlation with observed collective action outcomes in a limited sub-sample of villages. Because the measure has strong face validity given the centrality of family networks in the Philippines, and has been shown to affect important socio-economic and political outcomes, I argue that leveraging the family network data represents an important empirical contribution, despite the challenges to verifying the measures’ correlation with observable collective action in conflict zones.

Family networks may be endogenous to displacement from prior conflict exposure, especially since individuals may flee to communities where they have family ties. That displaced households often return to protect the ancestral home and economic assets after violence has subsided, and norms governing intermarriage are slow to change, reduces concerns of endogeneity bias. Because economically-motivated emigration to urban and state-controlled areas is more common than to the rural periphery, these villages are more likely to have multiple distinct families with identical names. Therefore, measurement error inflates the family-based bridging measure in state-controlled villages, which are also less vulnerable to rebel control, biasing *against* the theory.

The DSWD conducted a full census only in municipalities with estimated poverty incidence above 50% (Fernandez 2012), 710 total, and conducted a partial census in the remainder.<sup>26</sup> Table 3 describes the balance across full and partial census villages on key covariates.

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<sup>26</sup>In the remaining municipalities DSWD conducted full census only in “pockets of poverty” identified by local government and implemented “on-demand” assessment in other areas. See Fernandez (2012).

Villages in full-census municipalities are poorer, further from the provincial capital, closer to dense forests, have lower quality governance, more rugged terrain, and, crucially, a higher proportion of communist-influenced villages. Because the partial census under-reports non-poor households, I compare the social structure across full and partial census villages by examining networks constructed among poor households only. The distribution of the bridging statistic within poor household networks is nearly identical across two samples.

Table 3: Covariate Balance

Predictor	Full Census	Partial Census	Pr(Diff. in Means = 0)
	Villages	Villages	
	Mean (Std. Dev.)	Mean (Std. Dev.)	
Poverty Incidence	42.86 (11.89)	25.44 (14.2)	< 0.01
Governance Score (2005)	131.53 (68.97)	153.68 (93.11)	< 0.01
Dist. Provincial Cap. (km)	42.49 (40.29)	32.25 (26.05)	< 0.01
Terrain Ruggedness	234.35 (295.84)	151.41 (260.11)	< 0.01
Dist. to Dense Forest (km)	32.44 (45.81)	36.96 (24.92)	< 0.01
Bridging (Poor HH only)	-0.85 (0.12)	-0.86 (0.14)	< 0.01
CPP-NPA Influence	0.04 (0.19)	0.02 (0.13)	< 0.01

In the main empirical analysis, I restrict the sample to full-census municipalities. Though non-random, this sample represents a subset of particular importance to the study of community-level dynamics of insurgency. On each of the key covariates representing structural and community interest mechanisms predominant in the existing literature, the full census sample represents a higher risk of rebel territorial control. These are precisely the units of territory in conflict-affected states of greatest relevance for the theory emphasizing community collective action capacity, since the argument is designed to complement the existing research by explaining variation within areas in which structural and interest-based theories suggest rebel territorial control is feasible. Though analysis in this sample limits its scope of generalizability, it contributes to the literature by explaining the expansion and contraction of insurgency within the periphery, which is essential to advancing understanding of protracted civil conflict.

Furthermore, the results are consistent in robustness checks using the full sample of full

and partial census villages, in which community networks are constructed using only the population of poor households.<sup>27</sup> A village’s poor population likely differs from the non-poor in important ways relevant to collective action capacity. But, examining networks among the poor population is nonetheless especially relevant, considering the CPP-NPA typically targets poor, aggrieved populations for mobilization. That the results are consistent across these two sets of sample selection and measurement choices reduces, but does not eliminate, concerns regarding biased inferences.

Local Government Performance

Figure 6: GGI 2005 Summary Statistics

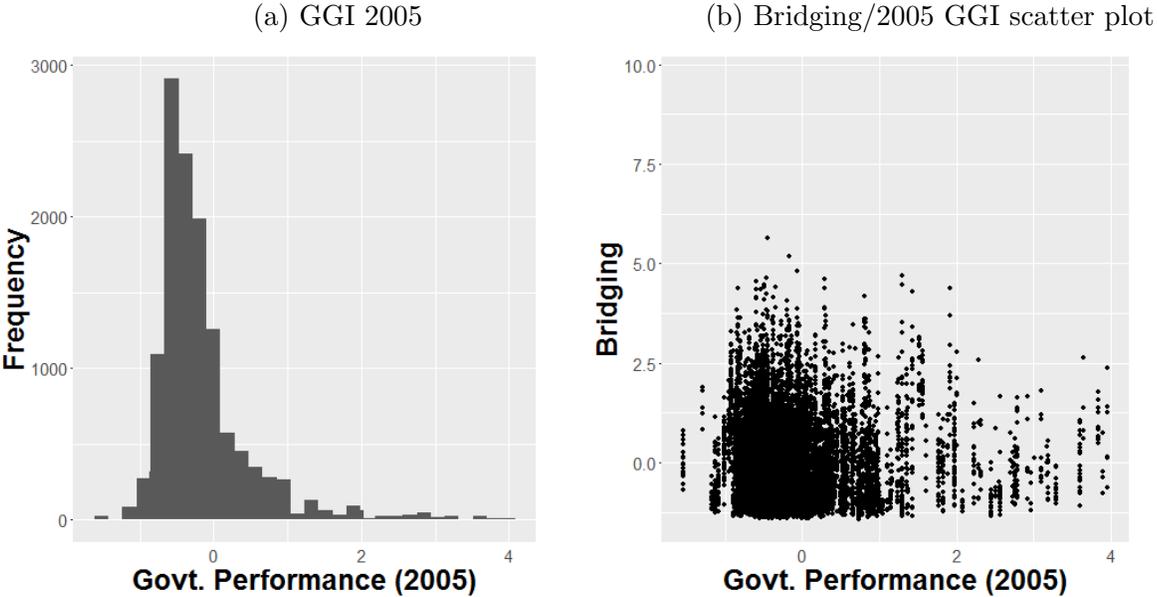


Figure 6a: plots the distribution of the GGI 2005 score in the sample. Figure 6b: scatter plot representing the correlation between bridging statistic and the GGI 2005 score in the sample.

The theory proposes that the effect of collective action capacity is conditional on the community’s outside options; in particular, the quality of local governance and protection from

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<sup>27</sup>See the appendix for detail regarding the missing villages and municipalities and the results alternative samples.

civil war violence. As part of its transparency initiative, the Government of the Philippines collects indicators of Local Government Unit (LGU) performance on economic, political, and administrative dimensions, and aggregates them to an overall Good Governance Index (GGI).<sup>28</sup> Figure 6 plots the distribution of the 2005 GGI in the sample and its correlation with village network bridging. Crucial to investigating the conditional effect of collective action capacity, there is substantial overlap between bridging and GGI across the range of both variables.

The government did not assess GGI in “highly urbanized cities,” so the sample drops 26 of 595 full-census municipalities (4%), totaling 937 of 13487 villages (7%). Because densely populated centers of state power have very sparse networks (low bridging), excluding them biases against finding support for the posited conditional relationship. Furthermore, as noted in the justification for the sub-sample including only the full-census municipalities with high poverty incidence, there is theoretical justification for focusing on contested territory in the periphery.

A limitation of this measure is possibility local government performance may be endogenous to either or both collective action capacity and prior rebel control. In fact, the theory’s logic builds in an expectation this endogeneity. Communities with high collective action capacity are better equipped to hold rebels and government accountable to community interests, meaning they may be more successful in demanding government services. This relationship violates the independence assumption underlying the causal interpretation of the change in the effect of collective action capacity over the range in government performance. Similarly, the very nature of insurgency implies local government performance is endogenous to prior conflict processes: the government will be more constrained in delivering services

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<sup>28</sup>The aggregate measure incorporates indicators of financial resource management, poverty alleviation, rule of law and administration of justice, security and public safety, political participation, and delivery of services such as health, education, and electricity. See <http://nap.psa.gov.ph/ggi/techNotes.asp> for more details.

to areas controlled by insurgents. Nevertheless, as noted there is substantial variation in bridging across the range of government performance, and the state’s efforts to improve governance in historically conflict-affected regions as a state-building strategy imply that local government performance is not entirely determined by its endogeneity to the community cohesion and/or conflict history. Furthermore, the appendix reports consistent results using alternative, plausibly exogenous, measures of communities’ outside options—the literacy rate in 1980—and exploring geographic and temporal trends.

### Confounders

The regression analysis includes covariate adjustment for potential confounders correlated with both family network structure and rebel control. I include the number of families in the village, as network size affects the community’s division into distinct groups and the density of ties within and across groups. In very small villages, families may be forced to marry outside the community, while large networks are typically sparse because the number of possible connections grows exponentially with the number of nodes.

The municipality’s distance to the provincial capital, typically an urbanized center with comparatively greater service provision and police headquarters, controls for the state’s cost to projecting power to the village. As in many civil war contexts, the CPP-NPA insurgents seek territorial concealment in heavily forested and mountainous areas. I use geo-referenced Land Cover data to calculate the distance in kilometers between each village’s centroid and the edge of the closest densely forested area.<sup>29</sup> I measure terrain roughness using NASA’s Shuttle Radar Topography Mission (SRTM) data covering the topography of the Philippines.<sup>30</sup> I include the percentage of poor households in the village, with the expectation that

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<sup>29</sup>For villages with dense forests within their borders, the distance is 0.

<sup>30</sup>I calculate distances and the terrain ruggedness score using *rgdal*, *rgeos*, *raster* and *sp* packages in R. Clipped Land Cover and SRTM data for the Philippines were downloaded from the PhilGIS project website: <http://philgis.org/>.

poverty increases alignment with communist rebels.<sup>31</sup>

## 5.2 Model Specification

To test Hypothesis 1, I investigate the correlation between community bridging and insurgent territorial control across a variety of regression model specifications. Here, I report the results from the preferred cross-sectional multilevel logit model. Because the predictors are time-invariant, in the main analysis I collapse the yearly observations of communist insurgent control into a dichotomous measure for whether insurgent control occurred during at least one of the observed years. The multilevel structure adjusts coefficient and standard error estimates for spatial<sup>32</sup> and temporal clustering in the data (Gelman and Hill 2006). To investigate the conditional relationship between rebel control and community collective action capacity, I fit a varying slope model, in which the effect of bridging varies across discrete ordered (ranked) categories of local government performance.

**Model 1.**  $C_{ij} \sim \text{logit}^{-1}(\omega_{h[i]} + \tau_{h[i]}B_{ij} + \mathbf{X}_i\beta + \mathbf{W}_j\delta, \sigma_C^2),$

$$\omega_{h[i]} \sim N(0, \sigma_\omega^2),$$

where  $C_{ij}$  is the dichotomous indicator for whether the village is under communist insurgent control during at least one of the observed years in the panel and  $B_{ij}$  is the village network bridging measure in village  $i$  and municipality  $j$ . Municipality  $j$  falls within a quartile of local government performance,  $h$ .  $\tau$  represents the estimated coefficient on  $B_{ij}$ , unique to each government performance level.  $\mathbf{X}$  is a matrix of village-level covariates, including network size, distance to dense forests, terrain ruggedness, and poverty incidence;  $\beta$  is the vector of coefficients.  $\mathbf{W}$  is a matrix of municipality-level covariates, including local government performance and distance to the provincial capital;  $\delta$  is the vector of coefficients. All

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<sup>31</sup>The appendix includes robustness checks substituting alternative control variables.

<sup>32</sup>Municipal governments are vested with political power and rebel mobility is constrained by limited resources.

predictors are standardized.<sup>33</sup>  $\sigma_C^2$  represents the the unmeasured error in the distribution of village-level CPP-NPA influence.  $\omega$  represents the varying intercept for local government performance level and  $\sigma_\omega^2$  represents its variance.

In the Appendix, I report results from alternative specifications, including fixed effects instead of the multilevel structure and a linear rather than logit functional form. I explore robustness to grouping government performance into quintiles and deciles, and to using a linear interaction between community bridging and government performance.<sup>34</sup> I also fit the model with alternative measures of collective action capacity and confounders. The results are consistent across specifications, suggesting inferences are not overly sensitive to modeling choices.

### 5.3 Results

Figure 7: Model 1 Results

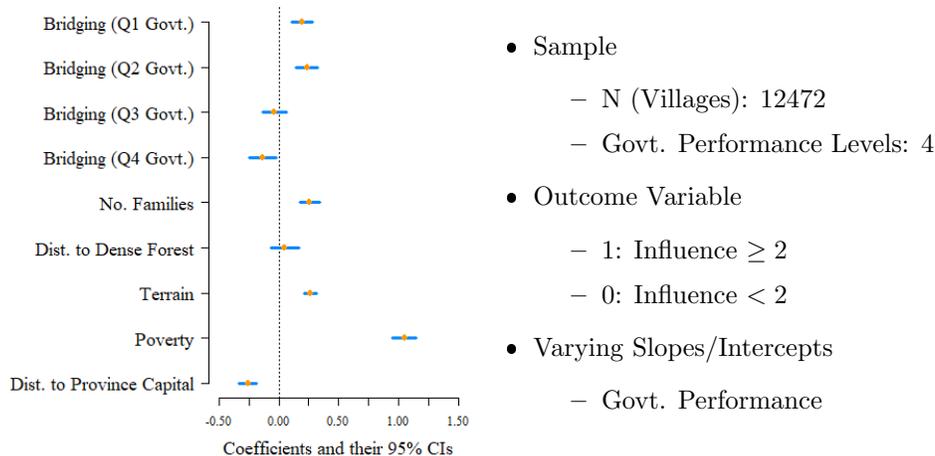


Figure 7 reports coefficient estimates and 95% confidence intervals from Model 1, includ-

<sup>33</sup>One-unit changes in most raw variables are substantively insignificant. For example, a one-unit change in the bridging score represents nearly its full range.

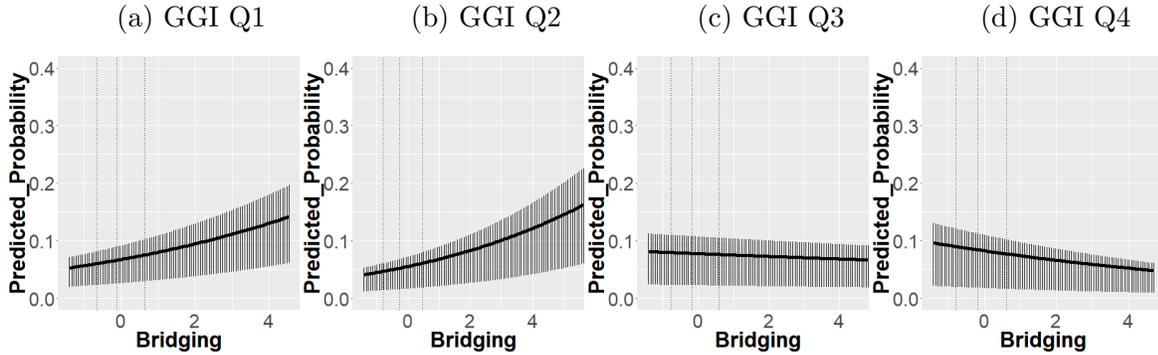
<sup>34</sup>I privilege the varying-slope model over the linear interaction because the latter imposes additional assumptions, including the effect of bridging changes linearly over the range of government performance.

ing distinct bridging coefficients for each government performance quartile. Figure 8 plots the change in predicted probability of communist control as bridging increases for each quartile of local government performance, holding all other variables at their observed variables.

The results are consistent with the conditional relationship proposed in Hypothesis 1, which predicts a positive effect of collective action capacity on rebel territorial control at low levels of state service provision and reversal in the effect direction at sufficiently high government performance. Bridging *increases* rebel control in the bottom two quartiles of local government performance. The coefficients are positive and distinguishable from 0 and the predicted probability of CPP-NPA control increases substantially in bridging. In the third quartile of government performance, the coefficient is indistinguishable from 0 and the predicted probability of communist control is flat over the range of bridging, indicating no effect. Finally, in the top quartile of government performance, bridging decreases rebel control. The bridging coefficient is negative and distinguishable from 0 and the predicted probability of communist control declines in bridging.

The effect of bridging may appear substantively insignificant at first glance. However, recall the sample excludes villages that likely experience the highest levels of government protection and service provision due to missing government performance measures for urbanized municipalities. The truncated range of government performance both attenuates the magnitude of the detected effect of collective action capacity and biases against finding evidence to support the reversal in effect direction. Furthermore, because CPP-NPA control is so rare (2.27% of village-years) while the costs of conflict are so high, even slight changes in the probability of rebel control are consequential. Note also that village-level bridging exhibits huge variance in the sample: 1.43 standard deviations below to 10.64 above its mean. Comparisons across villages with substantial differences in network bridging are substantively relevant.

Figure 8: Model 1 Predicted Probabilities



Sample	Outcome Variable	Varying Intercepts
· N (Villages): 12472	· 1: Influence $\geq 2$	· Govt. Performance
· Govt. Performance Levels: 4	· 0: Influence $< 2$	

Figure 8: Plots the change in predicted probability of CPP-NPA influence over the range of the bridging score for the villages in the first quartile (Figure 8a), second quartile (Figure 8b), third quartile (Figure 8c), and top quartile (Figure 8d) of local government performance. All other covariates are held at the values observed in the data at the specific bridging score. Thick solid lines represent the average marginal probability, averaged over all municipality-years. Vertical solid lines plot the middle 50% of municipality-year specific predicted probabilities at the given value of bridging. Vertical dashed lines represent the 25th, 50th, and 75th percentile of the bridging score.

## 6 Discussion and Conclusion

This article contributes a civilian agency theory to explain the distribution of territorial control during civil wars. Regression analysis of unique village-level data from the communist insurgency in the Philippines, and qualitative analysis of village elder interviews, support the theory. By arguing community *capabilities* to mobilize collective action influences rebels' incentives to control territory, the theory complements existing models of civil conflict that emphasize explanations based on structural, military, economic, and geographic characteristics, or civilians' fixed political interests. The findings build upon a burgeoning literature emphasizing civilian agency in conflict processes by highlighting the role civilians play in shaping where belligerents operate, and where conflict occurs, in the first place. Because the distribution of territorial control influences subsequent conflict processes, this article's attention to explaining the expansion and contraction of insurgency at the local level has

implications for understanding a variety of outcomes: the scale and form of political violence, rebel and state governance, conflict duration and termination, and the prospects for post-war peace and economic development.

The findings suggest “hearts and minds” counterinsurgency strategies designed to win public support require credible commitments to maintain protection and service delivery indefinitely. Significant investments in state-building may be necessary to achieve even operational-level counterinsurgent goals to eliminate rebel control in contested territory. Even community-driven development (CDD) programs—designed to build local capacity for self-governance as a bulwark against insurgency expansion—may prove ineffective or counterproductive if implemented prior to, or as a substitute for, investment in state-building.

Due to acknowledged data limitations, future research is required to further interrogate the theory and to generalize to other cases and types of civil war. Civilians in ethno-nationalist conflicts may be less inclined to support non-coethnic belligerents, which limits community outside options central to the accountability mechanism. Future research may extend the theory by incorporating the intensity of ideological- and identity-based civilian preferences, which influence community outside options. This article illustrates the theory’s rebel governance mechanism using interviews from community leaders. Additional data collection focusing on the perspective of NPA personnel may complement the existing qualitative analysis.

## References

- Abinales, Patricio N and Donna J Amoroso. 2005. *State and Society in the Philippines*. Rowman & Littlefield Publishers.
- Arjona, Ana. 2015. Civilian Resistance to Rebel Governance. In *Rebel Governance in Civil War*, ed. Ana Arjona, Nelson Kasfir and Zachariah Mampilly. New York, NY: Cambridge University Press chapter 1, pp. 1–20.
- Arjona, Ana. 2016. *Rebelocracy: Social Order in the Colombian Civil War*. New York, NY: Cambridge University Press.
- Arjona, Ana, Nelson Kasfir and Zachariah Mampilly. 2015. *Rebel Governance in Civil War*. New York, NY: Cambridge University Press.
- Balcells, Laia. 2017. *Rivalry and Revenge*. Cambridge University Press.
- Berman, Eli, Jacob N Shapiro and Joseph H Felter. 2011. “Can Hearts and Minds be Bought? The Economics of Counterinsurgency in Iraq.” *Journal of Political Economy* 119(4):766–819.
- Berman, Eli, Joseph Felter, Ethan Kapstein and Erin Troland. 2013. Predation, taxation, investment and violence: evidence from the Philippines. Technical report National Bureau of Economic Research.
- Berman, Eli, Michael Callen, Joseph H Felter and Jacob N Shapiro. 2011. “Do Working Men Rebel? Insurgency and Unemployment in Afghanistan, Iraq, and the Philippines.” *Journal of Conflict Resolution* 55(4):496–528.
- Boulding, Kenneth E. 1962. *Conflict and Defense: A General Theory*. Harper & Row.
- Buhaug, Halvard. 2010. “Dude, Where’s My Conflict? LSG, Relative Strength, and the Location of Civil War.” *Conflict Management and Peace Science* 27(2):107–128.
- Buhaug, Halvard, Lars-Erik Cederman and Jan Ketil Rød. 2008. “Disaggregating ethnonationalist civil wars: A dyadic test of exclusion theory.” *International Organization* pp. 531–551.
- Buhaug, Halvard, Scott Gates and Päivi Lujala. 2009. “Geography, Rebel Capability, and the Duration of Civil Conflict.” *Journal of Conflict Resolution* 53(4):544–569.
- Cederman, Lars-Erik, Nils B Weidmann and Kristian Skrede Gleditsch. 2011. “Horizontal Inequalities and Ethnonationalist Civil War: A Global Comparison.” *American Political Science Review* 105(03):478–495.
- Chwe, Michael Suk-Young. 1999. “Structure and strategy in collective action.” *American journal of sociology* 105(1):128–156.
- Chwe, Michael Suk-Young. 2000. “Communication and coordination in social networks.” *The Review of Economic Studies* 67(1):1–16.

- Clauset, Aaron, Mark EJ Newman and Cristopher Moore. 2004. "Finding community structure in very large networks." *Physical review E* 70(6):066111.
- Collier, Paul and Anke Hoeffler. 2004. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56(4):563–595.
- Condra, Luke N and Jacob N Shapiro. 2012. "Who Takes the Blame? The Strategic Effects of Collateral Damage." *American Journal of Political Science* 56(1):167–187.
- Corpuz, Onofre D. 1965. *The Philippines*. Prentice-Hall, Inc.
- Crost, Benjamin, Joseph Felter and Patrick Johnston. 2014. "Aid Under Fire: Development Projects and Civil Conflict." *The American Economic Review* 104(6):1833–1856.
- Cruz, Cesi, Julien Labonne and Pablo Querubin. 2017. "Politician family networks and electoral outcomes: Evidence from the Philippines." *American Economic Review* 107(10):3006–37.
- Cullinane, Michael. 1998. Accounting for Souls: Ecclesiastical Sources for the Study of Philippines Demographic History. In *Population and History: The Demographic Origins of the Modern Philippines*, ed. Daniel F. Doepfers and Peter Xenos. Manila: Ateneo de Manila Press chapter 10, pp. 281–346.
- Cunningham, David E, Kristian Skrede Gleditsch and Idean Salehyan. 2013. "Non-state actors in civil wars: A new dataset." *Conflict Management and Peace Science* 30(5):516–531.
- Dube, Oeindrila and Juan F Vargas. 2013. "Commodity price shocks and civil conflict: Evidence from Colombia." *The Review of Economic Studies* 80(4):1384–1421.
- Fearon, James D and David D Laitin. 1996. "Explaining interethnic cooperation." *American political science review* 90(04):715–735.
- Fearon, James D and David D Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97(1):75–90.
- Fernandez, Luisa. 2012. "Design and Implementation Features of the National Household Targeting System in the Philippines."
- Fortna, Virginia Page, Nicholas J Lotito and Michael A Rubin. 2018. "Don't Bite the Hand that Feeds: Rebel Funding Sources and the Use of Terrorism in Civil Wars." *International Studies Quarterly* .
- Fukuyama, Francis. 2016. "Governance: What Do We Know, and How Do We Know It?" *Annual Review of Political Science* 19(1):89–105.  
**URL:** <https://doi.org/10.1146/annurev-polisci-042214-044240>
- Galula, David. 2006 [1964]. *Counterinsurgency Warfare: Theory and Practice*. Greenwood Publishing Group.

- Gelman, Andrew and Jennifer Hill. 2006. *Data analysis using regression and multi-level/hierarchical models*. Cambridge University Press.
- Gould, Roger V. 1993. "Collective action and network structure." *American Sociological Review* pp. 182–196.
- Gubler, Joshua R and Joel Sawat Selway. 2012. "Horizontal inequality, crosscutting cleavages, and civil war." *Journal of Conflict Resolution* 56(2):206–232.
- Guevara, Che. 2002 [1961]. *Guerrilla warfare*. Rowman & Littlefield Publishers.
- Gurr, Ted R. 1970. *Why Men Rebel*. Princeton University Press.
- Habyarimana, James, Macartan Humphreys, Daniel N Posner and Jeremy M Weinstein. 2009. *Coethnicity: Diversity and the Dilemmas of Collective Action: Diversity and the Dilemmas of Collective Action*. Russell Sage Foundation.
- Hirose, Kentaro, Kosuke Imai and Jason Lyall. 2017. "Can civilian attitudes predict insurgent violence? Ideology and insurgent tactical choice in civil war." *Journal of peace research* 54(1):47–63.
- Holtermann, Helge. 2016. "Relative Capacity and the Spread of Rebellion: Insights from Nepal." *Journal of Conflict Resolution* 60(3):501–529.
- Horowitz, Donald L. 1985. *Ethnic Groups in Conflict*. University of California Press.
- Humphreys, Macartan. 2005. "Natural resources, conflict, and conflict resolution: Uncovering the mechanisms." *Journal of conflict resolution* 49(4):508–537.
- Humphreys, Macartan and Jeremy M Weinstein. 2006. "Handling and manhandling civilians in civil war." *American Political Science Review* 100(3):429.
- Humphreys, Macartan and Jeremy M Weinstein. 2008. "Who fights? The determinants of participation in civil war." *American Journal of Political Science* 52(2):436–455.
- Jackson, Matthew O, Tomas Rodriguez-Barraquer and Xu Tan. 2012. "Social capital and social quilts: Network patterns of favor exchange." *The American Economic Review* 102(5):1857–1897.
- Kahler, Miles and David A Lake. 2004. "Governance in a global economy: political authority in transition." *Political Science and Politics* 37(03):409–414.
- Kalyvas, Stathis. 2006. *The Logic of Violence in Civil War*. Cambridge Studies in Comparative Politics, Cambridge University Press.
- Kalyvas, Stathis N. 2008. "Ethnic defection in civil war." *Comparative Political Studies* 41(8):1043–1068.
- Kalyvas, Stathis N. 2012. "Micro-level studies of violence in civil war: Refining and extending the control-collaboration model." *Terrorism and Political Violence* 24(4):658–668.

- Kaplan, Oliver. 2013. "Protecting civilians in civil war The institution of the ATCC in Colombia." *Journal of Peace Research* 50(3):351–367.
- Kaplan, Oliver. 2017. *Resisting War: How Communities Protect Themselves*. Cambridge University Press.
- Kasfir, Nelson. 2015. Rebel Governance – Constructing a Field of Inquiry: Definitions, Scope, Patterns, Order, Causes. In *Rebel Governance in Civil War*, ed. Ana Arjona, Nelson Kasfir and Zachariah Mampilly. New York, NY: Cambridge University Press chapter 2, pp. 21–46.
- Kessler, Richard J. 1989. *Rebellion and Repression in the Philippines*. Yale University Press.
- Larson, Jennifer M. 2016. "Interethnic conflict and the potential dangers of cross-group ties." *Journal of Peace Research* 53(3):459–471.
- Larson, Jennifer M and Janet I Lewis. 2018. "Rumors, kinship networks, and rebel group formation." *International Organization* pp. 1–33.
- Le Billon, Philippe. 2001. "The political ecology of war: natural resources and armed conflicts." *Political geography* 20(5):561–584.
- Mampilly, Zachariah Cherian. 2011. *Rebel rulers: Insurgent governance and civilian life during war*. Cornell University Press.
- Mao, Tse-Tung, translated by Samuel B Griffith. 2007 [1937]. *On Guerrilla Warfare*. BN Publishing.
- McCoy, Alfred W. 1993. *An anarchy of families: State and family in the Philippines*. University of Wisconsin Press.
- Morelli, Massimo and Dominic Rohner. 2015. "Resource concentration and civil wars." *Journal of Development Economics* 117:32–47.
- Nagl, John A, James F Amos, Sarah Sewall, David H Petraeus et al. 2008. *US Army/Marine Corps Counterinsurgency Field Manual: 3-24*. University of Chicago Press.
- Nielsen, Richard A, Michael G Findley, Zachary S Davis, Tara Candland and Daniel L Nielson. 2011. "Foreign aid shocks as a cause of violent armed conflict." *American Journal of Political Science* 55(2):219–232.
- Nunn, Nathan and Nancy Qian. 2014. "US food aid and civil conflict." *The American Economic Review* 104(6):1630–1666.
- Ober, Josiah. 2008. *Democracy and knowledge: Innovation and learning in classical Athens*. Princeton University Press.
- Ostrom, Elinor. 1990. *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press.

- Ostrom, Elinor. 2000. "Social capital: a fad or a fundamental concept." *Social capital: A multifaceted perspective* 172(173):195–98.
- Parkinson, Sarah Elizabeth. 2013. "Organizing rebellion: Rethinking high-risk mobilization and social networks in war." *American Political Science Review* 107(03):418–432.
- Petersen, Roger D. 2001. *Resistance and rebellion: lessons from Eastern Europe*. Cambridge University Press.
- Putnam, Robert D. 2001. *Bowling alone: The collapse and revival of American community*. Simon and Schuster.
- Putnam, Robert D, Robert Leonardi and Raffaella Y Nanetti. 1994. *Making democracy work: Civic traditions in modern Italy*. Princeton university press.
- Race, Jeffrey. 1973. *War comes to Long An: Revolutionary conflict in a Vietnamese province*. Univ of California Press.
- Risse, Thomas. 2012. Governance in Areas of Limited Statehood. In *The Oxford Handbook of Governance*, ed. David Levi-Faur. pp. 699–715.
- Rubin, Michael A. 2018. Rebel Territorial Control, Governance, and Political Accountability in Civil War: Evidence from the Communist Insurgency in the Philippines PhD thesis Columbia University.
- Santos, Soliman M, Paz Verdades M Santos, Octavio A Dinampo and Diana Rodriguez. 2010. *Primed and purposeful: Armed groups and human security efforts in the Philippines*. Small Arms Survey, Graduate Institute of International and Development Studies.
- Sarbahi, Anoop K. 2014. "Insurgent-Population Ties and the Variation in the Trajectory of Peripheral Civil Wars." *Comparative Political Studies* On-line First edition.
- Scott, James C and Benedict J Kerkvliet. 1986. *Everyday forms of peasant resistance in South-East Asia*. Psychology Press.
- Sexton, Renard. 2016. "Aid as a tool against insurgency: Evidence from contested and controlled territory in Afghanistan." *American Political Science Review* 110(4):731–749.
- Shaver, Andrew and Jacob Shapiro. forthcoming. "The effect of civilian casualties on wartime informing: Evidence from the Iraq war." *Journal of Conflict Resolution*. .
- Shesterinina, Anastasia. 2016. "Collective Threat Framing and Mobilization in Civil War." *American Political Science Review* 110(3):411–427.
- Siegel, David A. 2009. "Social networks and collective action." *American Journal of Political Science* 53(1):122–138.
- Souleimanov, Emil Aslan and David S Siroky. 2016. "Random or retributive?: Indiscriminate violence in the chechen wars." *World Politics* 68(4):677–712.

- Staniland, Paul. 2012. "States, Insurgents, and Wartime Political Orders." *Perspectives on Politics* 10(02):243–264.
- Staniland, Paul. 2014. *Networks of Rebellion: Explaining Insurgent Cohesion and Collapse*. Cornell University Press.
- Stewart, Megan A. 2018. "Civil War as State-Making: Strategic Governance in Civil War." *International Organization* 72(1):205–226.
- Tarrow, Sidney. 1994. *Power in movement: Social movements, collective action and mass politics in the modern state*. Cambridge: Cambridge University Press.
- Torres Jr, Ernesto C. 2011. A Success Story of Philippine Counterinsurgency: A Study of Bohol. Technical report DTIC Document.
- Varshney, Ashutosh. 2001. "Ethnic conflict and civil society: India and beyond." *World politics* 53(03):362–398.
- Weinstein, Jeremy M. 2007. *Inside Rebellion*. Cambridge University Press.
- Wood, Elisabeth Jean. 2003. *Insurgent Collective Action and Civil War in El Salvador*. Cambridge University Press.
- Woolcock, Michael and Deepa Narayan. 2000. "Social capital: Implications for development theory, research, and policy." *The world bank research observer* 15(2):225–249.
- Wright, Austin L., Luke N. Condra, Jacob N. Shapiro and Andrew C. Shaver. Forthcoming. "Civilian abuse and wartime informing."
- Wucherpfennig, Julian, Nils W Metternich, Lars-Erik Cederman and Kristian Skrede Gleditsch. 2012. "Ethnicity, the State, and the Duration of Civil War." *World Politics* 64(01):79–115.