

Do All Good Things Go Together? Development Assistance and Insurgent Violence in Civil War

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International organizations and national governments deliver billions of dollars in development assistance each year to citizens in ongoing insurgencies. Existing work shows that development assistance shapes insurgent violence, yet under-specified mechanisms and a failure to test all competing explanations have hampered knowledge cumulation. This article proposes a new theory of insurgent territorial loss to argue that development assistance should increase overall violence by insurgents, and indiscriminate violence in particular. Anti-poverty subsidies incentivize information sharing with the government, increasing incumbent territorial control and forcing insurgents to rely on increased and more indiscriminate violence to recapture territory. A difference-in-differences identification strategy combined with matching tests all existing mechanisms against one another in the context of a conditional cash transfer program in Colombia. The empirics provide support for the territorial loss mechanism, while competing explanations do not find support. Development assistance frequently produces welfare gains yet may also lead to increased insurgent violence.

International organizations and national governments deliver billions of dollars in development assistance each year to citizens in ongoing insurgencies, including those in Afghanistan, Iraq, the Philippines, and the Democratic Republic of the Congo. Such assistance ostensibly aims to improve the welfare of vulnerable populations (*World Development Report* 2011), yet governments and international donors also fund these projects for strategic reasons: to distribute patronage, buy votes, and undermine support for armed groups that violently contest the state (see, e.g., De La O 2013; Feyzioglu, Swaroop, and Zhu 1998; Findley and Young 2007).

Development assistance disrupts local labor markets, alters the calculus of household decision making, and changes the local balance of power between rival actors. It should, therefore, shape patterns of violence in irregular wars. In particular, positive income shocks are likely to have an effect on the behavior of insurgents as these groups, comparatively weak vis-à-vis national governments, seek to appropriate resources, motivate civilians to join their ranks, and strategically counter government efforts to buy civilian loyalty.

The literature has identified a number of mechanisms through which development assistance might affect the be-

havior of armed groups and therefore the levels of violence they deploy. Two trends, however, have hampered the cumulation of knowledge. First, a number of these mechanisms are either underspecified or make assumptions about the production of violence that may not be tenable. Many argue, for example, that increased collaboration between the government and civilians—due to successful government efforts to buy information on rebel activities or to win civilians’ “hearts and minds”—will weaken rebels and cause them to pack up and go home. They do not explore whether territorial loss might increase insurgent resolve and violence to recapture territory or change the forms of violence that insurgents use. This article does so. Second, the literature has failed to synthesize disparate findings from different studies. While some degree of anarchy is natural for an emerging field of inquiry, it is critical to distill observable implications from the full range of competing explanations, test them against our own, and account for conflicting results. This article takes up that challenge.

I offer a theory of how development assistance might increase insurgent violence, one that does not involve the logic of looting or predation (see, e.g., Berman et al. 2012; Sullivan and Wood 2015; Wood 2014). While governments may

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successfully use development assistance to purchase information on rebels, I argue that the effect, *insurgent territorial loss*, is likely to prompt increased insurgent violence as rebels attempt to recapture territory.¹ Unlike existing mechanisms, the theory presented here also provides predictions about the type of violence to which insurgents will resort: rebels will use indiscriminate violence as they become more desperate and unable to identify civilians who have collaborated with the government.² An observable implication of the theory is that we should see more informational transactions between civilians and the government following aid disbursement, allowing for greater incumbent territorial control.

Aid should have heterogeneous treatment effects. First, poorest communities should be hardest hit, as they will offer information to the government to ensure development assistance continues, prompting insurgents to use indiscriminate violence more quickly and severely. Second, where territorial loss means forfeiting important revenue streams, for example, fixed natural resources, insurgents will be even more committed to countering newfound incumbent influence and will use particularly high levels of violence to reclaim control.

Empirically evaluating the connection between aid and violence is difficult because aid is not randomly allocated and may be provided where incumbents wish to buy votes or reward loyal constituencies. I attempt to mitigate this inferential problem using a difference-in-differences identification strategy with matching. I examine a conditional cash transfer (CCT) program in Colombia, *Familias en Acción* (FA), which I show increased overall insurgent violence against civilians and insurgent indiscriminate violence, in particular. FA is the largest social welfare program in a country that has been affected by insurgency for over 50 years, delivering anti-poverty assistance to over 1,000 municipalities and reaching 2.6 million of Colombia's poorest families as of December 2013. CCT programs provide cash subsidies to poor families that send children to school, regularly visit health centers, or pursue other welfare-improving behaviors. Nearly every country in Latin America has an active CCT program—some of the world's largest include Brazil's *Bolsa Família* and Mexico's *PROGRESA/Oportunidades*—as do countries in sub-Saharan Africa (e.g., Nigeria and Burkina Faso), Asia (e.g., Pakistan, the Philippines, and Indonesia), and the Middle East (e.g., Yemen and Turkey) (Fiszbein et al. 2009). While

vigorous debates continue over whether aid and anti-poverty assistance contribute to or hinder development (e.g., Sachs 2005), a number of studies have shown that CCTs effectively promote human capital accumulation and overall welfare (e.g., Rawlings and Rubio 2005).

Given the prevalence of CCTs globally, why study aid and violence in Colombia? One of the world's longest ongoing civil wars, the Colombian conflict tragically provides an ideal environment to test this connection for a few reasons. First, it provides a tough test for my theory. The insurgent group examined here, the Revolutionary Armed Forces of Colombia (FARC)—the country's oldest, largest, and most powerful—could abandon aid-recipient towns and remain politically relevant and militarily strong.³ That the FARC chose to more forcefully and indiscriminately attack towns where aid was provided offers evidence that it valued territorial control even though it could absorb losses. Second, there are clear policy consequences for counterinsurgency doctrine: the Colombian government has innovated on delivering humanitarian aid in conflict, most clearly via a “territorial consolidation” program to build state capacity in long-ignored locales. It has also “innovated” by systematically cooperating with paramilitaries (López and Sevillano 2008). Due to the perceived success of this approach, prominent voices in policy circles have argued that the “Colombian model” should be exported to Mexico and Central America to combat cartel violence (O'Hanlon and Petraeus 2013) and to the Middle East to help contain Islamist groups (Stavridis 2014). It is therefore critical to understand whether Colombian counterinsurgent policies have been successful, and if so why, before urging their adoption elsewhere. Finally, examining a CCT program in Colombia provides an opportunity to compare findings across contexts while holding some confounders constant. Many factors condition the effect of aid on violence—for example, implementing partner, the form aid takes, its scope and scale, and the armed actor it is intended to undermine—making it useful to compare findings from similar conflicts. Crost, Felter, and Johnston (2016) examines the effect of a CCT program on violence in the Philippines; given that the type of aid program is the same and that both feature Communist insurgencies financially buoyed by drugs, the two are comparable. That the studies produce different findings is discussed in a subsequent section, helping to uncover scope conditions for the territorial loss mechanism presented here.

1. *Violence* is defined as purposively inflicted physical harm.

2. *Indiscriminate violence* involves random targeting or targeting based on collective attributes like political affiliation or ethnic identity. On territorial loss and violence in civil war, see Hultman (2007), Metelits (2010), Wood (2014), and Ziemke (2012).

3. If territorial losses mounted, the group's political and territorial relevance would be compromised, but the marginal cost of losing each town would be small.

This article makes a number of contributions to broader literatures on political order, state-building, political and criminal violence, and development. First, it provides a novel explanation connecting development assistance to increased insurgent violence. The mechanism centers on the negative externality of driving rebels out of a territory where aid is provided: rebels' subsequent bloody attempts to recapture lost territory. Second, it moves beyond existing work that connects aid to intensity of violence but not to its form. By focusing not only on changes in the scale of insurgent violence but also on whether violence is indiscriminate, scholars gain a more fine-grained understanding of conflict processes and policy makers acquire better ways to protect civilians. Third, this article speaks to core debates in literatures on state-building and development. Attempts to extend and consolidate state control are likely to be violent (e.g., Tilly 1992), yet it is unclear how governments can best build legitimacy where armed groups compete for influence. If aid increases incumbent control while engendering violence, who do civilians blame? An implication is that aid may be viewed suspiciously over time if it invites indiscriminate insurgent attacks. Finally, I test observable implications of competing mechanisms in the aid and violence literature against one another, rather than only my own. Doing so helps integrate disparate strands and move the literature forward.

The stakes are high. If "all good things go together," aid simultaneously generates lasting, desirable economic and social changes, bolstering state legitimacy and raising the opportunity costs of participating in rebellion. Governments could, therefore, rely less on violent counterinsurgency to achieve gains. If development assistance has perverse consequences, inviting insurgent retribution, development assistance should be forgone in favor of strategies relying primarily on military force.

This article exposes the negative consequences of development assistance in Colombia, yet it is unclear how well these results travel beyond the control and treatment groups studied here to other communities in-country, beyond the Colombian conflict to other countries, beyond CCTs to other kinds of development assistance programs, to cases where the international community implements aid programs, to places where governments are unable to convert information into effective counterinsurgency, and so forth. I return to concerns about generalizability, common to all single-country studies, in the conclusion.

The article proceeds in five parts. The next section outlines and critiques existing mechanisms and then presents a theory of insurgent violence centering on territorial loss. The next section outlines the Colombian armed conflict, describes the FA program, and the defines dependent vari-

ables. The following section presents the empirical strategy used to identify the effect of the FA program on insurgent violence. The section after that provides the empirical results and robustness checks, and evaluates competing explanations. The final section offers avenues for future research and concludes.

DO ALL GOOD THINGS GO TOGETHER?

Existing mechanisms and their limitations

The literature has identified five mechanisms that connect development assistance and violence. These need not be mutually exclusive and, in some cases, they may overlap. First, via an "opportunity cost" mechanism, development aid makes it more expensive to join the insurgency (e.g., Grossman 1991). An inability to recruit is thought to lower insurgent violence where aid is provided. Arguments connecting opportunity costs to violence, however, assume that local recruitment is the binding constraint on the local production of violence. Yet an armed group may face recruitment difficulties and, out of desperation, use existing personnel and resources to launch attacks on aid-recipient communities from nearby as it seeks to regain a foothold. In short, opportunity cost arguments are fuzzy on how and why violence is produced. Micro-level studies from Afghanistan, Iraq, and the Philippines, moreover, have found no support for this explanation (Berman, Shapiro, and Felner 2011).

Second, aid may help win civilians' "hearts and minds," generating gratitude toward the government in recipient communities (Berman et al. 2011; Findley and Young 2007; *U.S. Army/Marine Corps Counterinsurgency Field Manual* 2007). Just as aid buys votes for incumbents in nonconflict contexts (De La O 2013; Manacorda, Miguel, and Vigorito 2011), a similar dynamic may be at work in civil war, weakening insurgent support and decreasing violence. There are two theoretical objections. First, assuming that changes in attitudes translate into changes in behavior may be problematic (Böhnke and Zürcher 2013, 413): civilians are constrained by their desire for survival. Only if shifts in territorial control correlate with the disbursement of aid, allowing the incumbent to better protect civilians, should defection to the government occur. Second, as mentioned above and as discussed in my theoretical account below, territorial losses by rebels are not likely to lead to rebel capitulation but rather to concerted attempts at recapture. Evidence also appears to be weak for the hearts and minds approach. Beath, Christia, and Enikolopov (2012) find only qualified support in Afghanistan: development assistance reduced violence in villages with low initial levels of violence, and the effect vanished once the program was completed.

Third, and relatedly, development aid may motivate civilians to “share information” with the government on insurgent activity, allowing for selective assassinations of rebel collaborators. While the information-sharing mechanism explicitly models how changes in civilian incentives to collaborate with the government translate into insurgent violence, it too is theoretically silent on how insurgents respond to territorial loss. Do rebels attempt to stem the flow of information to the government if they retain some territorial control nearby? If and once control has been completely lost, how do insurgents respond? The “information-centric” mechanism appears to find support in Iraq (Berman et al. 2011), yet, more ambiguously, Crost et al. (2016) find that towns in the Philippines treated with CCT subsidies experienced lower levels of insurgent attacks than control towns, an effect attributed to either an “information-centric” or “hearts and minds” mechanism.⁴

Fourth, “predation” mechanisms predict that as the benefits of territorial control increase, groups should be more willing to use violence to capture rents. Dube and Vargas (2013) find that oil price increases led to spikes in local levels of violence in Colombia. Insurgent violence in the Philippines increased with levels of private investment, suggesting predation (Berman et al. 2012). In two dozen post–Cold War African countries, aid increased rebel violence by providing chances for looting and presenting challenges to rebel authority (Sullivan and Wood 2015).⁵ However, the predation mechanism in some cases may be underspecified or inapplicable for two reasons. In many conflicts, insurgents have more lucrative sources of funding than aid; groups that profit from trafficking in drugs, timber, minerals, or people may not find aid sufficiently attractive.⁶ Second, the logic of predation points to some theoretical holes: where groups can reliably control territory, following the disbursal of aid, we would expect to see an initial spike in violence as groups demonstrate their capacity and resolve for using violence, and then a subsequent decrease as civilians learn that failure to furnish resources will result in selective victimization. The power to hurt is most useful when held in reserve (Schelling 1966). For predation to be a viable ongoing strategy, civilian aid recipients also need to be kept alive: killing those on whom

predation depends is akin to “killing the goose that lays the golden egg” (Bates, Greif, and Singh 2002).

Fifth, and finally, insurgents may attempt to use violence “preemptively to counter anticipated shifts in support” resulting from development assistance. Crost, Felter, and Johnston (2014) show that a development assistance program in the Philippines increased insurgent violence even before the project began, lending support to the idea that insurgents sabotage projects because they fear the loss of support aid would bring. This mechanism requires that insurgents know in advance (or in the early stages of program preparation) where and when aid will be disbursed, a high bar in many conflicts.

Each of these mechanisms, summarized in table 1, provides predictions about violence intensity but not violence type, that is, whether insurgent violence will become increasingly/decreasingly indiscriminate or selective.⁷ In contrast, the theory of *territorial loss* presented below generates predictions about levels and forms of insurgent violence following development assistance. Aid should increase violence overall, and it should increase indiscriminate violence in particular. Following the empirical tests, I evaluate additional observable implications of these mechanisms in view of quantitative and qualitative data from Colombia.

How development assistance produces insurgent territorial loss and increased insurgent violence

To develop my theory, I begin with an account of how the government, an armed group, and civilians interact in the face of aid. The government has some mix of altruistic and calculated political goals leading it to provide assistance to civilians. It prefers that aid reach poor citizens, but it prefers providing assistance to not doing so even if armed groups attempt to capture aid or respond with violence. The government does so because providing aid is thought to offer both electoral (e.g., Labonne 2013; Manacorda et al. 2011) and counterinsurgency benefits (e.g., Galula 1964; *U.S. Army/Marine Corps Counterinsurgency Field Manual* 2007). The government limits potential negative repercussions in a few ways.

First, governments avoid providing aid to towns entirely under insurgent control, due to lack of capacity and because they fear complete capture of aid. As Mampilly (2011, 60) writes, “In a situation of contested control, the state may choose to use ‘hearts and minds’ strategies,” shorthand here for aid, but not where rebels have complete control. Second, governments attempt to condition aid, either at a

4. Elsewhere, Brazil’s CCT program, *Bolsa Familia*, had a violence-reducing impact on crime, although the mechanism cannot be isolated (Chioda, Mello, and Soares, forthcoming).

5. In support of the “aid increases violence” finding, Nunn and Qian (2014) show that US food aid increases the incidence and duration of civil conflicts cross-nationally.

6. In the case studied here, transfers corresponded to 15% of the monthly minimum wage.

7. While not explicitly stated, predation seems to suggest increases in selective violence alone, as only recipients of aid should be victimized.

Table 1. Theories Connecting Development Assistance to Insurgent Violence

Theory	Insurgent Violence Intensity	Violence Type
Opportunity costs	Lower violence	No prediction
Hearts and minds	Lower violence	No prediction
Information	Lower violence	No prediction
Predation	Higher violence	No prediction
Preempting anticipated shifts	Higher violence	No prediction
Territorial loss	Higher violence	Indiscriminate violence

community or individual level. If assistance can be withdrawn when civilians collaborate with insurgents, civilians should refrain from such collaboration, fearing loss of aid (Berman et al. 2011). Some kinds of assistance, for example, large fixed assets such as roads and bridges, cannot be credibly threatened with revocation. Anti-poverty cash subsidies, on the other hand, as well as policing, healthcare, or education, could be withheld from communities that collaborate with insurgents (e.g., Berman et al. 2011, 776).⁸ The government can also structure programs, however imperfectly, to make aid conditional on individual behavior; this may include distributing vouchers requiring citizens to provide identification cards to purchase food, as well as requiring program participants to have regular meetings with government officials.

What are the preferences of armed groups? At the individual level, combatants join for multiple reasons, including material gain, revenge, a deep ideological commitment to the cause, or personal ties to active combatants (e.g., Humphreys and Weinstein 2008; Oppenheim et al. 2015). Even the most ideological of groups require material support from civilians to provide selective incentives to potential recruits, bribe public officials, purchase arms, and so forth. The literature tends to assume, however, that armed groups' interest in appropriating resources—and, in this case, capturing aid—overshadows other goals.⁹ More important than capturing development aid is an armed group's ability to control territory: in the short term, it allows them access to resources and recruits, while in the long term, it strengthens their bargaining position, providing leverage

8. Some argue it is difficult to make credible any threats to condition aid, similar to the "Samaritan's Dilemma" facing international donors (Buchanan 1975).

9. For a critique, see Gutiérrez Sanín (2004).

vis-à-vis the government to make demands, force accommodation, or triumph militarily. Armed groups must incentivize civilians not to provide information to the government because this translates into loss of territorial control and, if not reversed, military defeat (Kalyvas 2006). Violence can help rebels prevent or reverse territorial loss.

The civilian population is our third actor. Civilians, intuitively, wish to stay alive and thus will collaborate with the armed actor that can credibly claim to protect them from retribution. They also prefer to keep development aid rather than forfeit it to insurgents: aid may mean the difference between having sufficient food for one's family and not, so they will do what is necessary to avoid losing such benefits. These two mechanisms predict collaboration with the incumbent where the incumbent's offer of assistance is sufficiently attractive, where assistance can be conditioned on community or individual behavior, and where communities and individuals can be more or less reliably shielded from potential insurgent retribution.

How, then, should we expect development aid to affect insurgent behavior? To recap, the government provides aid where it has either complete or partial control. Communities that receive aid on average increase their collaboration with the government (e.g., Berman et al. 2011, 2013), providing information in order to continue receiving development assistance. The government therefore retains or increases territorial control where aid is furnished, while insurgents lose territory.

Where insurgents lose territorial control due to aid, they will respond with increased violence, and increased indiscriminate violence, for two reasons. Insurgents seek to recapture territory where aid is given, but they are increasingly unable to identify and eliminate those who defected to the government to produce that marginalization. As government control increases, insurgents need to increasingly rely on indiscriminate violence. Historic ties to populations where aid is provided may help bridge that gap, allowing insurgents to selectively eliminate presumed collaborators even once control has been lost. Yet insurgents are likely to respond to territorial loss with increased indiscriminate violence, even where selective violence is possible, for a second reason: as government control increases in aid-recipient communities, insurgents begin to see whole villages as guilty of defection and betrayal. As Ziemke (2012, 29) notes from the Angolan conflict, when insurgents were "backed against a wall," that is, where they were losing territory, "civilians were no longer to be considered exempt from targeting, because they were no longer considered neutrals and innocents, standing apart from the conflict." Kalyvas (1999, 245), too, shows that Algerian insurgents resorted to

massacres when facing “mass civilian defections toward the incumbents.”¹⁰ Metelits (2010) argues that groups shift from civilian-respecting to civilian-abusing tactics when facing competition over strategic resources necessary for organizational survival. The territorial loss mechanism also resonates with canonical accounts in behavioral economics that demonstrate that individuals are more willing to make risky choices when facing sure losses (e.g., Tversky and Kahneman 1991).

This brings us to the two hypotheses tested in the empirical section:

H1. Development assistance should increase violence against civilians by insurgent groups, a result of insurgent territorial loss.

H2. Development assistance should increase indiscriminate violence by insurgent groups, as selective violence becomes increasingly difficult or less attractive to use.

These hypotheses are consistent with anecdotal evidence from other conflicts as well. Military personnel in Balkh and Uruzgan in Afghanistan felt that military-administered aid projects led community members to “report IEDs or provide useful information after the implementation” of aid projects, yet “there was little concrete evidence in any of the five provinces that aid projects were reducing unrest” (Fishstein and Wilder 2012, 3). This seemingly contradictory observation makes sense given the logic of territorial loss and attempted recapture articulated above.

Recall that the alternative hypotheses produce varying predictions. Only two existing mechanisms predict that assistance will increase insurgent violence: predation contends that insurgents will target aid beneficiaries to capture resources, leading to higher levels of violence, while the anticipated shifts in support mechanism predicts an increase in attacks in treatment communities even before the disbursal of aid occurs. If the opportunity costs, hearts and minds, or information-centric mechanisms were at work, we would expect to see a drop-off in levels of violence after aid is given, among other things. I now turn to a brief description of the Colombian conflict and then to the empirical analysis.

10. Indiscriminate violence need not always mean increased body counts, and increased body counts from territorial loss might not be exclusively due to indiscriminate violence. This is why multiple dependent variables are used.

THE COLOMBIAN CONFLICT AND THE CCT PROGRAM

One of the longest-running insurgencies in the world, the Colombian conflict has featured a range of leftist and rightist armed groups, including paramilitary organizations, small insurgent groups, and large rebel armies. The ongoing conflict has its roots in *La Violencia*, a civil war that lasted from 1948 until the installation in 1958 of a semi-authoritarian, rotating presidency called the *Frente Nacional*, designed to stop the bloodshed. Two left-wing insurgent groups that still exist today—the FARC and the National Liberation Army (ELN)—came into being as *La Violencia* was ending. The FARC, the focus of this article, was founded in 1964, with goals that include large-scale land redistribution and the overthrow of the Colombian government. While its strength has varied over time, the FARC remained a relatively small fighting force until the early 1980s, when it embarked on a massive geographical expansion, buoyed by profits from taxing the growth of coca. By the early 2000s, the FARC counted between 16,000 and 20,000 combatants, with approximately half of those subsequently killed or captured during the administration of President Álvaro Uribe, which ended in 2010 and was characterized by deep collusion with anti-guerrilla paramilitary groups.¹¹

Dependent variables

Data for my dependent variables are drawn from the Human Rights Observatory Database compiled by the Presidency of Colombia. This data set has municipal-level data on violent events, including the type of armed action perpetrated by violent nonstate actors, as well as their clashes with state forces.¹² The appendix, available online, contains information on data collection and comparisons with other data sets.

I use three dependent variables to assess levels and types of violence by Colombia’s largest insurgent group: *FARC Civilian Killings*, the total number of civilians killed by the FARC in a municipality-year; *FARC Attacks*, the number of nonreciprocated (unilateral) violent actions carried out by the FARC in a municipality-year, which includes attacks against the government as well as civilians; and *FARC Indiscriminate Violence*, the total number of indiscriminate violent acts committed by the FARC, which typically in-

11. Following paramilitary massacres, and with a sympathetic president in power, the largest paramilitary group negotiated its demobilization in the mid-2000s.

12. See *Guía para la conformación de observatorios de DH y DIH* (2006).

volve the use of grenades or gas cylinder bombs.¹³ As a Human Rights Watch report stated, gas cylinder bombs used by the FARC “are impossible to aim with accuracy and, as a result, frequently strike civilian objects and cause avoidable civilian casualties” (Human Rights Watch 2015); this measure is therefore a reasonable proxy for indiscriminate violence. Such weapons are notoriously inaccurate and, while affording some discrimination in killing, they provide far less discrimination than a rifle or pistol. Indeed, one of the FARC’s most deadly attacks of its more than 50-year war occurred when it launched a gas cylinder bomb in Bojayá, Chocó. Allegedly aimed at paramilitaries, the bomb instead hit a church where civilians had sought shelter, killing 119 (CNRR 2010).¹⁴

I have chosen these dependent variables for a few reasons. Civilian casualty counts are commonly used outcome variables when studying violence. I also look to the total number of attacks and number of indiscriminate attacks because these measures may be less driven by systematic reporting bias than civilian casualty counts, and they are frequently employed in the aid and violence literature.

Colombia’s CCT program: *Familias en Acción*

Initial funding for Colombia’s CCT program was provided by the World Bank and the Inter-American Development Bank. It was not intended as a counterinsurgency program. Of the total 1,024 municipalities in Colombia, 691 municipalities qualified for FA. To qualify, a town could not be a departmental capital and needed to have fewer than 100,000 inhabitants, have sufficient education and health infrastructure, have a bank to process the subsidy payments, and have a mayor who was willing to provide lists of citizens who, on the basis of their economic status, would be potential beneficiaries of the program.

Within qualifying municipalities, the poorest households with children aged 0–17 were deemed eligible for FA. Families with children under the age of 5 received a basic nutritional supplement, equivalent to approximately \$15 per

month. Subsidies also included a monetary supplement for homes with children under the age of 7, also to be used for nutrition. As part of the participation requirements, mothers were required to take their children for check-ups to evaluate their development (Attanasio, Meghir, and Vera-Hernandez 2004). Households with children aged 6–17 received an additional monthly grant per child, conditional on the child attending at least 80% of lessons at school. The total monthly FA transfer was equivalent to approximately 15% of the minimum wage. The program was rolled out to a small portion of pilot municipalities in 1999, with a subsequent wave occurring in late 2002. This second wave, in late 2002, is the focus of this article.

EMPIRICAL STRATEGY

Nonrandom treatment assignment makes it difficult to identify the causal effect of aid on violence. Ideally FA would have been randomly assigned, but political pressure interceded. Instead, econometricians responsible for assessing FA’s effect on welfare outcomes constructed a stratified random sample of treated areas (Attanasio et al. 2004). Municipalities were assigned to 25 strata based on an index that included geographic region, infrastructure, number of households eligible for FA (including poverty measures), and health and school characteristics. Control municipalities were then matched from the same stratum as treatment towns to be as similar as possible. In many cases, the only difference between treatment and controls is that control towns did not have a bank, a prerequisite for distributing FA subsidies.¹⁵ Note that the matched sample was chosen by researchers other than this author and was constructed for completely different purposes, to evaluate the welfare and development effects of FA. As such, we should have increased confidence in the matching procedure.

The final sample consists of 122 municipalities: 57 treated and 65 control. A map displaying control and treatment towns and a full list of each appear in the appendix. The sample under evaluation included a total of 68,566 individuals: 40,325 people, within 6,773 separate households, resided in treatment towns, while 28,241 people, living within 4,689 separate households, resided in control towns.

I estimate the effect of FA on levels of FARC violence using difference-in-differences, thereby removing biases in second-period comparisons between the treatment group and the control group that result from time-invariant differences

13. These variables capture different phenomena: in 2002 and 2003, the correlation between FARC Civilian Killings and FARC Attacks was 0.372; between Civilian Killings and FARC Indiscriminate Violence, it was 0.184; and between FARC Attacks and FARC Indiscriminate Violence, it was 0.583. Indiscriminate violent acts are sometimes lethal and sometimes not: each incident was responsible for an average of 1.33 civilian deaths, with a large standard deviation of 25.12.

14. I use “indiscriminate violence” as Kalyvas (2006) does, to include targeting at the collective level, as well as random exposure to violence. Determining whether deaths are due to collective or random violence is exceedingly difficult, particularly in a large-*N* context.

15. A broader group of municipalities could serve as a control group, yet we want to ensure no control towns had been treated in earlier waves of FA. This smaller set of control towns was not.

or those that follow parallel trends across time (Bertrand, Duflo, and Mullainathan 2004). I estimate the following model:

$$Y_i = \beta_0 + \beta_1 \text{Period}_i + \beta_2 \text{Treated}_i + \widehat{\beta}_3(\text{Period}_i \times \text{Treated}_i) + \varepsilon_i, \quad (1)$$

where Y is the mean level of violence in municipality i and $\widehat{\beta}_3$ is the estimated impact of the intervention.

The crucial assumption for difference-in-differences concerns parallel trends: trends in violence would be the same across treatment and control towns had the treatment not been applied to treatment towns. Although untestable, evaluating pre-treatment balance between treatment and control groups bolsters our confidence that treatment communities would have followed the same path as control communities.¹⁶ I begin with pre-treatment violence data, both from the previously introduced data set and from another, maintained by CERAC, a think tank based in Bogotá (Restrepo, Spagat, and Vargas 2004).¹⁷ I use data on armed clashes among armed groups and between armed groups and the government to check for balance. There are no significant pre-treatment differences between control and treatment groups along any of the violence variables, including my dependent variables. Results from these and other balance tests described below appear in the appendix.

I now check for balance on additional variables, including natural resource endowments, such as gemstones, oil, and coca in a municipality, as these may attract armed groups and make them more violent (e.g., Weinstein 2007). Data from Daly (2012) is used to construct the dummies *Gemstones* and *Oil*, coded using the Oxford Economic Atlas of the World: *Gemstones* takes a value of 1 if a municipality possesses emerald, sapphire, aquamarine, or gold mine sites, while *Oil* takes a value of 1 if a municipality contains oil fields, pipelines, or refineries, and 0 otherwise. *Coca* uses yearly UN estimates of total municipal hectares under coca cultivation. *Border* codes whether a municipality is situated on an international border: these regions provide insurgents safe havens. To measure poverty, I use a municipal-level index of the percent of households whose basic needs are not met, Basic Unsatisfied Needs (*NBI*, in Spanish), generated by Colombia's national statistics bureau, as poverty may produce grievances and increase insurgent recruitment. *Population* data are taken from the 2005 census, carried out by the Departamento Administrativo Nacional de Estadística (DANE). I also assess road density, proximity to roads,

and distance to transportation and economic hubs, as such locations may be attractive targets for insurgents and allow the government to pursue more effective counterinsurgency. Prior political preferences might shape insurgent violence; I include differences in vote shares for the winning candidates in the 1998 (a pro-peace candidate) and 2002 (a hard-line conservative candidate). The matching exercise successfully established comparable treatment and control groups. There are no statistically significant differences between the two groups along any variables examined.

The next step to evaluate the parallel trend assumption is to visually examine trends across control and treatment towns prior to the treatment. FA began operation in our treatment group in very late 2002. Figure 1A plots the number of civilians killed by the FARC: trends are similar in control and treatment municipalities in the pre-treatment period. Figure 1B shows that a similar pattern holds for attacks by the FARC, which are slightly higher in the control group between 1996 and 1998, but then slightly lower going forward. Finally, figure 1C shows patterns of FARC indiscriminate violent incidents: the general trend among the control and treatment groups is similar in the pre-treatment period. As expected, the control and treatment groups diverge when treated municipalities receive the treatment. Slopes are only different for one variable, *FARC Indiscriminate Violence*, and only in two 1-year periods (1997–98 and 2000–2001). More importantly, there are no statistically significant differences between the treatment and control groups in the years before the application of the treatment across any of these three variables. In the subsection section titled “Robustness checks and additional tests” of the “Results” section, I perform placebo tests to further evaluate the tenability of the parallel trends assumption.

RESULTS

I use a Poisson estimator for all models, given that the dependent variable is a count variable, yet results are robust to a negative binomial estimator (see the appendix). The baseline period is 2002, and the “follow-up” period is 2003. I cluster standard errors at the municipality level; because my design features only two periods, concerns about serial correlation are mitigated, and we should have increased confidence that we are not falsely rejecting the null hypothesis of no effect (Bertrand et al. 2004). Using monthly rather than yearly data produces similar results (see the appendix).

Table 2 presents baseline results. The variable of interest is $\text{Treatment} \times \text{Period}$. I find that FA had a statistically significant effect upon killings and indiscriminate violent incidents by the FARC, yet no effect upon attacks, corresponding to a 160% increase in FARC Civilian Killings and a

16. There is not a perfect overlap between variables used to construct the treatment and control groups and those used here to conduct balance tests: the original evaluation of the program showed no difference between the two groups on schooling and health variables, which I do not test here.

17. The appendix describes the CERAC data set in greater detail.

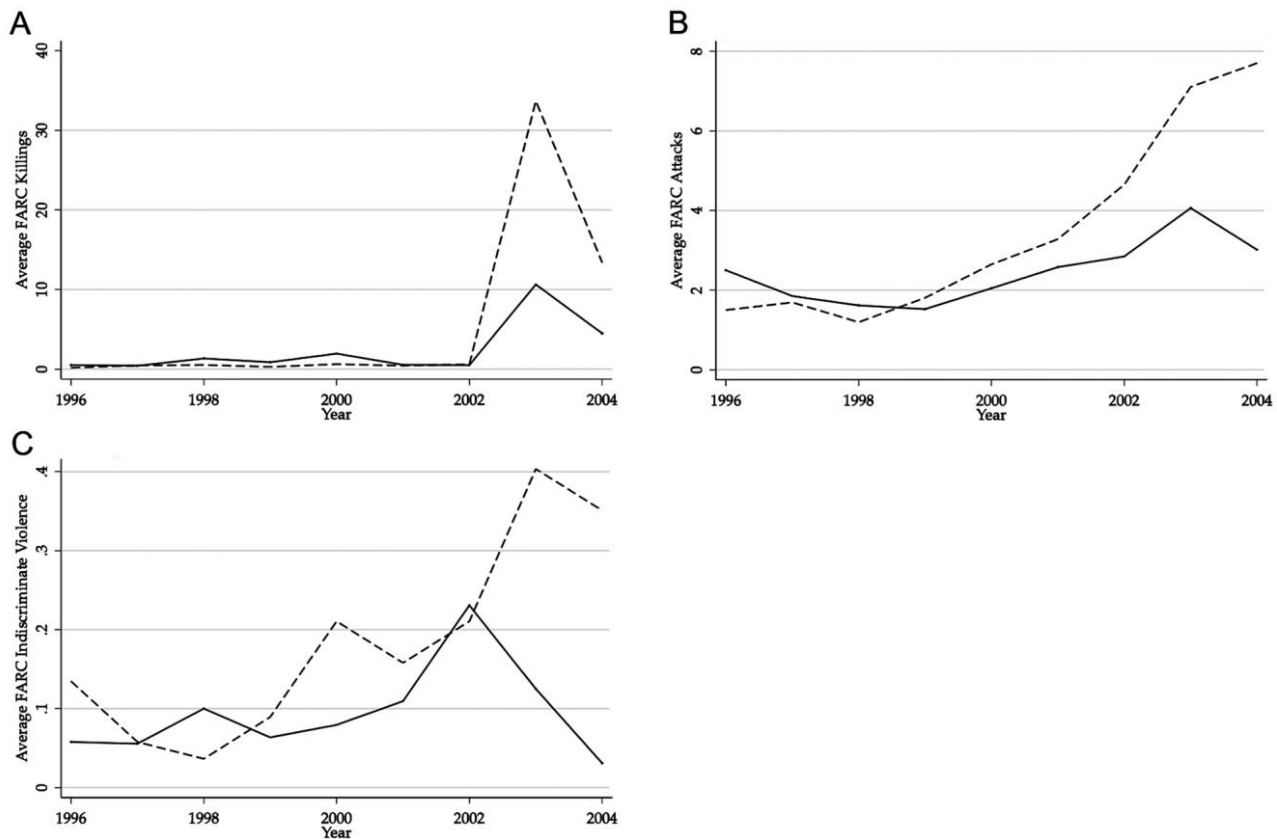


Figure 1. FARC violence by year across control and treatment groups, 1996–2004. A, Civilian killings; B, attacks; C, indiscriminate violence

250% increase in FARC Indiscriminate Violence. Table 2 provides support for the principal hypothesis advanced in the theory section.¹⁸ I also assess whether the violence-increasing effect lasted into a second year, into 2004. In those tests, the difference-in-differences is significant only for indiscriminate violent incidents, representing an increase of 11 times over the baseline, but not for civilian killings or attacks (see the appendix).

FA appears to have increased violence, but is there evidence that aid increased government control, allowing for increased, reliable information from civilians, which led to more insurgent violence? While impossible to document informational transactions, I proxy for them. The Colombian military routinely conducts surprise raids to capture people or weaponry associated with the conflict: these are kinetic actions that may or may not include the use of lethal force and are not primarily intended to capture rebels themselves but rather supplies and rebel collaborators. Army raids are more likely to occur where better information is provided

to the government by civilians. Such information is more likely to be provided to the government where the state's armed forces can credibly protect citizens who inform on

Table 2. *Familias en Acción* Increased FARC Civilian Killings and FARC Indiscriminate Violence

	Dependent Variable		
	Killings (Model 1)	Attacks (Model 2)	Indiscriminate (Model 3)
Treatment × Period	.963*** (.359)	.069 (.188)	1.279* (.693)
Treatment	.190 (.917)	.491 (.388)	−.092 (.405)
Period	3.042*** (.344)	.356** (.138)	−.628 (.489)
Constant	−.678 (.576)	1.046*** (.255)	−1.466*** (.264)

Note. Number of observations = 244. Standard errors are in parentheses.
 * $p < .10$.
 ** $p < .05$.
 *** $p < .01$.

18. This corresponds to an average increase of 10 civilians killed and an additional 0.301 indiscriminate violent attacks. These calculations represent the marginal effect of the Treatment × Period variable in their respective models.

insurgents (Kalyvas 2006). In other words, we should see more raids as government control increases. To test this, I use *Army Raids* as a dependent variable to see whether FA incentivized better information sharing between civilians and governments. Figure 2 provides support for the parallel trends assumption, while table 3 shows that the difference-in-differences is positive and significant, providing support for the proposed mechanism.¹⁹ We might worry that aid-recipient communities were targeted by the army for increased operations after the receipt of FA, violating the parallel trend assumption. Yet decisions about which towns would receive FA were made nationally, by the state's social welfare agency, while tactical decisions about counterinsurgency operations were made by regional and local army officials. In short, towns that received FA did not receive an influx of military personnel.

Heterogeneous treatment effects

Anti-poverty programs likely have heterogeneous treatment effects. Because assistance is most critical to the poorest civilians, they should be most willing to collaborate with the government to ensure continued receipt of aid. As a result, extremely poor towns may be hardest hit by insurgent violence where aid is provided. I examine the relationship between FA and violence across communities with different pre-treatment poverty levels. I divide communities into quartiles, with the "high quartile" corresponding to those with the highest proportion of poor households. Figure 3A displays coefficient plots from regressions estimated on data subset by levels of poverty, with FARC Civilian Killings as the dependent variable. Coefficients are displayed as incident rate ratios (IRRs) to demonstrate magnitude. The difference-in-differences is only significant, and positive, in the poorest communities.²⁰ Results are nearly identical for FARC Indiscriminate Violence.

Aid-recipient communities with natural resource wealth provide a financial lifeline to insurgent groups; losing such towns to government control would mean forfeiting important rents. As such, insurgents should use high levels of violence to attempt to regain control of these towns (Metelits 2010; Ziemke 2012). Figure 3B displays coefficient plots from regressions estimated on data subset by whether

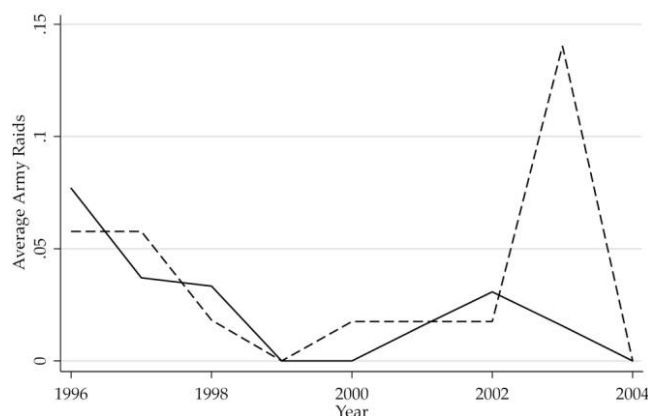


Figure 2. Army raids

a municipality had coca cultivated within its boundaries in the pre-treatment period (1997–2001), with coefficients presented as IRRs. Even in municipalities without coca, the difference-in-differences estimate is positive and significant, but FA increased violence most where coca was cultivated. Results are similar for FARC Indiscriminate Violence.

Robustness checks and additional tests

I conduct three sets of additional tests, all of which appear in the appendix. First, placebo tests estimate the principal models on data from the period prior to the implementation of the FA program (with 2001 as the baseline and 2002 as the follow-up period). If changes in levels of violence are attributable to the treatment, we should find no effect of FA on violence in the year prior to the program's implementation. Second, I include pre-treatment covariates as control variables (Gerber and Green 2012). Results are robust to both of these tests. Third, I assess the effect of FA on paramilitary violence. In addition to collaborating with the government where aid is provided, civilians may form or invite paramilitaries to hold territory (e.g., Jentzsch, Kalyvas, and Schubiger 2015). If insurgents increase violence where aid is provided, paramilitaries should help eliminate civilians appearing to support insurgents, leading to more paramilitary violence. Difference-in-differences estimates show that FA increases paramilitary attacks—at a weak $p < .10$ —but not paramilitary killings.

Competing explanations and findings

Three explanations—the opportunity costs, hearts and minds, and information mechanisms—predicted decreased insurgent violence following the receipt of aid. While we cannot definitively discard mechanisms based on a single observable implication, the core prediction of decreased violence was not supported in the data from Colombia. Mechanisms that predicted increased insurgent violence were the preempting

19. The marginal effect is 0.136.

20. Poverty may proxy historical insurgent presence, yet of the 357 municipalities where insurgents were active during *La Violencia* between 1948 and 1958 (Daly 2012), only 54 are in the poorest quartile, with 118 in the wealthiest. Municipalities with no historic insurgent presence are, surprisingly, poorer. A Chi-square test with 3 degrees of freedom assessing differences between levels of poverty depending on historic insurgent violence has a value of 24.562 ($p < .000$).

Table 3. *Familias en Acción* Increased Government Control and Army Raids

	Dependent Variable: Army Raids (Model 1)
Treatment × Period	2.772* (1.623)
Treatment	-.562 (1.216)
Period	-.693 (1.229)
Constant	-3.481*** (.699)

Note. Number of observations = 244. Standard errors are in parentheses.

* $p < .10$.

** $p < .05$.

*** $p < .01$.

anticipated shifts in support, predation, and territorial loss mechanisms. There is no evidence that increased insurgent violence occurred prior to the disbursal of funds, shown in both yearly and monthly placebo tests (see the appendix), undermining perhaps the key observable implication of the anticipated shifts in support mechanism.²¹ I also find disconfirming evidence for predation. FA generated welfare benefits for recipients, increasing school attendance, childhood nutrition and health status, and overall household consumption. Aid reached program beneficiaries and was not captured by insurgents. That aid reached program participants also provides disconfirming evidence for the preempting anticipated shifts in support mechanism: violence followed rather than preceded the receipt of aid, and insurgents were unable to convince residents with violence not to accept aid.

Additional qualitative evidence undermines our confidence in other mechanisms: the FARC banned civilians from accepting FA assistance, rather than asking them to collect benefits and subsequently turn them over. In the departments of Meta and Caquetá, where the state and FARC have strongly competed for control, a local FARC leader forbade mothers from picking up FA checks and distributed pamphlets and “manuals for civilian conduct” that included prohibitions on participating in FA (e.g., *El Espectador* 2013; *El Tiempo* 2005; Presidencia 2012). In Vista Hermosa, Meta, the FARC accused women who disobeyed insurgent orders by picking up aid checks of being “supposed informers for the army”

21. It is possible that the FARC sought to preempt shifts in support using nonviolent means, particularly in locales where the group felt less vulnerable, but that is beyond the scope of this article.

and, in response, carried out multiple assassinations ex post to reverse adverse shifts in loyalty and control that resulted from that aid.

The territorial loss mechanism, the argument put forth here, appears to be the most convincing in view of the evidence: the observable implications of the theory were confirmed using the core difference-in-differences models: evidence in support of the mechanism was found by proxying informational transactions with army raids, while the quantitative and qualitative evidence casts doubt on other mechanisms.

The results from this article differ from those in Crost et al. (2016), which shows that a CCT program in the Philippines decreased violence by weakening insurgent support. The two conflicts share certain characteristics. The FARC and the largest insurgent group in the Philippines, the New People’s Army (NPA), are decades-old Communist groups; both rely on illicit funding (*Philippine Daily Inquirer* 2010), have links with armed groups beyond their own countries’ borders (Labita 2010), and are responsible for widespread human rights violations. To what can we attribute divergent findings from the Philippines and Colombia? I propose a few possibilities. First, the two governments have differing counterinsurgency capabilities. If an incumbent cannot capitalize on the civilian collaboration that development aid enables, rebels will not lose territory and will not resort to increased and indiscriminate violence. The heterogeneous treatment effects of FA suggest a second possibility: it is unclear whether the CCT program was deployed to towns in the Philippines where illegal drugs such as marijuana, widespread in mountainous areas of Northern Luzon, Eastern Visayas, and Mindanao (*Illicit Drug Trafficking: Philippine Center on Transnational Crime* 2010), which would affect insurgent decisions to increase violence. If marijuana-cultivating villages did not receive the CCT, this might account for the different findings. Third, the NPA is much weaker than the FARC, suggesting potential scope conditions for the territorial loss mechanism: perhaps only strong rebels can respond by ramping up violence from neighboring villages when facing territorial loss. The fact that yet another study (Crost et al. 2014) finds that a community-driven development program in the Philippines increased insurgent violence shows how the type of aid, the form in which it is disbursed, and the size of the program all interact with endogenous conflict dynamics to shape insurgent behavior.

CONCLUSION

Development assistance—whether provided by international organizations or national governments—is delivered with multiple purposes. It ostensibly seeks to improve the

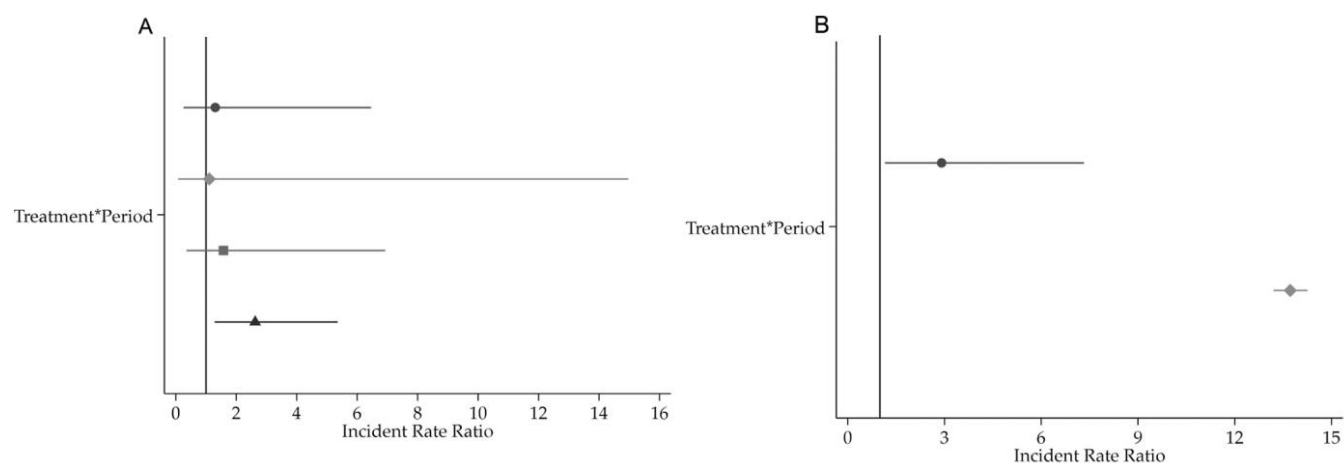


Figure 3. Heterogeneous treatment effects, FARC civilian killings. A, Poverty; B, coca

lives of the poor and make them more resilient to negative shocks. CCT programs in particular have become common tools to incentivize poor citizens to invest in their own health and education. Yet aid also provides governments with patronage to reward loyal constituencies and with tools to drive out armed groups.

Such programs can have damaging consequences for aid-recipient communities. I have argued that during insurgency, development assistance allows the government to consolidate territorial control, leading to increased insurgent violence as rebels attempt to regain territory. Using a difference-in-differences identification strategy with matching, I show that a Colombian CCT program tragically appears to have increased civilian killings and indiscriminate violence by the country’s largest insurgent group, the FARC. Other prominent mechanisms from the literature, tested against the data, do not appear to find support. In areas where relationships between civilians and the FARC are presumed to be the strongest (e.g., in coca-growing regions and in the country’s poorest areas), the effect of FA on violence is even greater, indicating that where loss of territory would be extremely costly, the FARC responds most forcefully.

As mentioned above, many factors mediate the relationship between development assistance and insurgent violence. These include project design and implementation (Berman et al. 2013),²² the social bases on which insurgent groups are built (Staniland 2014), the strength of insurgents, and historical patterns of armed and nonviolent mobilization in fa-

vor of and against the state,²³ among many others. As such, it would be foolish to assume that development aid will always increase or decrease insurgent violence. It is possible, for example, that some minimum level of rebel military strength is required to mount attacks from nearby villages following territorial loss. Empirically identifying that threshold remains for future work. It is also possible that the delivery mechanism for aid interacts in predictable ways with armed group strength or with other variables. Further study across conflicts, accompanied by careful attention to mechanisms and causal inference, will help refine the argument’s scope conditions and establish its generalizability.

This article exposes a trade-off many governments face: development assistance has desirable normative, electoral, and military consequences, yet it may exacerbate insurgent violence against civilians. Should governments provide assistance and prepare for insurgent attacks? The optimal strategy depends upon the incumbent’s ability to capitalize on aid’s benefits and to politically manage the costs of increased insurgent violence. Because what constitutes “politically manageable” levels of violence for governments varies—in some cases generating recriminations, in others increased support—it is difficult to issue blanket recommendations. Outsourcing development assistance to international organizations, for example, likely would not prompt increased incumbent territorial control and insurgent violence. It remains for future research to explore how governments could generate the welfare benefits of aid, capture electoral boosts from patronage, and achieve counterinsurgency successes, all while limiting civilian suffering. Given the proliferation of development assistance programs in conflict zones, governments

22. Programs that deposit development assistance via mobile phones, for example, may make predation difficult, changing the incentives for the use of violence. See, e.g., Crost et al. (2016, 181).

23. The appendix shows that the results are not driven by earlier rebellion.

and international organizations have an opportunity and a responsibility to design solutions that help mitigate violence against civilians.

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