

Bases, Bullets, and Ballots: The Effect of US Military Aid on Political Conflict in Colombia

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Does foreign military assistance strengthen or further weaken fragile states facing internal conflict? Aid may strengthen the state by bolstering its repressive capacity vis-à-vis armed nonstate actors or weaken it if resources are diverted to these very groups. We examine how US military aid affects political violence in Colombia. We exploit the allocation of US military aid to Colombian military bases and compare how aid affects municipalities with and without bases. We use an instrument based on worldwide increases in US military aid (excluding Latin America). We find that US military assistance leads to differential increases in attacks by paramilitaries but has no effect on guerilla attacks. Aid also results in more paramilitary (but not guerilla) homicides during election years, particularly in politically competitive municipalities. The findings suggest that foreign military assistance may strengthen armed nonstate actors, undermining domestic political institutions.

Each year, the world's most powerful nations expend substantial resources on weak states with the putative aim of shoring up governments facing internal strife.^{1,2} From Colombia to Iraq to the Philippines, military aid is deployed with the view that it strengthens states against insurgents, drug cartels, and other armed, nonstate actors. While weak states may benefit from foreign military assistance if it strengthens the state's repressive capacity (Fearon and Laitin 2003), that same weakness may also enable substantial capture or diversion of external resources by illicit armed groups (Besley and Persson 2010). Yet, little attention has been devoted to how military aid can exacerbate conflict when diverted to nonstate armed actors.

Influential examinations of military aid in the international relations literature have focused primarily on the behavior of sovereign states (e.g., Carleton and Stohl 1985, 1987; Cingranelli and Pasquarello 1985; McCormick and

Mitchell 1988; Poe 1991; Poe and Meernik 1995). However, a singular focus on the state may overlook an important link in the aid-conflict chain, given the marked rise in armed nonstate actors in the post-Cold War era (Pearlman and Cunningham 2011). Indeed, these very actors may benefit from external resources if they are able to siphon aid or if it is funneled toward them via collusive governments. Thus, to complement existing work, the role of armed, nonstate actors should be considered in evaluating how military aid affects political violence.

Our article uses this approach in examining the impact of US military aid on political conflict in Colombia between 1988 and 2005. Colombia serves as the ideal laboratory for this study as it has been embroiled in a decades-old civil war enmeshed with the international drug trade, and the United States has provided nearly \$5 billion in military aid with the stated aim of supporting the nation's counternarcotics

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1. Supplementary material for this article is available at the "Supplements" link in the online edition. Data and programs necessary to reproduce the numerical results will be made available at <http://www.santafe.edu/~snaidu/replications/basesreplicationfinal.zip> upon publication.

2. Military aid from the advanced nations exceeds all other forms of aid. For example, in 2008, the US allocation for development aid, including official development assistance, USAID administrative expenses, and the State Department Economic Support Fund, totalled \$4.7 billion. In contrast, \$5.2 billion was allocated for military aid to other countries, including Foreign Military Financing, International Military Education and Training, and the Andean Counter-Drug Initiative (Congressional Budget Justification 2008).

and counterinsurgency efforts. The key actors in the conflict are left-wing guerrillas, the state, and right-wing paramilitary groups, which have unofficially been allied with the government in countering the guerrillas.³ We use rich conflict data disaggregated across these three actors to trace the role of armed nonstate groups.

An important feature of US military aid is that it is disbursed to brigades of the Colombian military, which operate out of bases located in particular municipalities. We find that increases in US military aid increase paramilitary violence differentially in municipalities that have military bases, while exerting no significant effects on guerrilla violence. To address potential endogeneity in the timing of US military aid, we use an instrumental variables strategy which exploits general increases in US military spending around the world (excluding Latin America). The rise in global US military aid reflects the broad geopolitical outlook of the American government shaped by major world events such as 9/11 and can thus be considered exogenous to the Colombian conflict.

Consistent with paramilitary involvement in elections (Acemoglu, Robinson, and Santos-Villagran 2013), we also observe disproportionate increases in paramilitary homicides in base regions during election years, again, without equivalent increases in guerrilla homicides. In contrast to these effects on killings, we find no discernible impact of military aid on the cultivation of coca, the crop used to manufacture cocaine.

The pattern of our results suggest a mechanism of resource sharing between the military and the paramilitary, as opposed to the explanations that rest on strategic interactions among the armed actors. Our findings and inter-

pretation accord with qualitative work that has documented links between the Colombian military and paramilitary groups (Dudley 2004; Hristov 2009; HRW 1996, 2000).

Perspectives on the potential consequences of aid strengthening paramilitary organizations could differ. First, if these groups are seen as a necessary means of fighting the guerrillas, then aid diversion may be considered beneficial if it enables the Colombian government to combat insurgents with greater flexibility (Dasgupta 2009). The potential utility stemming from government use of paramilitaries is also modeled in Mandler and Spagat (2005).

On the other hand, the well-documented human rights abuses of the paramilitary groups, including explicit assassination of civilians and political leaders, have led other authors to argue that the Colombian government's ties to these groups undermines the legitimacy of the state (Watson 2000) and that financial support from the United States promotes political repression (Avilés 2001) and strengthens undemocratic elements within Colombian society (Delacour 2000). In addition, paramilitary involvement in the drug trade indicates that strengthening this group is at odds with the United State's counternarcotics objective (Stokes 2001), while the very presence of a nonstate armed group controlling territory weakens the Colombian state's monopoly on the legitimate use of violence. Through this route, donor countries may find themselves fueling the very groups that military aid is designed to suppress, prolonging conflict and further weakening the state. The breadth of potential consequences underscores the importance of understanding how foreign aid influences conflict dynamics involving armed nonstate actors.

In terms of literature, our article is related to scholarship examining the impact of foreign military aid on political outcomes, including human rights, democracy, and conflict. Though the existing body of work encompasses a rich set of proposed theoretical channels, much of it is focused on the role of states, and very little of it formalizes the role of illicit armed actors. For example, within the human rights literature, it has been posited that security aid increases repression (Clark 1991; Danaher, Berryman, and Benjamin 1987; Meyer 1998) by enabling government elites to maintain power by suppressing the opposition (Callaway and Matthews 2008). Correspondingly, cross-national evidence suggests a negative relationship between military aid and human rights violations (Callaway and Matthews 2008).

A closely related literature seeks to understand determinants of foreign aid allocations of the hegemonic United States. Meernik, Kruger, and Poe (1998) show that in the post Cold-war era, US foreign aid is less driven by security

3. Realist scholars suggest aid operates in the interest of donors (e.g., Morgenthau 1962; Waltz 1979, 159). Since the paramilitaries and guerrillas do not directly threaten the United States from the realist view, we would expect aid to primarily reduce narcotics activities and only secondarily suppress the guerrillas and paramilitaries (to the extent that the United States would actually like to eliminate the latter group). Since idealists posit that aid may be given in the interest of the receiving country, the emphasis here would be on suppressing both illegal armed groups, and only secondarily on narcotics, given the high cost of the war to Colombian citizens. Marxist or structuralist criticisms (e.g., Stokes 2005), however, would point to the US involvement on behalf of transnational imperial motivations and capital accumulation. Under this view, the US interest would lie in securing property rights for both transnational and domestic owners against guerrilla expropriation and violence. As it is difficult to discern what is the "true" US interest in this context, we take the stated aim of the US government and evaluate military aid based on both the repression of nonstate armed actors as well as the elimination of narcotics production.

considerations and more influenced by statist ideological goals such as promotion of democracy and human rights. In fact, a large volume of studies have sought to analyze whether human rights conditions among recipient countries influence the distribution of US military aid (Abrams and Lewis 1993; Apodaca and Stohl 1999; Carleton and Stohl 1985, 1987; Cingranelli and Pasquarello 1985; Neumayer 2003; Poe 1991; Poe and Meernik 1995). Overall, these studies have found mixed effects. Although assistance to repressive nations may exacerbate state abuses, it is difficult to infer the consequences of aid from analyzing its determinants, given the selection problem that arises when aid is targeted to certain types of political contexts.

While little empirical work has identified the specific impact of military aid on civil conflict, third-party military interventions have been shown to lengthen conflict duration (Regan 2002). In fact, sustained civil wars and political repression have long been held as persistent legacies of superpower backing, particularly of states in Latin America which regularly received US military assistance during the Cold War era (Grandin 2007; Smith 2000).⁴ Yet intentional targeting by donors differs from indirect diversion of aid through the state, which remains largely unexamined.

An older literature has explored the role of US military aid on democratic institutions more broadly, with some reporting insignificant relationships (Schmitter 1979; Wolf 1969) and others finding evidence of institutional deterioration (Muller 1985). More recent cross-national work by Finkel, Perez-Liñán, and Seligso (2007) also suggests an insignificant relationship between US military aid and democracy.⁵ These mixed empirical estimates perhaps stem from differing samples as well as reliance on endogenous cross-country variation. In contrast, we use finer-grained within-country variation covering over 900 municipalities and isolate exogenous variation in aid disbursement, which facilitate cleaner identification of the political consequences of military aid.⁶ Overall, there has been limited empirical work identifying the causal link between foreign military

aid and civil war violence.⁷ Our article advances the literature by documenting this link.

THE COLOMBIAN CONFLICT

The Colombian civil war started with the launch of a communist insurgency in the 1960s. Officially, it is a three-sided conflict involving the government military, communist insurgents, and right-wing paramilitary groups, though typically, the government and the paramilitary groups have been allied against the guerrilla. The conflict remained low intensity throughout the 1980s, when it effectively served as a Cold War proxy, but escalated sharply during the 1990s for a number of different reasons, including guerrilla defeat of the narcotraffickers and the emergence of paramilitary groups. This can be seen in Figure A.I of the online supporting information (SI) appendix, which shows the average number of attacks in municipalities by each of the three armed actors. Both the guerrillas and paramilitaries have sought territorial dominance via warfare and targeted political killings. They are financed by kidnapping, extortion, and predation on natural resource rents and rely heavily on the cocaine trade for financing purposes. Thus the drug trade is inextricably linked to the internal conflict.

The guerrilla insurgency has been led by the Armed Revolutionary Forces of Colombia (FARC) and National Liberation Army (ELN), which had 16,000–20,000 and 4,000–6,000 combatants respectively, during the period of our analysis.⁸ Both groups fight with the stated aim of overthrowing the government, and also claim to represent the rural poor by supporting policies such as land redistribution. Despite the stated ideological motivation, the guerrillas today are perceived to be economically motivated and profit from their involvement in the conflict (Richani 1997). These profits, stemming largely from the drug trade, finance attacks against their opponents as well as physical infrastructure. In comparison to the paramilitaries, these groups rely less on political assassinations, though they also pursue some targeted political killings.

Paramilitary organizations in their current form emerged in the 1980s, as private armies for drug cartels and the rural

4. More recently, scholars have analyzed the efficacy of military assistance in pacifying insurgent populations (Branch and Wood 2010).

5. Another branch of this literature has also examined the impact of US military programs on militarism and military coups (Baines 1972; Fitch 1979; Ruby and Gibler 2010).

6. Foreign aid more broadly defined has also been held to weaken democratic institutions by increasing the value of the state as a prize, thereby generating a resource curse (Djankov, Montalvo, and Reynal-Querse 2008). However, empirical assessments of the aid-democracy relationship have yielded mixed results (Dunning 2004; Goldsmith 2001; Knack 2004; Morrison 2009; Wright 2009).

7. A larger body of work has examined the effect of economic aid on civil conflict, spurred in part by the theoretical notion that aid increases the value of capturing the state (Grossman 1992). Two recent empirical analyses in this area are Crost, Felter, and Johnston (2014) and Nunn and Qian (N.d.) which examine the impact of development aid and food aid, respectively. Both find that aid promotes conflict using explicit strategies to identify the causal relationship.

8. Both organizations have seen their membership fall in the post-2005 period.

elite who were targeted for extortion by the guerrillas. These were illegal armed groups for most of the period we analyze: they were not formally affiliated with the government and received no official state support in their formation.⁹ However, they did receive informal assistance from military and police officers through unofficial channels. A prominent example occurred in 1983, when the defense minister in the Betancur administration launched a new military brigade in Puerto Berrío. This unit and associated battalions “worked closely with the paramilitaries” (Dudley 2004, 52), and Puerto Berrío became a focal point for paramilitary repression. However, these ties were not officially sanctioned, and the judiciary subsequently prosecuted members of the brigade for their involvement with the death squads (Dudley 2004).

Independent paramilitary groups emerged separately across different regions of Colombia, but the organizations shared the same underlying view of violently opposing the guerrillas, as well as left-leaning politicians. As such, they began carrying out assassinations of political candidates during the 1980s (Dudley 2004). However, it was not until 1997 that the disparate groups became an organized national political force, forming an umbrella organization called the United Self-Defense Forces of Colombia (AUC), which had roughly 15,000 members at peak strength. As shown in Figure A.I in the online appendix, the 1997 consolidation corresponded to a sharp rise in paramilitary violence, as the groups expanded their activities nationally. It also marked the beginning of *parapolitica*—more direct paramilitary intervention in electoral politics. Besides funding pro-paramilitary politicians, this has entailed killings of civilians to coerce local populations into voting for such politicians, deterring would-be political competitors from entering races or simply assassinating candidates.¹⁰

Around this time, the Judiciary started actively reigning in the paramilitary groups, effectively declaring them illegal. In part, this policy decision was a response to striking spikes in civilian massacres, which was an explicit paramilitary strategy (Aranguren 2001). The policy also reflected the

paramilitaries’ involvement with the drug trade. However, unofficial collusion between the AUC and military continued throughout the 1990s and 2000s, though the degree and form of this collusion has been a point of debate.

In 2003, the AUC declared a partial cease-fire, and some paramilitary blocks agreed to participate in a demobilization program. However, the demobilization did not effectively disarm all paramilitary units: human rights groups have documented continued paramilitary violence.¹¹ Today, like the guerrillas, Colombian paramilitary groups are on the US government’s watchlist of terrorist organizations.

Our definition of political conflict draws on this qualitative evidence and encompasses two forms of violence. The first is unilateral attacks perpetrated by each of the armed actors as a part of the ongoing civil war. The second is targeted political killings undertaken by the two illegal armed groups, the guerrillas and paramilitaries.

US AID TO COLOMBIA

Owing to its position as the world’s largest producer of cocaine, Colombia became a major recipient of US military assistance after the “War on Drugs” was initiated during the late 1980s.¹² As shown in Figure 1, Panel A, aid increased in 1990. This corresponded to the Andean Initiative which provided the country with a \$200 million aid package intended to combat drugs but was comprised largely of resources to train and equip the Colombian military (Isacson 2005). Aid increased again with the 2000 launch of Plan Colombia, a \$1.2 billion package aimed again at training and equipping the Colombian military for counternarcotics rather than counterinsurgency operations. However, given the guerrillas’ involvement in the drug trade, the line between these two objectives is blurry, and it is difficult to distinguish the counternarcotics and counterinsurgency components of US aid (Stokes 2001). For this reason, our analysis aggregates these two aid categories.

One important characteristic of US military aid is that it is disbursed to particular Colombian military brigades, each of which is attached to and operates out of a particular government military base. This disbursement method generates spatial variation across Colombian municipalities, as aid will be concentrated in municipalities with bases.

9. This is in contrast to historical phases in which the state provided official support for civilian groups that served as precursors of paramilitary organizations or subsequently worked with paramilitary groups. This includes civil patrols armed by the Defense Ministry in the 1960s (Hristov 2009), civilian networks created by the Colombian Central Intelligence Agency in 1991 (HRW 1996), and the CONVIVIR in 1994 which resulted in the creation of rural security cooperatives some of which subsequently joined paramilitary groups.

10. See Acemoglu, Robinson, and Santos-Villagran (2013) and the references therein for more details on paramilitary effects on elections.

11. See “Evaluation of the Paramilitary Demobilization in Colombia,” 2006 conference proceedings from *Corte a Impunidad Colombia en la Mira de la Corte Penal Internacional*, <http://www.kolko.de/downloads/evaluation-demobilization.pdf>.

12. Throughout the 1990s, it was the third largest recipient after Israel and Egypt and today remains the largest recipient of US military aid in the Western Hemisphere.

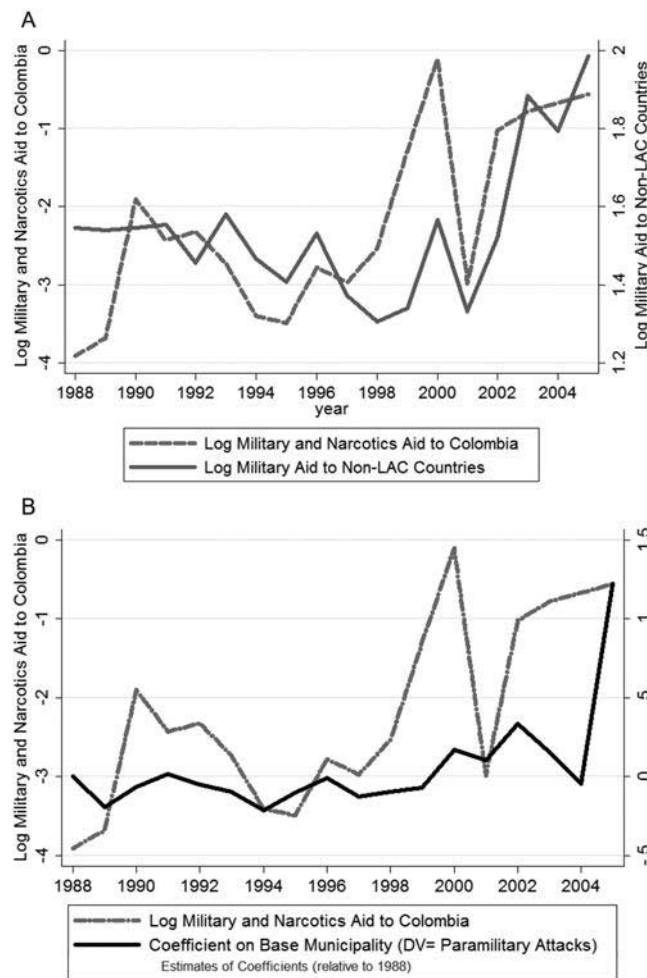


Figure 1. US military assistance and differential attacks in base municipalities: (1) Panel A: US military assistance to Colombia and non-Latin American countries and (2) Panel B: US military assistance and differential paramilitary attacks in base municipalities. Panel A shows the log of US military aid (in billions) to Colombia (dashed) and all non-Latin American countries (solid). Data from USAID Greenbook. Panel B shows the log of US military aid (in billions) to Colombia (dashed) and the paramilitary attacks (from CERAC) coefficients on our base variable interacted with each year in our base specification (solid).

MECHANISMS

Given the way in which US military aid is disbursed, there are three potential channels through which aid can serve to strengthen paramilitary capacity and thus result in greater conflict perpetrated by paramilitary groups. The first involves aid diversion while the other two involve strategic interactions among the armed groups, and each imply different empirically verifiable patterns of conflict.

Resource Sharing. Colombian military brigades may share resources such as arms and ammunition with paramilitary groups or provide other forms of logistical support funded out of military aid. Human rights organizations have provided extensive documentation of the military funneling weapons, uniforms, and transport equipment; providing training and intelligence; and assisting in the conduct of paramilitary operations (Hristov 2009, 82; HRW 2000). In-

terviews with former military intelligence officials suggest that the sale of military arms to paramilitaries was common, and ex-paramilitary members have also described using military helicopters and being flown in to military bases.¹³ In addition, military intelligence has provided paramilitaries with lists of suspected insurgents or guerrilla sympathizers, who were subsequently threatened or killed.

Military support for paramilitary operations has taken both indirect and direct forms. On some occasions, the military simply blockaded roads during paramilitary massacres. On other occasions, joint operations have been alleged, including in connection with massacres in San José

13. *La Semana*. "Former paramilitary leader Salvatore Mancuso said that AUC received help from the police and the military in massacre." November 18, 2008.

de Apartadó in 2005¹⁴ and El Aro in 1997 (HRW 2000).^{15,16}

Charges of resource sharing have raised concern among American policy makers that some part of US aid may end up providing operational or material support to paramilitaries, through factors such as weapons supply or sharing of intelligence from either the deployment of military advisors or technological assistance with surveillance.¹⁷ In 2000, a declassified cable from Secretary of State Albright to Ambassador Kammen indicated: “We note with concern persistent reports that the 24th Brigade, and the 31st Counter-guerrilla Battalion in particular, has been cooperating with illegal paramilitary groups that have been increasingly active in Putumayo.”¹⁸ A US military Advisory Group inquiry in 1995 also revealed that military brigades associated with human rights violations that were conducted jointly with paramilitaries had received military assistance, including “vehicles, M6 and M60E3 machine guns, pistols, grenade launchers, 7.62mm and 9mm ammunition, and claymore mines” (HRW 1996, 146).¹⁹

Partly in response to such documentation, in 1997 the United States Congress passed the “Leahy Amendment,” which required Colombian military brigades to be vetted for human rights abuses before becoming eligible for US assistance. However, the Colombian armed forces have largely evaded these requirements.²⁰ Moreover, Plan Co-

14. *El Espectador*. “Verdades de la masacre de San José de Apartadó.” August 1, 2008.

15. Overlaps in the networks of military and paramilitary groups have also facilitated the provision of this support. For instance, the Third Brigade officers helped to form the Calima Front, a paramilitary group, with former officers assuming leadership positions (HRW 2000).

16. Allegations of resource sharing have led to the indictment of several high-level military officials, including General Mario Montoya, commander and highest ranking officer of the Colombian army, who was charged with supplying weapons to paramilitaries in Medellín in 2006. Six other high-ranking officials were also indicted on similar charges in 2008, including the former director and deputy director of the Administrative Security Department (a key security agency). The list of accused is available at <http://www.colombiasupport.net/news/2007/05/hundreds-of-public-servants-implicated.htm> (accessed October 24, 2009).

17. For example, the United States provided \$340 million to help upgrade radar facilities in Southern Colombia used for gathering intelligence on guerrilla activity paramilitaries (Stokes 2005).

18. National Security Archive: <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB69/col70.pdf> (accessed: October 24, 2009).

19. More recently, even direct examples of weapons supply have emerged. For example, in 2005, the Colombian government arrested two US army officers near Melgar, Tolima, the site of one of the largest bases in Colombia, under charges of arming paramilitary groups with ammunition supplied by the US government. (*New York Times*. “Ammo Seized in Colombia; 2 G.I. Suspects Are Arrested.” May 5, 2005).

20. The mechanisms have included: reshuffling individuals accused of human rights violations across brigades; forming new brigades, which

Colombia was specifically exempted from having to abide by this clause.²¹ Since US military aid is allocated to military brigades operating out of Colombian government military bases, municipalities with bases were best positioned to serve as physical points of diffusion of resources to paramilitary groups.

Complementary tactics. The second potential channel is via complementarity in tactics between the government and the paramilitary groups. If the paramilitaries specialize in a form of fighting that complements government military efforts, then aid may lead to greater paramilitary violence in locations where the state expands its attacks. For example, the military has a technological advantage over the guerrilla, but the highly mobile paramilitary are relied on “as a rearguard that consolidates—with an antisubversive program—the territories taken by the army” (Gutiérrez Sanin and Baron 2005, 6).

Guerrilla repression. The third potential mechanism arises through the effect of aid on guerrilla repression. If foreign military aid strengthens the government’s military capacity, this may facilitate more successful repression or expulsion of the guerrillas from a given territory. This, in turn, may unleash paramilitary violence if the guerrillas had previously held paramilitary aggression in check within these areas. It is also conceptually possible that increases in guerrilla attacks are met with increases in paramilitary attacks, as landowners and other pro-paramilitary constituencies react to left-wing violence. Indeed, the origins of the paramilitary lie in the demand of landowners to protect themselves from the FARC.

In the supporting information appendix, we present a simple model of three-way conflict between paramilitaries, guerrillas, and the government that allows us to parametrize each of the three channels above. Our empirical analysis also enables direct examination of these three possibilities, as each of the potential channels implies a different pattern of results. The empirical consequences of our discussion of mechanisms are as follows:

- 1) If military brigades share resources with paramilitary groups, then an increase in US military

were subsequently vetted and “approved” by the US State Department; and not cooperating in handing over information about human rights violations to the US government. (See the National Security Archives Declassified document <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB69/col58.pdf> (accessed December 8, 2008).

21. *The Washington Post*. “Clinton Clears Aid Package For Colombia; Human Rights Waiver Allows \$1.3 Billion to Fight Drugs.” August 23, 2000.

- aid should lead to differential increases in paramilitary attacks in municipalities with bases.
- 2) If US military aid leads to paramilitary violence via repression of the guerrillas, then increases in aid will also lead to differential reductions in guerrilla violence in municipalities with bases.
 - 3) If US military aid increases paramilitary violence owing to complementary tactics *or* government repression of the guerrilla, then aid increases should not lead to differential increases in paramilitary violence in base municipalities once government attacks are controlled for.

We also consider the implications for violence during election years. Given the well-documented electoral involvement of the paramilitary groups (Acemoglu, Robinson, and Santos-Villagran 2013) the effect of aid in times and places where electoral competition is salient may be qualitatively different. If resource sharing serves as the primary mechanism, we expect targeted paramilitary killings stemming from aid to change with the electoral objectives of paramilitary groups, rising differentially in election years and in politically competitive municipalities.

In addition, we posit that political homicides are a type of violence without strong tactical complementarities with government attacks, as they tend to target individual civilians and do not benefit as much from the operational support of the Colombian military as larger-scale attacks. In addition, direct government involvement in assassinations could risk undermining the legitimacy of the state and so is likely to be restrained relative to attacks against the guerrillas. Thus, if complementarity with government forces is the key mechanism, we should not observe paramilitary political killings in response to aid to increase differentially during election periods.

EMPIRICAL STRATEGY

Our empirical strategy uses the fact that US military aid is allocated to brigades which are headquartered in military bases located in particular municipalities. This creates municipal-level variation in the allocation of US military aid. Importantly, we focus on the long-standing military bases that precede the period of the analysis, which precludes the possibility that they have been constructed as an endogenous response to conflict over this time.

We implement a basic difference-in-differences estimator. We estimate:

$$y_{jt} = \alpha_j + \beta_t + (USmil_t \times Base_j)\lambda + X_{jt}\phi + \omega_{jt}, \quad (1)$$

where y_{jt} are conflict-related variables including the number of paramilitary attacks, government attacks, or guerrilla attacks in municipality j and year t . α_j are municipality fixed effects which control for all time-invariant municipality characteristics that may be correlated with conflict, including geographic features such as rough terrain, the presence of the base itself, and historical municipal conditions. β_t are year fixed effects which also control for conflict levels that are common to all Colombian municipalities in a given year. X_{jt} is a vector of control variables that varies across specifications but always includes the natural log of population, which accounts for the scale effect since our conflict-related dependent variables are the number of attacks. $Base_j$ is a dummy variable which equals one if the municipality has a military base. $USmil_t$ is the natural log of US military and antinarcotics aid to Colombia.²² The coefficient λ captures the extent to which changes in military assistance induce a differential change in violence in municipalities that have bases, relative to nonbase municipalities. This approach enables us to examine the effect of aid on conflict outcomes, in the absence of data on how much aid is allocated to each of the bases individually. In our main specifications, Equation (1) is estimated using ordinary least squares (OLS), with all standard errors clustered at the municipality level.

One concern with this empirical strategy is potential endogeneity in the timing of US funding. Reverse causality could generate an upward bias on our estimates if US military aid increases more in response to violence growth in municipalities with bases. For instance, attacks in base regions may be viewed as a strong threat to stability and therefore galvanize more US funding relative to attacks in other regions. On the other hand, the estimates could be downward biased if aid increases more in response to violence growth or other omitted variables correlated with violence in nonbase regions. As an example, since reducing narcotics production is a stated US objective, military aid may respond to trends in violence in the largest coca producing municipalities, which are nonbase municipalities.

To address this potential endogeneity, we use an instrumental variables (IV) strategy that exploits changes in US funding in countries outside of Latin America as an instrument for changes in US funding to Colombia. Since Colombia is one of the largest recipients of US antinarcotics assistance, it is possible that the allocation of this line item to Colombia determines the allocation of antinarcotics as-

22. Note that the α_j control for $Base_j$ and the β_t control for the overall level of $USmil_t$, which is why the constituent terms of the interaction do not appear separately.

sistance to other countries. To avoid this concern, we instrument the sum of antinarcotics and military aid to Colombia solely with military aid to other nations. The instrument is valid since US funding to the rest of the world is determined by the broad geopolitical outlook of the American government, reflecting factors such as the party of the president or other major world events, and can thus be considered exogenous to the conflict in Colombia. For example, Figure 1, Panel A shows that there was a sharp increase in US military assistance to countries outside of Latin America after 2001. This reflects both the start of the Bush administration and the events of 9/11, which created an impetus to provide greater funding as a part of the “war on terror.” This figure also shows that US assistance to Colombia is positively correlated with military aid to non-Latin American nations. Indeed, a simple regression of these two time series confirm that there is a significant positive relationship. (See the Appendix Table A.I in the supporting information).²³ Since our treatment is the interaction of US military aid with the military base indicator, our instrument is aid to non-Latin nations interacted with the base indicator. We conduct two-stage least squares (2SLS) estimation in which the first stage is:

$$USmil_t \times Base_j = a_j + \beta_t + (USmil_{nonlac}_t \times Base_j)\gamma + X_{jt} + \nu_{jt}, \quad (2)$$

where $USmil_{nonlac}_t$ is the log of US military aid to non-Latin American countries. The second stage is:

$$y_{jt} = \alpha_j + \beta_t + (USmil_t \times Base_j)\delta + X_{jt} + \omega_{jt}. \quad (3)$$

While our main specifications use fixed-effects least-squares estimation, in the supporting information appendix, we also use a fixed-effects negative binomial estimator, implementing the IV strategy via a two-stage procedure and bootstrapped standard errors (Cameron and Trivedi 2009).²⁴

23. This table also shows that the relationship is robust to the inclusion of a linear time trend. However, we treat the inclusion of the trend and its square as an auxiliary check since we have time series with just 18 years of data, and this likely constitutes an overcontrol since these variables will be correlated with any effect of Plan Colombia.

24. We opt for OLS as the primary estimator as there are both excess zeroes in our data as well as overdispersion, which make it problematic to apply count models with fixed effects (Allison and Waterman 2002; Guimàres 2008). In particular, the paramilitary attacks variable is zero for 15,746 out of 16,848 municipal year observations, suggesting that excess zeros are a problem. However, in the online appendix, we show that our results are robust to a variety of different functional forms with OLS, as well as a “hybrid” fixed-effects Negative Binomial estimator proposed by Allison (2005). We focus on Negative Binomial estimation over Poisson estimation as our data are overdispersed.

Equations (1) and (3) serve as the key equations of the analysis. But we additionally assess whether there are differential effects of military aid on homicides carried out by these groups during election periods, to test for political motivations. To analyze this, we estimate:

$$y_{jt} = \alpha_j + \beta_t + (USmil_t \times Base_j \times Ele_t)\theta + (USmil_t \times Base_j)\lambda + (Ele_t \times Base_j)\vartheta + X_{jt}\phi + \omega_{jt}, \quad (4)$$

where Ele_t is a dummy which equals one during the years in which elections were held in Colombia: 1988, 1990, 1991, 1994, 1997, 1998, 2000, 2002, and 2003. The coefficient θ captures the differential effect of US military spending in base regions during election years relative to nonelection years. The coefficient ϑ captures the differential effect of election periods on violence in base regions relative to nonbase regions. All other two-way subinteractions are absorbed by the municipality or year fixed effects.

DATA AND EMPIRICAL RESULTS

Our data on civil war violence comes from the *Conflict Analysis Resource Center* (CERAC). This dataset is event-based and includes over 21,000 war-related episodes in over 950 municipalities from 1988 to 2005. It is collected on the basis of 25 major newspapers and supplemented by oral reports from members of Catholic priest networks who describe incidents of political violence in nearly every municipality in the country. This expands the scope of data coverage to remote regions that may otherwise lack media coverage. The priests are regarded as neutral actors in the conflict and are often used as negotiators between the two sides. This minimizes potential overreporting of violent events perpetuated by one side over another. The data are also cross-checked against other official sources, including a dataset by the National Police and reports by HRW and Amnesty International. The procedure used to collect the data is described more extensively in Restrepo, Spagat, and Vargas (2004).

The CERAC data record the number of attacks that are undertaken by each major actor in the conflict, including the government, the paramilitaries, and the guerrillas, and these are the main dependent variables of our analysis. The data are able to distinguish between unilateral *attacks*, which are one-sided events carried out by a particular group, versus two-sided events involving an exchange of fire among two or more groups. Attacks by the government primarily involve aerial bombardment or antikidnap and antinarcotics operations. Attacks by the illegal armed groups also include incidents such as village incursions; killing civilians; bombing pipelines and other infrastructure; destroying police

stations or military bases; and ambushing military convoys. Two examples convey the richness of the underlying data.²⁵

1. January 12, 2004. Department: Antioquia–Municipality: Anza. Guerrillas from Front 34 of FARCEP threw an explosive at a group of AUC paramilitaries, killing five and injuring seven of them.
2. December 24, 1999. Department: Valle–Municipality: Tulua. Between 30 to 40 heavily armed AUC paramilitaries arrived in the zone of Altaflor. Holding a list, they pulled five peasants out of their houses and executed them.

We also employ a number of conflict-related variables from a Center for Study of Economic Development (CEDE) dataset, which was collected from the Observatory of Human Rights of the Vice-Presidency of Colombia and is based on reports from the Colombian security agency, the *Administrative Department of Security*. This includes municipality-year-level data on the number of paramilitary and guerrilla homicides, as well as killings of elected officials, candidates running for office, and community leaders, which we refer to as assassinations. The data also include several other measures including: paramilitary and guerrilla activity such as population displacement and theft; government military actions, such as rescue of kidnaps, seizure of arms and captives, and antinarcotics operations such as dismantling of narcotics laboratories. We define our core sample based on the number of municipalities which include both the CERAC and CEDE conflict data, which yields a sample of 936 municipalities.

We construct an indicator of whether a municipality has a military base from two sources. We begin with the base locations reported in globalsecurity.org, which gives us a list of 37 municipalities with military bases. We cross-check each of these bases against information from the Colombian army, navy, and airforce web sites to determine which bases were newly built over our sample period.²⁶ We find and exclude new bases from the sample, since it is possible that these bases were built as an endogenous response to ongoing conflict.²⁷ This leaves us with 34 municipalities with military bases, of which 32 appear in the sample for which the conflict data is available. Map 1 in the supporting information appendix shows the location of these bases.

We obtain data on municipal population from DANE, the Colombian statistical agency, and municipal geographic characteristics from CEDE. In addition, data on coca cultivation comes from two sources. *Dirección Nacional de Estupefacientes* (DNE) has a measure of land used for coca cultivation in each municipality in 1994. An equivalent measure for 1999 to 2004 comes from the *United Nations Office of Drug Control* (UNODC), which collects this data based on satellite imagery.

Data from the Registraduría Nacional De Colombia is also used to generate the Golosov index of political competitiveness (Golosov 2010). Data on vote shares disaggregated by party needed to create this index are only available after 1997 for mayoral elections and after 2000 for the local councils. We create separate indices for mayors and councils for each election year and average these over the common election year sample (2000 and 2003). Our competitiveness indicator equals 1 if both the average mayoral index and average council index exceed the median values of these measures.

Finally, data on US aid is from the USAID Greenbook. We use disbursements, which is money and resources spent that year, rather than commitments of future aid. Since much of US assistance to Colombia, including the provision of training and equipment, falls under the category of antinarcotics assistance, we look at the combined categories of military and antinarcotics assistance. We also use data on Colombian military expenditures from the World Bank.

Table A.II in the online appendix shows the descriptive statistics of key variables, in municipalities with and without military bases. The means indicate that paramilitary, guerrilla, and government attacks, as well as paramilitary and guerrilla political assassinations, tend to be higher in base municipalities relative to nonbase municipalities. In addition, paramilitary assassinations exceed guerrilla assassinations, on average, in both types of regions. There are also differences in the population size, ruggedness, coca cultivation, and oil presence across these regions. As such, we control for these municipal characteristics interacted with year effects in the analysis below.

US MILITARY AID AND VIOLENCE IN BASE MUNICIPALITIES

We first present visual evidence. We interact our base indicator with year dummy variables and regress paramilitary attacks on these interaction terms, controlling for municipality and year fixed effects and the log of population. In Figure 1, Panel B, we graph these interactions along with US military and antinarcotics aid to Colombia. The aid time series move in tandem during most years. In partic-

25. We translate the events which are originally recorded in Spanish.

26. Army: <http://www.ejercito.mil.co/?idcategoria=69> (accessed April 10, 2009), Navy: <http://www.armada.mil.co/> (accessed April 10, 2009). Air force: <http://www.fac.mil.co/?idcategoria=391> (accessed April 10, 2009).

27. See online appendix for further information on new bases.

ular, differential attacks increased in 2000 when Plan Colombia was launched, fell in 2001 when military aid was scaled down, and rose again in 2002 when aid started increasing.²⁸

Table 1 confirms this visual evidence. Columns (1)–(3) presents the OLS estimates of Equation (1). The coefficients show that an increase in military assistance significantly increases paramilitary attacks as well as government attacks in base regions relative to nonbase regions but has no significant effect on guerrilla attacks. This result is consistent with our prediction that paramilitary violence will increase in response to aid. Moreover, the insignificant effect on guerrilla violence presents evidence against the notion that paramilitary attacks increase owing to successful government repression of the communist insurgents. Together this provides evidence for our first mechanism of resource sharing and against the second mechanism of government repression of guerrillas.²⁹

The OLS estimates imply substantial effects: the coefficient of .15 in column (1) suggests that a 1% increase in US aid increases paramilitary attacks by approximately .0015 more in base municipalities, or by 1.5% more above the mean paramilitary attacks of .103 over the sample period. Similarly, column (2) implies that 1.2% more aid increases government attacks by approximately 1% more in base versus nonbase areas. US aid to Colombia increased by an average of 92% per year over 1988–2005. Thus the coefficients imply an associated differential increase of 138% in paramilitary attacks and 110% in government military attacks.

Given the sizable spike in military aid in 2000 (Figure 1a), we additionally verify that the estimates are robust to excluding this year from the sample.³⁰ In Online Table A.III, we also disaggregate narcotics and military aid and show that the effects are driven by narcotics assistance. This likely reflects the fact that on average, narcotics assistance was

28. We posit that differential attacks fell in 2004 due to the paramilitary demobilization of 2003, which drastically reduced attacks by the AUC. This nation-wide reduction should also have reduced the differential number of attacks in base municipalities since the AUC is the most politically connected faction of the paramilitary groups with most direct links to the military. As discussed previously, the demobilization resulted in a temporary hiatus of attacks, and paramilitary violence (including by the AUC) resumed in 2005. This account is corroborated in Figure 1-B, as the number of attacks spiked upward this year after falling in 2003 and 2004.

29. The noneffect additionally indicates that aid is not targeted to regions that have high overall levels of civil war violence.

30. The coefficient (standard error) on our treatment variable is 0.17 (0.06) in the model of paramilitary attacks when the year 2000 is excluded.

nearly six times larger than military assistance over this period and became a larger portion of overall security assistance with the advent of Plan Colombia.³¹

Columns (4)–(6) in Table 1 present the IV estimates of Equation (3), while columns (7)–(9) show the reduced form.³² The IV estimates are larger than the OLS estimates. They imply that a 1% increase in aid translates into 3% more paramilitary attacks and 2.6% more government attacks in base municipalities versus nonbase municipalities. This is consistent with the idea that OLS downward biases the estimates since US funding responds to differential increases in violence in nonbase areas, such as the largest coca municipalities. It could also reflect heterogeneity in the effect of aid on paramilitary attacks. For example the aid that comes to Colombia as part of general US aid increases may be less well-targeted to Colombian military troops facing the guerrilla and thus more likely to be captured by paramilitaries or their sympathizers.

An important conceptual point is to discern the resource sharing channel from the use of complementary tactics between the government and the paramilitaries. As indicated by the third implication of our theoretical framework, if the effect on paramilitary attacks is driven primarily by complementarity, then the impact of aid on paramilitary attacks should be rendered small and insignificant when we control for government attacks. Yet doing so in Table 2, Column (1) doesn't significantly affect the estimated coefficients, in both the OLS (Panel A) and IV (Panel B). In fact, the coefficients lie within the 5% confidence interval of the corresponding coefficients in Columns (1) and (4) Table 1.³³ Thus, paramilitary attacks appear not to be driven purely by complementarities with government attacks.

31. In Table A.III, we also test for dynamic effects by interacting the base indicator with lag of the aggregate aid measure. The effect of lagged aid is smaller and less precise relative to the contemporaneous effect for both paramilitary and government attacks. We thus use the contemporaneous aid interactions in the remainder of the analysis.

32. The first-stage F-statistic will be mechanically very large because the bases variable is interacted with the endogenous time series variable, the US military aid to Colombia, and the instrument, US military aid to non-Latin American nations. Since our IV strategy is designed to address endogeneity in the aid component, the strength of the first-stage is better reflected in the significant relationship between the two military aid time series (shown in Figure 1-A and Table A.I). The reduced form estimates presented in Table 1 also show that the significant second-stage relationships are not driven by inclusion of interaction terms with the bases variable in the first stage.

33. Since contemporaneous government attacks is endogenous, we verify that these results are the same if we control instead for lag government attacks. These results are available upon request.

Table 1. US Military Aid and Violence: Baseline Estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Paramilitary Attacks	Government Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks
US Mil and Narc Aid X Base	0.150* [0.060]	0.133* [0.060]	-0.078 [0.112]	0.315* [0.121]	0.297* [0.102]	-0.274 [0.249]	-	-	-
US Non-Latin American Mil Aid X Base	-	-	-	-	-	-	1.116* [0.429]	1.052* [0.361]	-0.971 [0.883]
Estimator	OLS	OLS	OLS	IV	IV	IV	Reduced Form	Reduced Form	Reduced Form
Observations	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606
Number of Municipalities	936	936	936	936	936	936	936	936	936

Note—Variables not shown include municipality and year fixed effects and log of population. Robust standard errors clustered at the municipality level are shown in parentheses. US Mil and Narc Aid is the (log) sum of US military and narcotics aid to Colombia. US Non-Latin American Mil Aid is the (log) US military aid to countries outside of Latin America.

* Significant at the 5% level.

Table 2. US Military Aid and Violence: OLS and IV Estimates with Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Paramilitary Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks
US Mil and Narc Aid X Base	0.129* [0.053]	-0.133 [0.110]	0.134* [0.061]	0.082 [0.056]	-0.094 [0.107]	0.090* [0.045]	0.060 [0.045]	0.136 [0.123]	0.147* [0.059]	0.136* [0.059]	-0.072 [0.112]
Government Attacks	0.157* [0.046]	0.414* [0.106]	-	-	-	-	-	-	-	-	-
US Mil and Narc Aid X Base	0.269* [0.109]	-0.399 [0.263]	0.235* [0.098]	0.198* [0.090]	-0.327 [0.243]	0.295 [0.157]	0.321* [0.118]	-0.106 [0.299]	0.305* [0.121]	0.304* [0.103]	-0.265 [0.249]
Government Attacks	0.154* [0.045]	0.420* [0.106]	-	-	-	-	-	-	-	-	-
Department X Year FE			Y	Y	Y						
Year X Base						Y	Y	Y			
Post-2001 X Base						Y	Y	Y			
Historical Casualties Control									Y	Y	Y
Historical Guerrilla Attacks Control											
Other Time-Varying Controls											
Observations	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,457	16,457	16,457
Number of Municipalities	936	936	936	936	936	936	936	936	921	921	921

Notes—See Table 1. In addition, columns 3–5 include department X year fixed effects. Columns 6–8 include a separate trend as well as a differential post-2001 level for base municipalities. Columns 9–11 include time-varying effects of 1988 urbanization, coca production, oil, and the standard deviation of height.
 * Significant at the 5% level.

In the remaining columns of Table 2, we show that our results are robust to including a number of additional important controls. First, it is possible that other types of aid or security policy are set in particular department-years in a manner that is correlated with violence levels as well as military aid.³⁴ To account for this, columns (3)–(5) control for department by year fixed effects, meaning we compare only municipalities within the same department within the same year. Since US military assistance and differential paramilitary attacks in base areas increased in the post-2001 era (Figure 1b), columns (6)–(8) include separate linear time trends by base and nonbase regions, and a post-2001 indicator variable interacted with the base variable. This allows the level effect of US assistance on violence in base and non-base regions to vary for the period before and after 2001.

In columns (9)–(11), we also control for a number of other geographic and economic characteristics, all interacted with year dummies, including: a 1988 urban indicator (measured as population over 10,000), since bases tend to be located in larger cities; the standard deviation of height, since ruggedness may differ across base and nonbase regions; whether municipalities produce or transport oil, since oil is Colombia's largest export and armed groups may fight to predate on resource rents (Dube and Vargas 2013); as well as coca cultivation in 2000 (when Plan Colombia was launched), as 11 of the base municipalities produce this drug crop over the sample period.³⁵ Since bases may have been built in regions with high levels of past violence, we additionally control for year interactions with aggregate historical violence levels, measured as total war-related casualties and guerrilla attacks over 1975–87 (scaled by municipal population in the beginning of the sample period). We find that the estimated effects on paramilitary attacks remain significant across the specifications in Table 2, though several display insignificant impacts on government attacks. This also suggests that increased government attacks is not a prerequisite for greater paramilitary violence in response to aid increases, casting further evidence against the complementarity channel.³⁶

34. There are 32 departments in Colombia, and these are analogous to US states. Governors of departments have the power to set state-wide policies and may do so on security matters or with the aim of attracting aid.

35. The results are also robust to controlling for interactions with coca cultivation in 1994, the earliest year for which coca data is available.

36. We also conduct a number of additional robustness checks in the online appendix. Leave-one-out estimation shows that the effects are not driven by any one base (Figure A.II). Estimates using discrete versions of the attacks variables in Table A.III show insensitivity to functional form, while Table A.IV demonstrates robustness to Negative Binomial estima-

Aid, State Strength, and Coca Cultivation

A core issue of importance to our analysis is the role of the state. Clearly, military efforts by the Colombian government will influence violence outcomes. Moreover, US military aid allocation may be correlated with state strength if the Colombian government receives more aid when it spends more domestic resources on the conflict and concentrates its fighting efforts in the base regions.

To account for this potential effect, columns (1)–(6) of Table 3 present estimates controlling for (log) government military expenditures interacted with the base variable. In columns (7)–(12), we control for its interaction with various presidential administrations, which have differed in the degree to which they prioritized defense. For example, the hallmark of the Uribe administration (2002–2010) was allocating greater resources toward suppressing the guerrillas. The omitted category is President Virgilio Barco of the Liberal party, who served from 1986 to 1990. The IV estimates are larger in magnitude after we include the administration controls, and these results indicate that most of the later administrations witnessed relatively fewer paramilitary attacks in the base regions.³⁷ These results establish that our findings are not driven by a Uribe effect.³⁸

tion. Table A.V also addresses the concern that nonbase regions may not serve as good controls for base regions by partitioning the sample on paramilitary presence in the beginning of the sample period, whether a municipality borders a base municipality, and whether it is recorded as growing coca. Table A.VI indicates that the results are robust to instrumenting base location with the average slope of the municipality, as military bases cannot be built in excessively steep regions. Finally, Table A.VII demonstrates that neither the emergence of new base locations over our sample period nor the expansion of two base facilities in the post Plan Colombia period affect our estimates. These additional checks provide further evidence that our results are not driven by endogeneity in the spatial location of bases.

37. The earlier administrations were those of Presidents Gaviria and Samper, both of the Liberal Party. President Pastrana (in office over 1998–2002) was from the Conservative Party. President Uribe was an Independent who had helped to form the National Unity Party.

38. The OLS results appear to suggest that military aid does not affect government attacks significantly when military expenditure is accounted for, or any of the dependent variables when administration dummies are included. However, this is likely to reflect overcontrolling: US military aid varies with idiosyncratic relationships among various Colombian presidents and the United States, and controlling for unrestricted presidential effects thus eliminates a lot of this variation in aid. If presidents are also pursuing base-specific counterinsurgency strategies that affect paramilitary groups, then including the presidential controls would confound the OLS estimates. However, we circumvent this potential bias with the IV strategy. Since endogenous time-varying US military aid is exactly the type of problem that the IV estimate solves, the robustness of the results to the IV strategy in Table 3 helps ensure that this potential overcontrolling bias does not invalidate our account.

Table 3. Accounting for State Strength

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Paramilitary Attacks	Government Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks	Paramilitary Attacks	Government Attacks	Guerrilla Attacks
US Mil and Narc Aid X Base	0.116* [0.046]	0.105* [0.053]	0.045 [0.110]	0.337* [0.137]	0.321* [0.109]	-0.267 [0.277]	0.055 [0.045]	0.046 [0.033]	0.170 [0.157]	0.514* [0.185]	0.350* [0.118]	0.449 [0.302]
Col. Mil Expenditure X Base	-0.106 [0.071]	-0.085 [0.056]	0.382 [0.277]	0.135 [0.137]	0.151* [0.066]	0.041 [0.299]	-	-	-	-	-	-
Gaviria X Base	-	-	-	-	-	-	-0.023 [0.068]	0.098 [0.095]	2.406* [0.882]	-0.224* [0.106]	-0.034 [0.091]	2.283* [0.945]
Samper X Base	-	-	-	-	-	-	-0.008 [0.073]	0.121 [0.079]	0.728* [0.341]	-0.110 [0.086]	0.054 [0.074]	0.666 [0.345]
Pastrana X Base	-	-	-	-	-	-	0.121 [0.167]	0.104 [0.127]	0.580 [0.544]	-0.711* [0.342]	-0.446* [0.196]	0.073 [0.715]
Uribe X Base	-	-	-	-	-	-	0.392 [0.208]	0.502* [0.194]	-0.140 [0.437]	-0.753* [0.351]	-0.255 [0.213]	-0.837 [0.753]
Estimator	OLS	OLS	OLS	IV	IV	IV	OLS	OLS	OLS	IV	IV	IV
Observations	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606
Number of Municipalities	936	936	936	936	936	936	936	936	936	936	936	936

Note—See Table 1. In addition, Columns 1–6 control for the (log) Colombian government military expenditures interacted with Base. Columns 7–12 control for each Colombian presidential administration interacted with Base, where the Barco administration of the Liberal Party is the omitted category.

* Significant at the 5% level.

Table 4. US Military Aid, Coca Cultivation, and Colombian Military Operations

	(1)	(2)	(3)	(4)	(5)	(6)
	Captives Taken	Weapons Seized	Freed Kidnaps	Coca	Antinarcotics Operations	Antinarcotics Operations
Panel A: OLS Estimates						
US Mil and Narc Aid X Base	2.164* [0.940]	0.566* [0.236]	0.411* [0.150]	-0.007 [0.016]	-0.462* [0.142]	-0.702* [0.281]
US Narc Aid X Base	2.431* [0.926]	0.587* [0.234]	0.333* [0.133]	-0.006 [0.016]	-0.465* [0.143]	-0.682* [0.278]
US Mil Aid X Base	-3.055* [1.304]	-0.075 [0.143]	0.068 [0.110]	-0.014 [0.015]	-0.132* [0.062]	-0.317* [0.115]
Panel B: IV Estimates						
US Mil and Narc Aid X Base	-5.542 [4.369]	1.169 [0.612]	0.037 [0.211]	-0.002 [0.029]	-1.372* [0.338]	-1.569* [0.552]
US Narc Aid X Base	-1.450 [2.934]	1.154* [0.537]	-0.179 [0.253]	-0.010 [0.021]	-1.140* [0.304]	-1.552* [0.545]
US Mil Aid X Base	-4.377 [3.452]	0.924 [0.484]	0.029 [0.166]	-0.002 [0.023]	-1.083* [0.267]	-1.251* [0.440]
Observations	7,454	7,454	7,454	7,454	7,454	2,003
Number of Municipalities	936	936	936	936	936	252

Note—Each cell represents a different regression. Variables not shown include municipality and year fixed effects and log of population. Coca years sample refers to years in which there is data on coca production:1994, 2000–2005. Column 6 restricts the sample to municipalities that were recorded as having grown coca at any point in the sample period. Dependent variables are discussed in the text. Robust standard errors clustered at the municipality level are shown in parentheses.

* Significant at the 5% level.

The stated aim of US military assistance to Colombia has been promoting counternarcotics efforts and lowering drug crop production. However, after 2001, the US government authorized the use of military assistance for counterinsurgency purposes in this country. To investigate what types of activity US aid influences, we analyze the effect of military aid on different types of operations undertaken by the Colombian military, as well as overall levels of municipal coca cultivation. Table 4 presents these estimates.³⁹ Columns (1)–(3) examine counterinsurgency operations—the number of armed group captives taken by the Colombian military, the number of weapons seized (including recaptured arms and deactivated explosives), and the number of kidnap victims rescued from the illegal armed groups. In addition, columns (4)–(5) examine municipal coca cultivation and the number of counternarcotics operations undertaken by the Colombian military.

To see which type of aid influences these outcomes, we also disaggregate the combined military and narcotics aid into each component. For the IV estimates in Panel B, narcotics (military) aid from the United States to Colombia is instrumented by narcotics (military) aid from the United States to all other non-Latin American nations. The results indicate that the influx of security assistance does significantly increase some types of government military operations, with the impact of narcotics aid on weapons seizures displaying greatest robustness across OLS and IV. The coefficient of 1.169 in column (2) of Panel B implies that a 1% increase in US aid increases arms seizures by 2.8% more in base regions.

In contrast, the coefficient on the aid interaction is close to zero and statistically insignificant for the coca outcome, suggesting aid does not have a disproportionate effect on drug crop production in base regions (even though they have higher coca cultivation on average, relative to nonbase regions). Moreover, there is a significant negative effect on antinarcotics operations, across both the OLS and IV specifications, which is influenced by both military and narcotics aid. These effects are substantial: for example, the coef-

39. Because we look at the coca outcome, we restrict the sample to the set of municipal year observations for which the coca variable is available, but the results do not change if we analyze the military operations for the full sample.

ficient in column (5) of Table 5, Panel B implies that a 1% increase in aid implies that antinarcotics operations fall by 7% more in base municipalities. In other words, when US military aid increases, there is a *decrease* in counternarcotics operations in base regions relative to nonbase areas. One interpretation of this effect is that it reflects a shift from counternarcotics to counterinsurgency in the use of US military aid. In column (6) we reanalyze the antinarcotics operations for the set of municipalities that have been known to produce coca at some point, which includes 11 military-base municipalities. The results remain effectively unchanged with this sample restriction.

Aid, Assassinations, and Elections

If the leakage of resources from the military strengthens paramilitary organizations, this should boost their capacity to undertake a range of activities, including attacks that are politically targeted. To test this idea, we next analyze whether military aid has differential effects on paramilitary and guerrilla killings during election periods. We look at total homicides and political assassinations, a subcategory that includes the killing of elected officials, candidates, and community leaders and thus reflects political targeting.

Columns (1)–(4) of Panel A in Table 5 presents the estimates for total homicides in all sample municipalities. While military aid has no significant effect on homicides during nonelection years, it leads to a significant differential increase in homicides conducted by paramilitaries in election years relative to nonelection years. Adding the coefficients together in the first two rows gives the total effect of military aid on homicides in election years. While positive, the noisiness of the coefficient in the second row does not allow us to rule out a zero total effect in the OLS estimates. However, the effect is positive, significant, and larger in the IV, indicating that military aid leads to significant increases in homicides during election years. As in previous tables, there is no effect on homicides committed by guerrillas, either in election or nonelection years.

Columns (5)–(8) in Panel A looks specifically at assassinations in the full sample. The positive estimate on the three-way interaction in the first row again shows that there is a differential effect of military aid on paramilitary assassinations in election years. However, the estimate in the second row indicates that military aid has a negative effect on assassinations in nonelection years, and the sum is also negative. In other words, military aid reduces paramilitary political assassinations in base regions, but this reduction is smaller during election periods.

Overall, these results suggest that the influx of US military aid has a composition effect on the type of violence

employed by paramilitary groups. During election years, there is a net increase in total paramilitary homicides, but a substitution away from assassinations, which are the highest profile killings. Moreover, this “security effect” of US aid is attenuated during election years, when the net political returns to violence against political candidates and leaders is arguably the highest.

Columns (6) and (8) also show that there is no differential effect on guerrilla assassinations during election periods. Thus the compositional change in killings induced by US military aid solely influences killings by paramilitaries, not the guerrillas. These effects are unlikely to be arising via complementary tactics since targeted killings don’t require large-scale operations, and the Colombian military is not tasked with carrying out political homicides. As such these homicide effects point to the importance of the resource-sharing channel.

These differential impacts in election years also suggest that paramilitary behavior responds to political incentives, which is consistent with evidence of electoral manipulation by paramilitaries presented in Acemoglu, Robinson, and Santos-Villagran (2013). To provide further support for the idea of political targeting, we examine whether effects are larger in the most politically competitive municipalities, where there are greatest potential gains from carrying out this type of elections-related violence. We use the Golosov index⁴⁰ of the effective number of political parties for candidates competing in the mayoral and local council elections, averaged over the set of years for which this data is available for both offices, 2000 and 2003. We split the sample based on whether the municipality lies above or below the median of this competitiveness measure for both types of elections. Panels B and C in Table 5 present the OLS and IV estimates, respectively. The results show that paramilitary homicide effects are significant only in the politically competitive sample (even though the sample size is much smaller for this group). For targeted political assassinations, the magnitude of the coefficient on the three-way interaction is also larger in the competitive sample in both the OLS and IV estimates. These results further confirm political incentives as a determinant of paramilitary violence.

CONCLUSION

Although substantial amounts of military assistance have been disbursed to countries facing internal conflict, little work has evaluated the impact of military aid on political

40. See Golosov (2011) for a description of this measure and arguments for why it is preferred over other measures of party competition in multiparty environments.

Table 5. US Military Aid, Homicides, and Assassinations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Homicides				Assassinations			
	Paramilitary	Guerrilla	Paramilitary	Guerrilla	Paramilitary	Guerrilla	Paramilitary	Guerrilla
US Mil and Narc Aid X Base X Election Year	2.178* [0.888]	0.053 [0.056]	7.066* [2.349]	0.141 [0.111]	0.312 [0.167]	0.029 [0.023]	0.272* [0.095]	0.053 [0.033]
US Mil and Narc Aid X Base	-0.861 [1.337]	-0.054 [0.066]	-1.534 [1.297]	-0.044 [0.092]	-0.741* [0.284]	-0.035* [0.016]	-0.445* [0.151]	-0.017 [0.012]
Election Year X Base	7.904* [2.842]	0.158 [0.149]	18.323* [5.859]	0.342 [0.275]	0.801* [0.297]	0.040 [0.039]	0.667* [0.254]	0.089 [0.070]
Estimator	OLS	OLS	IV	IV	OLS	OLS	IV	IV
Observations	16,606	16,606	16,606	16,606	16,606	16,606	16,606	16,606
Number of Municipalities	936	936	936	936	936	936	936	936
	Above median competition				Above median competition			
	Below median competition				Below median competition			
	Panel A: OLS and IV Estimates in all Municipalities							
US Mil and Narc Aid X Base X Election Year	2.181* [0.879]	0.052 [0.067]	2.205 [2.255]	0.041 [0.108]	0.434* [0.211]	0.039 [0.026]	0.027 [0.223]	0.004 [0.049]
US Mil and Narc Aid X Base	-1.178 [1.829]	-0.051 [0.091]	-0.678 [0.805]	-0.058 [0.056]	-0.850* [0.378]	-0.035 [0.018]	-0.391 [0.249]	-0.028 [0.033]
Election Year X Base	7.311* [2.827]	0.139 [0.187]	9.381 [7.116]	0.185 [0.253]	0.925* [0.379]	0.041 [0.049]	0.443 [0.395]	0.035 [0.062]
Observations	5,335	5,335	11,271	11,271	5,335	5,335	11,271	11,271
Number of Municipalities	297	297	639	639	297	297	639	639
	Panel B: OLS Estimates Disaggregated by Competitive Municipalities							
US Mil and Narc Aid X Base X Election Year	6.881* [2.298]	0.128 [0.143]	6.596 [5.932]	0.207 [0.154]	0.295* [0.120]	0.047 [0.041]	0.194 [0.144]	0.078 [0.053]
US Mil and Narc Aid X Base	-1.708 [1.766]	-0.012 [0.125]	-1.522 [1.028]	-0.127 [0.094]	-0.533* [0.199]	-0.015 [0.011]	-0.178 [0.133]	-0.026 [0.031]
Election Year X Base	17.338* [5.757]	0.294 [0.360]	18.708 [14.696]	0.545 [0.356]	0.579 [0.313]	0.053 [0.086]	0.754 [0.438]	0.188 [0.110]
Observations	5,335	5,335	11,271	11,271	5,335	5,335	11,271	11,271
Number of Municipalities	297	297	639	639	297	297	639	639
	Panel C: IV Estimates Disaggregated by Competitive Municipalities							

Note—See Table 1. In addition, the dependent variables in 1–4 are homicides, and in 5–8 are homicides of candidates, elected officials and community leaders. Regressions in Panel A include all sample municipalities. Panels B and C disaggregate the sample based on political competition. The above median competition sample is comprised of municipalities where the Golosov index for mayoral and local council elections in 2000 and 2003 exceeds the median values of these measures.

* Significant at the 5% level.

violence. This article has examined the effect of US military assistance on conflict in Colombia, a country embroiled in civil war over the past four decades.

We find evidence that increases in US military aid lead to higher levels of paramilitary attacks, even after controlling for government attacks. There are also no corresponding reductions in guerrilla violence. As such, neither tactical complementarities with government forces nor indirect repression of the insurgency can account for this effect. Instead, our results are consistent with the diversion of foreign military aid from the Colombian military to illicit paramilitary groups, which accords with extensive qualitative documentation of collusive resource sharing between these entities.

Turning to the implications for Colombian politics, we find that there are differential paramilitary killings in election periods, with largest effects emerging in competitive municipalities. These results point to a political cycle of paramilitary violence that is exacerbated by US military aid. Finally, we find no evidence of aid increasing counternarcotics activities, which is one of the stated goals of US assistance to Colombia.

Though we focus on Colombia, our results speak to broad questions in political development and international assistance. Military aid is sometimes proposed as a cure for weak states, as it is presumed to enhance the government's repressive capacity, and facilitate its ability to secure a "monopoly on the legitimate use of violence." Yet our results suggest that, in environments such as Colombia, international military assistance can strengthen armed nonstate actors, who rival the government over the use of violence.

As such, our findings hold obvious relevance for several other major recipients of US military aid, including Iraq, Afghanistan, Mexico, and Indonesia. In these nations, links between the military and informal armed militias have led to the use of foreign military resources by illegitimate armed groups and sometimes been accompanied by severe human rights abuses. Massacres in East Timor preceding the 1999 referendum on independence from Indonesia were led by militias tightly connected to the Indonesian military, which has been a large recipient of US military assistance. In recently occupied Iraq, informal Shiite militias conducted joint operations with the United States backed Iraqi army against suspected insurgents, despite accusations of torture and other human rights violations.⁴¹ Over 2008–2012, the United States disbursed nearly \$2 billion to Mexico as a

part of the Mérida Initiative to assist in combating the well-armed private armies of drug cartels. However, a 2001 Global Exchange report notes that "the Mexican army has been infiltrated by narcotics traffickers at the highest ranks, and is increasingly dependent on US weapons, training, and ideology" (258). The results in this article suggest that informal links between a state's armed forces and armed nonstate actors need to be taken into account for the effective deployment of military aid to conflict-torn societies.

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