

# The Monopoly of Violence: Evidence from Colombia\*

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## Abstract

Many states in Latin America, Africa and Asia lack the monopoly of violence, identified by Max Weber as the foundation of the state, and thus the capacity to govern effectively. In this paper we develop a new perspective on the establishment of the monopoly of violence and the formation of the state. We build a model to explain the incentive of central states to eliminate non-state armed actors (paramilitaries) in a democracy. The model is premised on the idea that paramilitaries may choose to and can influence elections. Since paramilitaries have preferences over policies, this reduces the incentives of the politicians they favor to eliminate them. The model also shows that while in non-paramilitary areas policies are targeted at citizens, in paramilitary controlled areas they are targeted at paramilitaries.

We then investigate the predictions of our model using data from Colombia between 1991 and 2006. We first present regression and case study evidence supporting our postulate that paramilitary groups can have significant effects on elections for the legislature and the executive. Next, we show that the evidence is also broadly consistent with the implication of the model that paramilitaries tend to persist to the extent that they deliver votes to candidates for the executive whose preferences are close to theirs and that this effect is larger in areas where the presidential candidate would have otherwise not done as well. These results illustrate that, consistent with our model, there appears to be a symbiotic relationship between some executives and paramilitaries. Finally, we use roll-call votes to illustrate a possible ‘quid pro quo’ between the executive and paramilitaries in Colombia.

Keywords: State Capacity, Violence, Elections.

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“Political power grows out of the barrel of a gun.”—Mao Zedong.

## 1 Introduction

Many scholars have argued that differences in state capacity are a key factor in comparative economic and political development (see for instance Evans, Rueschemeyer and Skocpol, 1985, Evans, 1989, 1995, Kohli, 2004). Although state capacity is multi-faceted, it inevitably relies on Weber’s famous notion of the state as “a human community that (successfully) claims the *monopoly of the legitimate use of physical force* within a given territory” (1946, p. 78). States vary greatly in their capacities and whether or not they have such a monopoly of violence, and there is little evidence that this variation has decreased over the recent past. For example, in the 1990s the state in Somalia, Sierra Leone, Liberia, the Congo and Rwanda, completely collapsed and gave up any pretence of undertaking the tasks that we associate with states. In Latin America, Colombia, Peru, Guatemala, El Salvador, and Nicaragua have all recently experienced or are now experiencing prolonged civil wars, with the writ of the state being absent from large parts of the country. In Pakistan the central state in Islamabad has little control of the ‘tribal areas’ such as Waziristan. Similarly, the Iraqi state in Baghdad exercises little authority in Kurdistan.

Why do some states fail to establish this monopoly? The social science literature emphasizes several key ideas, for instance, the inability of states to establish such monopoly because of ‘difficult geography’ (Herbst, 2000), ‘rough terrain’ (Fearon and Laitin, 2003), or simply poverty (Fearon and Laitin, 2003). It has also suggested that inter-state competition and warfare (Hintze, 1975, Tilly, 1975, Brewer, 1988, Herbst, 2000) and domestic political competition influence the incentives of politicians to build state capacity (Acemoglu, Ticchi, Vindigni, 2006, Besley and Persson, 2007). Common to all of these explanations is a type of ‘modernization’ view, suggesting that as society modernizes and grows richer, state capacity will simultaneously develop. In particular ‘state formation’ involves eliminating armed actors and establishing a monopoly of violence, in the same way that after the Wars of the Roses the victorious Tudors disarmed the English aristocracy (Storey, 1968).

Yet several of the examples above are quite puzzling from this point of view. In the case of Pakistan, the tribal areas have existed since the formation of the country in 1947, and even though they have been largely out of the control of the central state, they have also been represented within it. Under the 1973 Constitution the tribal areas had 8 representatives in the National Assembly elected by the tribal elders, or the Maliks. Under General Musharraf’s regime this was

increased to 12. In Iraq, while the peshmerga militia control the streets of Mosul, a coalition of Kurdish political parties keeps the government in power in Baghdad. In Colombia, as we shall see, as much as one third of the legislature may have been elected in elections heavily influenced by armed paramilitary groups. After many of these were arrested by the Supreme Court, the Colombian president did little to stop their alternates from voting in their absence.

These examples point to a different path of state formation than the one taken by England under the Tudors and subsequently enshrined in the social science literature. Instead, they suggest that state formation can take place without a monopoly of violence being established. In this paper we develop a new perspective on state formation, emphasizing the idea that aspects of state weakness, particularly the lack of monopoly of violence in peripheral areas, can be an equilibrium outcome which ‘modernization’ need not automatically change. Although we believe that the ideas proposed in this paper have relevance both in democratic or non-democratic contexts, we develop a model formalizing these notions in the context of a democratic country. We then investigate several of implications of this model using data from Colombia.

Our model begins from the observation that in a democracy non-state armed actors (in our context, paramilitaries) can control citizens’ voting behavior. Since paramilitaries naturally have preferences over policies, when they choose to become involved in politics, this reduces the incentives of the politicians they favor to eliminate them. The model predicts that in non-paramilitary areas policies are targeted at citizens while in paramilitary areas they cater to the preferences of paramilitaries. This implies that in paramilitary areas citizens obtain fewer public goods (and other policies they value). The model further implies that paramilitaries will tend to persist to the extent that they deliver votes to politicians they prefer—in the Colombian case, to President Álvaro Uribe—and that this effect is stronger in areas where these politicians would have otherwise not done as well. Thus non-state armed actors can persist because they can be in a symbiotic relationship with specific politicians holding power: paramilitaries deliver votes to politicians with preferences relatively close to theirs, while politicians they helped elect implicitly or explicitly support laws and policies that they prefer.

We empirically investigate the implications of our model using the recent Colombian experience, where two main non-state armed actors, the ‘left-wing’ guerrillas Fuerzas Armadas Revolucionarias de Colombia (FARC—The Revolutionary Armed Forces of Colombia) and ‘right-wing’ paramilitary forces, which in 1997 coalesced into the Autodefensas Unidas de Colombia (AUC—United Self-Defense Organization of Colombia), have shaped the recent political landscape. We first provide evidence that paramilitaries, though interestingly not the FARC, have systematically

influenced electoral outcomes. In particular, after the AUC got involved in politics in 2001, the presence of paramilitaries in a municipality is correlated with the rise of non-traditional ‘third parties’ (that is, parties other than the Liberals, the Conservatives, and the Socialists), which are widely recognized to be often directly or indirectly associated with the paramilitaries (e.g., López, 2007, Valencia, 2007).

The effect of paramilitaries on the elections is further substantiated by the fact that when a senator’s list receives a greater proportion of its votes in areas with high paramilitary presence, the senator is more likely to be subsequently arrested for illegal connections with paramilitaries and to support two crucial clauses of the Justice and Peace Law, which was passed to govern paramilitary demobilization and which was highly lenient towards the paramilitaries.<sup>1</sup> Table 1 depicts some of the relevant information. On it we placed the 20 senators whose list got the greatest share of their votes in areas with high paramilitary presence.<sup>2</sup> Column 1 shows that 45% of these senators belong to ‘third political parties’. Column 4 shows that the two senators with the highest vote shares have been arrested and found guilty of links with paramilitary groups. As of May 2009 another 4 senators are under arrest, while a further 3 are under investigation, all for links with paramilitaries. Column 3 shows that the majority of those in office at the time also supported the clauses of the Justice and Peace Law.

The evidence mentioned so far is consistent with the assumptions of our model, that paramilitaries were actively involved in influencing elections. The main prediction of our model is that paramilitaries should persist more where they deliver votes to the executive that they prefer, particularly in areas where this politician would otherwise not do well. This is because eliminating paramilitaries would implicitly cost valuable votes in the election. We also show that the correlations in the data are broadly consistent with this prediction.

Finally, we examine the roll-call votes in the Senate on the legislation for changing the Constitution to remove the one-term limit and allow presidential re-election to illustrate a possible channel for the ‘quid pro quo’ between legislators elected from high paramilitary areas and the executive. We find evidence that the greater was the proportion of votes a senator’s list obtained in high paramilitary areas, the greater was the likelihood of the senator to vote in favor of removing the term limit. Column 2 of Table 1 shows that of those who voted all but three of our ‘top 20’ senators voted in favor of re-election.<sup>3</sup>

<sup>1</sup>These clauses, supported by President Uribe, reduced the penalties that could be applied to former combatants and removed the possibility of extraditing them (to the United States). They were deemed to be ‘pro-paramilitary’ by international legal analysts and human rights NGOs, such as Human Rights Watch and Amnesty International.

<sup>2</sup>Table 1 uses our main measures of paramilitary presence using data on attacks and conflict incidents. Appendix Table A1 reproduces Table 1 using a different measure of paramilitary presence, with very similar results.

<sup>3</sup>There is no direct evidence that President Uribe is in some formal ‘coalition’ with paramilitaries, and we do not

Our econometric analysis proceeds under the assumption that our measures of the presence of paramilitaries and guerillas are exogenous. We are therefore cautious about giving causal interpretations to the conditional correlations we uncover. For example, it may be that paramilitaries select into areas where people's preferences are 'conservative' and would naturally support the new 'third parties' or President Uribe, thus creating a positive association between these variables and paramilitary presence. Nevertheless, most of our findings come from panel data models with fixed effects, so that if there are time-invariant differences in political preferences across municipalities, these will not influence our results. In addition, we use direct controls for how 'conservative' different municipalities are, and as already mentioned above, in the regressions on the persistence of the paramilitaries over time, we see paramilitaries persist precisely in places which, in the absence of paramilitary coercion, were relatively unlikely to have voted for President Uribe. Finally, the fact that paramilitary presence predicts the arrests of senators suggests that politicians are not simply the perfect agents of underlying voter preferences, but are in fact implicated with the non-state armed actors, as the case study literature also suggests.

Our empirical evidence comes from a specific country, Colombia; we must thus exercise caution in making claims about external validity. Nonetheless, we believe the political mechanisms emphasized in this paper are useful in building a richer political explanation for why many modern (and in fact democratic) states do not establish a monopoly of violence in their territory.<sup>4</sup> At the very least, the theoretical ideas and the empirical evidence presented here show that the implicit notion that 'modernization' in less-developed economies will naturally lead to the formation of a Weberian state, mimicking the European experience, needs to be revised or refined. Colombia has experienced over a century of sustained increases in GDP per-capita, large increases in educational attainment, rapid urbanization, indeed all of the features of modernization (Robinson and Urrutia ed., 2007). Yet the state has not established a monopoly of violence.

In addition to the literature cited above, the arguments in this paper are related to the recent political economy literature on the determinants of state capacity. For example, Acemoglu (2005) conceptualizes state capacity as the ability to tax citizens, and examines the consequences of state capacity for economic growth and welfare. Acemoglu, Ticchi and Vindigni (2006) model the

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argue or believe that he is; in fact, the politicians in our theoretical model are not in such a coalition either. What matters is that President Uribe's relatively conservative policies are closer to those preferred by the paramilitaries, who have strong conservative leanings and thus naturally have an interest in maintaining him in power. Some of our theoretical and empirical results then exploit the fact that he may take this into account in several of his key decisions.

<sup>4</sup>Naturally, it is possible that the mechanism that we identify here may be less important in non-democratic regimes, though even dictators require support. Recall, for example, that as noted above it was General Musharraf, not any of the democratic Pakistani governments, who increased the number of representatives of the tribal areas in the National Assembly.

endogenous creation of capacity by an elite facing democratization. They argue that the elite may have an incentive to choose inefficient state institutions to limit the amount of redistribution they will face under democracy. In a related paper, Besley and Persson (2009) develop a model where politicians have to decide whether to build fiscal capacity. None of these papers are concerned with the issue of establishing a monopoly of violence, which is the focus of our paper. Within political science our work relates to the literature on ‘subnational authoritarianism’ which has emphasized how democratization at the national level can coexist with highly authoritarian local practices (O’Donnell, 1993, Gibson, 2005, Mickey, 2009). This research has given examples of some of the mechanisms contained in our model, but has not developed these ideas formally, has not noticed the key predictions that our model develops, or provided an econometric investigation of these ideas.

The literature on civil war addresses some of the issues we emphasize here implicitly, for example, in its stress on the weakness of the state (e.g., Fearon and Laitin, 2003). Nevertheless, most of the research on civil war focuses on the motivations which lie behind the decisions of people to take up arms against their governments (see, Blattman, and Miguel, 2010). In this work the fact that a state does not have a monopoly of violence arises because given the expected benefit of allocating resources to fighting rebels or insurgents, it is not worth paying the cost of eliminating them.<sup>5</sup>

Our work owes a great debt to the journalists, scholars and public officials who have played key roles in bringing to light the involvement of paramilitaries and the AUC in politics in Colombia. Particularly important has been the work of the researchers whose essays appear in Romero (2007). Sánchez and Palau (2006) also show that political competition is negatively correlated with murders of politicians in municipal elections.

The paper proceeds as follows. In the next section we develop a theoretical model to examine the incentives of politicians controlling the central state to eliminate or live with non-state armed actors depending on whether they receive electoral support from these groups. Section 3 provides a brief overview of the history and nature of non-state armed actors in Colombia. Section 4 describes the data we use and provides some basic descriptive statistics. Section 5 provides regression evidence consistent with the effects of paramilitaries on electoral outcomes. Section 6

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<sup>5</sup>There is also a large literature about the origins of conflict in Colombia (see Bergquist, Peñaranda, Sánchez eds. 1992, 2001, Deas, 1999, and Posada Carbó, 2003). Influenced by the wider academic literature on civil wars, this work has emphasized the importance of state weakness in the Colombian context as well (e.g., Waldmann, 2007). We do not deny that this is important, for example with respect to the persistence of the FARC. Instead, we emphasize that state weakness in Colombia is not simply about inability to eliminate non-state armed actors; it is also about the lack of incentives to do so.

examines the key prediction of our theoretical model, that paramilitaries should persist more in areas where they deliver votes to the executive and where they would not have otherwise done as well. Section 7 provides some suggestive evidence on another implication of our model, the symbiotic relationship between the executive and the paramilitaries. Section 8 concludes. The online Appendix includes further robustness checks.

## 2 Model

In this section, we present a simple model to formalize the possible channels of interaction between central government and paramilitaries.<sup>6</sup> Motivated by the Colombian experience, our focus will be on democratic politics, where an incumbent is facing reelection and decides whether to reconquer some of the areas under paramilitary control. The model is a variation on the probabilistic voting model of Lindbeck and Weibull (1987) and is closely related to Baron’s (1994) analysis of the electoral influence of interest groups, except that instead of influencing voting patterns via information or campaign-finance, paramilitaries coerce voters or use ballot stuffing to achieve their electoral objectives. The model will highlight how paramilitary preferences influence electoral outcomes because paramilitaries can coerce voters to support one candidate over another. It will then show how the effect of paramilitaries on electoral outcomes influences the willingness of the democratic central government to reconquer and remove the paramilitaries from different areas—the conditions of the formation of the modern Weberian state with a monopoly of violence over the entire country. Finally, we also investigate how the presence of paramilitaries affects the policy choices of the party in power.

We consider a two-period model of political competition between two parties. Party  $A$  is initially (at  $t = 0$ ) in power and at  $t = 1$ , it competes in an election against party  $B$ . The country consists of a large equal-sized number,  $N$ , of regions, with each region inhabited by a large number of individuals. We denote the collection of these regions by  $\mathcal{N}$ . The party that wins the majority of the votes over all regions wins the election at  $t = 1$ .<sup>7</sup> Regions differ in terms of their policy and ideological preferences and, in addition, some regions are under paramilitary control. We assume as in standard Downsian models that parties can make commitments to their policies, but their ideological stance is fixed (and may capture dimensions of policies to which they cannot make

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<sup>6</sup>In the empirical work we examine the impact of both the paramilitaries and the FARC on elections. However, since we do not find robust effects of the FARC and since case study evidence suggests that the FARC was much less involved in electoral politics, in the theoretical model we focus on the relationship between politicians and the paramilitaries. We return to this issue in subsection 2.5.

<sup>7</sup>This implies that we are looking at a “presidential system,” though the empirical evidence below comes mostly from votes for senators and congressmen. Focusing on the presidential system simplifies the argument without any major implications for our focus.

commitments).

## 2.1 Electoral Competition without Paramilitaries

We first introduce the details of electoral competition at date  $t = 1$  and then return to the decisions at  $t = 0$ . To start with, let us ignore the regions that are under paramilitary control (these will be introduced below).

The utility of individual  $i$  in region  $j \in \mathcal{N}$  (i.e.  $j = 1, \dots, N$ ) when party  $g \in \{A, B\}$  is in power is given by

$$U_{ij}(q, \tilde{\theta}^g) = u_j(q) - Y(\tilde{\theta}_j - \tilde{\theta}^g) + \tilde{\varepsilon}_{ij}^g,$$

where  $q \in Q \subset \mathbb{R}^K$  is a vector of policies,  $u_j$  denotes the utility of all individuals in region  $j$  over this policy vector,  $\tilde{\theta}_j$  is the ideological bliss point of the individuals in region  $j \in \mathcal{N}$ , so that  $Y(\tilde{\theta}_j - \tilde{\theta}^g)$  is a penalty term for the ideological distance of the party in power and the individual (i.e.,  $Y$  is a function that's increasing in  $|\tilde{\theta}_j - \tilde{\theta}^g|$ ). This ideological distance captures policy choices not included in  $q$  (and to which the party cannot make a commitment at the election stage). We also assume that each  $u_j$  is strictly concave and differentiable. Finally,  $\tilde{\varepsilon}_{ij}^g$  is an individual-specific utility term that will play the role of smoothing regional preferences over the two parties as in standard probabilistic voting models (Lindbeck and Weibull, 1987). We assume that

$$\tilde{\varepsilon}_{ij}^A - \tilde{\varepsilon}_{ij}^B = \xi + \varepsilon_{ij},$$

where  $\xi$  is a common “valance” term determining the relative popularity of one party versus another and  $\varepsilon_{ij}$  is an iid term. To simplify the discussion, we assume that  $\xi$  and each  $\varepsilon_{ij}$  have uniform distributions over  $\left[-\frac{1}{2\phi}, \frac{1}{2\phi}\right]$ . Therefore, conditional on the realization of  $\xi$ , the fraction of individuals in region  $j \in \mathcal{N}$  who vote for party  $A$  will be

$$v_j = \frac{1}{2} + \phi [u_j(q^A) - u_j(q^B) + \theta_j + \xi], \quad (1)$$

where  $q^A$  and  $q^B$  are the policy vectors of the two parties, and

$$\theta_j \equiv Y(\tilde{\theta}_j - \tilde{\theta}^B) - Y(\tilde{\theta}_j - \tilde{\theta}^A)$$

is the ideological advantage of party  $A$  relative to party  $B$  in region  $j \in \mathcal{N}$ . Now denoting the total number of votes by  $V$ , the probability that party  $A$  gets elected as a function of its policies, the policies of the rival party, and its ideological advantage is

$$P^A(q^A, q^B | \theta) = \Pr[V \geq N/2]$$



$$\begin{aligned}
&= \Pr \left[ \sum_{j=1}^N \left[ \frac{1}{2} + \phi(u_j(q^A) - u_j(q^B) + \theta_j + \xi) \right] \geq \frac{N}{2} \right] \\
&= \frac{1}{2} + \frac{\phi}{N} \sum_{j=1}^N [u_j(q^A) - u_j(q^B) + \theta_j],
\end{aligned}$$

where  $\theta$  is the vector of ideological biases in favor of party  $A$ , and the first line uses (1) and the second line the fact that  $\xi$  is also distributed uniformly over  $\left[-\frac{1}{2\phi}, \frac{1}{2\phi}\right]$ . Throughout, we assume that ideological advantage of one party, in particular  $\left|\sum_{j=1}^N \theta_j\right|$ , is not so large as to make that party win with probability one (when both parties choose the same platform). In the election at time  $t = 1$ , Party  $A$ 's problem is

$$\max_{q \in Q} P^A(q, q^B \mid \theta) R^A, \quad (2)$$

where  $R^A$  is party  $A$ 's rent from holding office. Conversely, the problem of party  $B$  is

$$\max_{q \in Q} [1 - P^A(q^A, q \mid \theta)] R^B, \quad (3)$$

where  $R^B$  is party  $B$ 's rent from holding office and we have used the fact that the probability of party  $B$  coming to power is the complement of that for party  $A$ . An *electoral equilibrium* at time  $t = 1$  is a tuple  $(q^A, q^B)$  that solves problems (2) and (3) simultaneously (given the ideological biases  $\theta$ ). Given the concavity and differentiability assumptions, an equilibrium is uniquely defined; moreover, as long as it is interior, it satisfies the following equations

$$\sum_{j=1}^N \nabla u_j(q^A) = 0 \text{ and } \sum_{j=1}^N \nabla u_j(q^B) = 0, \quad (4)$$

where  $\nabla u_j$  denotes the gradient of function  $u_j$  with respect to the vector  $q$ . Clearly, (4) may not be satisfied if the solution is not in the feasible set of policies,  $Q$ , and in this case, an obvious complementary slackness generalization of (4) holds. Strict concavity of each  $u_j$  immediately implies that  $q^A = q^B = q^*$ . It is also straightforward to see that strict concavity implies  $q^A = q^B = q^*$  for some  $q^*$ , even if the equilibrium is not interior. Therefore, party  $A$  will win the election at time  $t = 1$  with probability

$$P^A(q^*, q^* \mid \theta) = \frac{1}{2} + \frac{\phi}{N} \sum_{j=1}^N \theta_j. \quad (5)$$

This then leads to the following proposition, characterizing the equilibrium (proof in the text).

**Proposition 1** *Without paramilitaries, there exists a unique electoral equilibrium (at  $t = 1$ ) where  $q^A = q^B = q^*$ , and  $q^*$ , if interior, satisfies (4). Party  $A$  wins the election with probability given by (5).*

Two important points to note are as follows. First, without paramilitary presence, national policies are chosen to cater to the preferences of all voters in all regions. This feature is fairly general, though as is well known the fact that both parties choose the same policy vector (policy convergence) is special and relies on the fact that the two parties do not themselves have preferences over policies. Whether they do or not is not important for the results here, and we therefore opted for the simpler specification. Second, average ideological bias across all regions determines the probability of reelection for party  $A$  (which is currently in power).

## 2.2 Elections under Paramilitaries with Exogenous Preferences

Next, let us suppose that a subset of the regions, denoted by  $\mathcal{Z} \subset \mathcal{N}$  are under paramilitary control. Denote the total number of these regions by  $Z$ . The key feature of paramilitary-controlled areas for our purposes is that, as we will document in detail below, voting is not free but influenced by the implicit or explicit pressure of the paramilitaries. Throughout the rest of this section we impose this feature.

We start with paramilitaries with “exogenous preferences,” meaning that how the paramilitaries influence the voting behavior of the citizens in the regions they control is exogenous. This will contrast with the case in which the support of the paramilitaries is endogenous to the policy choices, studied in the next subsection. In particular, we take the behavior of the paramilitaries (and the voting behavior of the citizens in paramilitary-controlled areas) as given. In particular, suppose that in each paramilitary-controlled region  $j \in \mathcal{Z}$ , a fraction  $\tilde{m}_j$  of the voters will vote for party  $A$  regardless of policies.<sup>8</sup> Let us denote the complement of the set  $\mathcal{Z}$  by  $\mathcal{J} = \mathcal{N} \setminus \mathcal{Z}$  and the total number of regions in this (non-paramilitary-controlled) set by  $J = N - Z$ . Let us also define  $m_j \equiv \tilde{m}_j - 1/2$ . Then with an identical reasoning to that in the previous subsection, the probability that party  $A$  will win the election at time  $t = 1$  is

$$\begin{aligned} P^A(q^A, q^B \mid \theta, \mathbf{m}) &= \Pr[V \geq N/2] \\ &= \Pr \left[ \sum_{j \in \mathcal{Z}} \tilde{m}_j + \sum_{j \in \mathcal{J}} \left[ \frac{1}{2} + \phi(u_j(q^A) - u_j(q^B) + \theta_j + \xi) \right] \geq \frac{N}{2} \right] \\ &= \Pr \left[ \sum_{j \in \mathcal{Z}} m_j + \sum_{j \in \mathcal{J}} \phi(u_j(q^A) - u_j(q^B) + \theta_j + \xi) \geq 0 \right], \end{aligned}$$

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<sup>8</sup>This assumption implies that the voting behavior of all citizens in paramilitary-controlled regions is entirely *insensitive* to policies. An alternative is to suppose that paramilitaries control the voting behavior of a fraction  $m_j$  of the citizens and the remaining  $1 - m_j$  vote freely. This alternative leads to similar results and is briefly sketched in the Appendix.

where  $\mathbf{m}$  denotes the vector of  $m_j$ 's (together with information on which  $j$ 's are in the set  $\mathcal{Z}$ ) and the last equality uses the definition of  $\tilde{m}_j$ . Throughout we assume that, as with the  $\theta_j$ 's  $\left| \sum_{j \in \mathcal{Z}} \tilde{m}_j \right|$  is not so large as to make one of the parties win the election with probability one.

Rearranging the previous expression further, we obtain

$$P^A(q^A, q^B \mid \boldsymbol{\theta}, \mathbf{m}) = \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} [u_j(q^A) - u_j(q^B) + \theta_j] + \frac{1}{J} \sum_{j \in \mathcal{Z}} m_j. \quad (6)$$

We again assume that both parties maximize the probability of coming to power and define an electoral equilibrium in the same way. With an identical argument to that before, we obtain the following proposition.

**Proposition 2** *Under paramilitaries with endogenous preferences, there exists a unique electoral equilibrium (at  $t = 1$ ) where  $q^A = q^B = q^*$ . If  $q^*$  is interior, it satisfies  $\sum_{j \in \mathcal{J}} \nabla u_j(q^*) = 0$ . Party  $A$  wins the election with probability*

$$P^A(q^*, q^* \mid \boldsymbol{\theta}, \mathbf{m}) = \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} \theta_j + \frac{1}{J} \sum_{j \in \mathcal{Z}} m_j.$$

Two features that are noteworthy relative to Proposition 1 are as follows. First, policies no longer cater to the preferences of all regions. Since citizens in paramilitary-controlled areas cannot reward or punish a government according to the policy proposals that it makes, both parties only target their policies to the voters in the non-paramilitary-controlled areas (see also the Appendix). This implies that, endogenously, public goods and other amenities will be reduced in the paramilitary-controlled areas beyond the direct effect of paramilitary presence.<sup>9</sup> Thus, all else equal, we may expect paramilitary presence to increase inequality across regions. Second, electoral outcomes will now be dependent on the influence of the paramilitaries on voting behavior, which is captured by the last term in  $P^A(q^*, q^* \mid \boldsymbol{\theta}, \mathbf{m})$ . If paramilitaries prefer party  $A$ , meaning that  $\sum_{j \in \mathcal{Z}} m_j > 0$ , then the probability that party  $A$  will win the election (and stays in power) is greater, other things equal. The more areas are controlled by the paramilitaries, the stronger is this effect. In the empirical work below, we will provide indirect evidence consistent with Proposition 2 by showing the influence of paramilitaries on electoral outcomes.

This last feature already highlights how paramilitaries can have a major influence on democratic politics. Nevertheless, this effect was minimized by the model in this subsection by assuming that the paramilitaries have exogenous preferences. We will relax this assumption below. But first we discuss how the electoral role of paramilitaries affects the decision of the central government to extend (“broadcast”) its power to peripheral areas controlled by the paramilitaries.

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<sup>9</sup>The direct effect may, for example, stem from the fact that such investments and public good delivery become more expensive, or paramilitaries directly damage infrastructure, law and order and the availability of public goods.

### 2.3 The State and the Paramilitaries

Taking the electoral equilibrium at time  $t = 1$  as given, let us now consider the decisions of the government (party  $A$ ) at time  $t = 0$ . In particular, as discussed in the Introduction, a key dimension of the process of the formation of the state is the ability and willingness of the central government to establish its monopoly of violence and thus remove the power of other groups with access to guns and means of exercising (local) violence. Let us model this in the simplest possible way and suppose that at time  $t = 0$ , the objective of the governing party is

$$\sum_{j \in \mathcal{R}} \gamma_j + P^A(q^A, q^B \mid \boldsymbol{\theta}, \mathbf{m}) R^A, \quad (7)$$

where  $\mathcal{R} \subset \mathcal{Z}$  is a subset of the areas previously controlled by the paramilitary that are “reconquered” by the central government, and  $\gamma_j$  is the net benefit of reconquering area  $j \in \mathcal{R}$ , which accrues to the government at time  $t = 0$ .<sup>10</sup> This net benefit includes the additional tax revenues or security gains that the central government will derive and subtracts the potential “real” cost of the reconquest (spending on the military, potentially stability and loss of life). However, the objective of the governing party, party  $A$ , also includes the probability that it will remain in power, thus enjoying rents from power at time  $t = 1$ . In particular, if some area  $j \in \mathcal{Z}$  is reconquered, then in the subsequent electoral equilibrium at time  $t = 1$ , party  $A$  will obtain a fraction  $1/2 + \phi\theta_j$  of the votes from this region as opposed to receiving  $\tilde{m}_j = m_j + 1/2$  of the votes had this place remained under paramilitary control. A *subgame perfect equilibrium* of this game is defined as an electoral equilibrium at date  $t = 1$  together with decisions by party  $A$  at date  $t = 0$  that maximizes its utility taking the date  $t = 1$  equilibrium as given.

The analysis in the preceding paragraph then establishes the following proposition.

**Proposition 3** *A subgame perfect equilibrium involves the electoral equilibrium characterized in Proposition 2 at time  $t = 1$ , and at time  $t = 0$ , Party  $A$  reconquers*

$$\text{all } j \in \mathcal{Z} \text{ such that } \gamma_j + (\phi\theta_j - m_j) \frac{R^A}{J} > 0$$

*and does not reconquer*

$$\text{any } j \in \mathcal{Z} \text{ such that } \gamma_j + (\phi\theta_j - m_j) \frac{R^A}{J} < 0.$$

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<sup>10</sup>One could easily extend this so that these rents accrue both at  $t = 0$  and  $t = 1$ , and in that case, the objective functions will change to  $\sum_{j \in \mathcal{R}} \gamma_j + P^A(q, q^B \mid \boldsymbol{\theta}) \left[ R^A + \sum_{j \in \mathcal{R}} \gamma_j \right]$ , slightly complicating the analysis.

This proposition is an important result of our analysis and will be investigated in our empirical work. It implies that the willingness of the state to reconquer areas controlled by the paramilitaries, and thus establish the monopoly of violence envisaged as an essential characteristic of the modern state by Max Weber, is affected not only by the real costs and benefits of doing so, but also by the implications of this expansion of the authority of the state on electoral outcomes. In particular, if many of these paramilitary-controlled areas have  $m_j > \phi\theta_j$ , then the state, currently controlled by party  $A$ , will be reluctant to reconquer these areas, because doing so will make it more difficult for this party to succeed in the upcoming elections (and moreover, this effect will be stronger when rents from power at  $t = 1$ ,  $R^A$ , are higher). Naturally, the areas that are most valuable in the hands of the paramilitaries are those that have both low  $\theta_j$  and high  $m_j$ ; that is, *areas that would have otherwise voted for party B, but paramilitaries are forcing citizens to vote in favor of party A*. A government that does not require electoral support (e.g., a “purely non-democratic” government) would have decided to reconquer all areas with  $\gamma_j > 0$ . Therefore, to the extent that  $\phi\theta_j < m_j$ , i.e., to the extent that paramilitaries are ideologically closer to the government in power than the opposition party, a democratic government may be less willing to broadcast its power and reconquer areas under paramilitary control than such a non-democratic government (or a government that is secure in its position).<sup>11</sup>

Note an important implication of the functional form assumptions we have imposed so far, in particular the uniform distributions of idiosyncratic preference and valance terms. Together with the assumption that  $\sum_{j \in \mathcal{Z}} \tilde{m}_j$  is not so large is to determine the election with probability one, this implies that the value of additional votes to the party in power is constant and independent of its “expected winning probability”. As a consequence, Proposition 3 takes a simple form, where the value of paramilitary votes to the party in power is independent of this probability. With other functional forms, as in reality, this value, and thus the behavior of this party towards the paramilitary groups, may depend on its expected winning probability, for example, making it less responsive to the votes delivered by these paramilitary forces when it is ex ante more likely to win the election.<sup>12</sup>

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<sup>11</sup>Naturally, the net benefit of reconquering an area might be different for a non-democratic government. For example, it might be  $\hat{\gamma}_j > \gamma_j$  instead of  $\gamma_j$ , because a non-democratic government can impose higher taxes on certain regions than democratic governments could or would. This would be another incentive for non-democratic governments to broadcast their power. On the other hand, the cost of doing so may also be higher for non-democratic governments because they may be unwilling to build a strong army because of the future potential threats that this may pose to their reign (e.g., Acemoglu, Ticchi and Vindigni, 2010). This would then imply  $\hat{\gamma}_j < \gamma_j$ .

<sup>12</sup>As we discuss in the next section, this feature of a more general model may actually be helpful in understanding some of the recent experiences in Colombia.

## 2.4 Electoral Competition under Paramilitaries with Endogenous Preferences

The discussion so far was for paramilitaries with exogenous preferences and thus took the vector  $\mathbf{m}$  as given. Naturally, the willingness of the paramilitaries to coerce citizens to vote for one candidate or another is also endogenous and depends on their policy and ideological preferences. We now investigate these issues. Suppose that, as with the citizens, the preferences of the paramilitaries controlling region  $j \in \mathcal{Z}$  are given by

$$W_j(q, \theta^g) = w_j(q) - \hat{Y}(\tilde{\theta}_j - \tilde{\theta}^g) + \tilde{\varepsilon}_j^g,$$

where  $\hat{Y}$  is another function (possibly the same as  $Y$ ) that is also increasing in  $|\tilde{\theta}_j - \tilde{\theta}^g|$  and now  $\tilde{\theta}_j$  is the policy preference of the group of paramilitaries controlling region  $j$ . With a similar reasoning to that above, let us define

$$\hat{\theta}_j \equiv \hat{Y}(\tilde{\theta}_j - \tilde{\theta}^B) - \hat{Y}(\tilde{\theta}_j - \tilde{\theta}^A)$$

as the ideological leanings of the paramilitaries in region  $j$  in favor of party  $A$  (we use  $\hat{\theta}_j$  instead of  $\theta_j$  to highlight that this refers to the paramilitaries). And in addition, suppose that, as before  $\tilde{\varepsilon}_j^A - \tilde{\varepsilon}_j^B$  it composed of two elements  $\varepsilon_{ij}$  and  $\xi$  both of which are distributed uniformly over  $\left[-\frac{1}{2\phi}, \frac{1}{2\phi}\right]$ . Then the probability that paramilitaries in region  $j \in \mathcal{Z}$  will prefer party  $A$  to party  $B$  is given by

$$\frac{1}{2} + \hat{\phi} \left[ w_j(q^A) - w_j(q^B) + \hat{\theta}_j + \xi \right].$$

Let us also assume that paramilitaries can force all voters in their sphere of influence to vote for whichever party they prefer. Then the probability that party  $A$  will win the election becomes

$$\begin{aligned} P^A(q^A, q^B | \hat{\theta}) &= \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} [u_j(q^A) - u_j(q^B) + \theta_j] \\ &\quad + \frac{\hat{\phi}}{J} \sum_{j \in \mathcal{Z}} [w_j(q^A) - w_j(q^B) + \hat{\theta}_j], \end{aligned}$$

where now  $\hat{\theta}$  denotes the vector of all ideological preferences, including those of the paramilitaries. Naturally, the model with paramilitaries with exogenous preferences in the previous two sections is a special case of this model where  $w_j(q) \equiv 0$  for all  $q \in Q$ , so that paramilitaries do not care about policy (though they may still care about the ideological stance of the party in power).

With a similar reasoning to our analysis above, electoral competition will lead to the same policy choice for both parties, and when it is interior, this vector will be given by the solution to the following set of equations:

$$\phi \sum_{j \in \mathcal{J}} \nabla u_j(\hat{q}^*) + \hat{\phi} \sum_{j \in \mathcal{Z}} \nabla w_j(\hat{q}^*) = 0. \quad (8)$$

Naturally, these equations hold in the complementary-slackness form when  $\hat{q}^*$  may be at the boundary of the feasible policy set  $Q$ .

Therefore, we obtain the following characterization of electoral equilibrium and efforts by the state to reconquer paramilitary-controlled areas under the control of the paramilitaries (proof in the text).

**Proposition 4** *Under paramilitaries with endogenous preferences, there exists a unique electoral equilibrium at  $t = 1$  where  $q^A = q^B = q^*$ . If  $q^*$  is interior, it satisfies (8). Party A wins the election with probability*

$$P^A(q^*, q^* | \hat{\theta}) = \frac{1}{2} + \frac{\phi}{J} \sum_{j \in \mathcal{J}} \theta_j + \frac{\hat{\phi}}{J} \sum_{j \in \mathcal{Z}} \hat{\theta}_j.$$

Moreover, the subgame perfect equilibrium involves Party A reconquering (at time  $t = 0$ )

$$\text{all } j \in \mathcal{Z} \text{ such that } \gamma_j + \left( \phi \theta_j - \hat{\phi} \hat{\theta}_j \right) \frac{R^A}{J} > 0,$$

and not reconquering

$$\text{any } j \in \mathcal{Z} \text{ such that } \gamma_j + \left( \phi \theta_j - \hat{\phi} \hat{\theta}_j \right) \frac{R^A}{J} < 0.$$

There are several new features in this proposition. First, when paramilitaries adjust their support depending on the policies and ideological stance of the two parties, the parties then change their policies in order to be more attractive to the paramilitaries' policy preferences. That is, rather than catering to the preferences of the citizens in the areas that are controlled by the paramilitaries (which they would have done without the paramilitaries), parties appease the paramilitaries themselves. This result is the basis of the potential *symbiotic* relationship between paramilitaries and the executive mentioned in the Introduction. Moreover, it can further increase the inequality among the regions, with the policies chosen specifically to support, or refrain from threatening, the paramilitaries and the areas where the paramilitaries are strongest. Two features determine how slanted towards the paramilitaries equilibrium policies are. These are: the size of the paramilitary-controlled areas (the greater is  $z$ , the more influential are the paramilitaries in shaping equilibrium policy) and the relative responsiveness of the paramilitaries to policy concessions (the greater is  $\hat{\phi}$  relative to  $\phi$ , the more responsive are policies to paramilitary preferences relative to citizen preferences). In addition, because electoral competition makes both parties cater to the wishes of the paramilitaries, at the end the paramilitaries ideological

preferences play a central role in whether they force the population to vote for party  $A$  or party  $B$ .<sup>13</sup>

Finally, we can also allow both parties or one of the parties to modify its ideological stance (in a credible fashion). The same analysis as here will then imply that in order to attract votes from paramilitary-controlled areas, one or both parties may decide to pander to the ideological preferences of the paramilitaries.

## 2.5 Importance of Non-National Ambitions

An important question in the context of Colombian politics is why right-wing paramilitary groups have become more involved in influencing elections than left-wing guerrillas, in particular, more so than the relatively well-organized FARC. One possible answer is that in contrast to the guerrillas, the paramilitaries do not have national ambitions, making a coalition between them and the executive controlling the central state more feasible. The model presented so far has implicitly made this assumption, since we did not introduce the risk that the non-state armed actors may take over the central state.

A simple way of introducing this possibility would be to have a probability  $\Phi(z)$  that the non-state armed actors would become strong enough to challenge the central state, perhaps overthrow it. Such an overthrow of the central government by non-state armed actors is not uncommon in weak African states, such as Somalia, Sierra Leone or Liberia, and has certainly been the objective of the FARC. Naturally, we would expect  $\Phi(z)$  to be increasing in  $z$ , so that when these groups control more areas, they are more likely to pose such a national challenge. In that case, we would need to change the objective function of party  $A$  to incorporate this possibility. For example, equation (7) could be modified to

$$\sum_{j \in \mathcal{R}} \gamma_j + [1 - \Phi(z)] P^A(q^A, q^B \mid \boldsymbol{\theta}, \mathbf{m}) R^A.$$

This specification makes it clear that when  $\Phi(z) > 0$ , there will be stronger incentives for party  $A$  to reconquer territories controlled by these non-state armed groups (thus reducing  $z$ ). When  $\Phi(z)$  is sufficiently high and sufficiently increasing in  $z$ , this effect can more than compensate for the electoral advantage that local control by these groups creates for the party in power. Thus factoring in the national ambitions of non-state armed actors reduces the room for a coalition or a symbiotic relationship between these groups and the executive. Expressed differently, this

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<sup>13</sup>The result that both parties modify their policies to partly cater to the wishes of the paramilitaries has an obvious similarity, and an identical mathematical logic, to Baron's (1994) result concerning the effects of a lobby on the platforms of two competing parties.



reasoning suggests that when non-state armed actors have national ambitions, it will be advantageous for the central state to eliminate them (sooner or later), thus any implicit or explicit policy promises that it makes to such groups would be non-credible, making a coalition between them impossible. This perspective suggests a natural reason for why, in Colombia, such a coalition may have been much more likely to arise between the executive and the paramilitaries rather than with the FARC.

## 2.6 Summary and Empirical Predictions

In the rest of the paper, we will investigate the effect of Colombian paramilitary forces on the electoral outcomes in the early 2000s. Our investigation is motivated by the theoretical ideas discussed above. In particular, we will document the following broad patterns, which, though not conclusive proof of the ideas developed here, are highly suggestive.

1. Consistent with Proposition 2, paramilitaries, once they became sufficiently powerful, started influencing electoral outcomes in the areas of Colombia they controlled.
2. Consistent with Proposition 3, we will show that paramilitaries located in areas that voted for the current President in great numbers, but in past elections tended to vote for more liberal politicians, are more likely to persist.
3. Consistent with Proposition 4, we will show that the President has proposed legislation in line with the preferences of the paramilitaries, and the Senators elected from high paramilitary areas have supported this legislation.

## 3 A Brief Overview of Non-State Armed Actors in Colombia

### 3.1 Origins of Colombian Non-State Armed Actors

Colombia has a long history of non-state armed actors and many of the most recent emerged from a murderous civil war known as *La Violencia* which lasted from the late 1940s to 1958. This civil war was fought between the Liberal and Conservative political parties and in 1964, out of the ashes of various Liberal and Communist guerillas, was formed the Fuerzas Armadas Revolucionarias de Colombia (FARC—The Revolutionary Armed Forces of Colombia). In the same year the Ejército de Liberación Nacional (ELN—National Liberation Army) was also created. These ‘left-wing’ guerilla groups were relatively small during the 1960s and 1970s, but began to expand rapidly in the 1980s and they were joined by other left-wing revolutionary movements such as the Movimiento 19 de Abril (M-19—Movement of April 19) and Quintín Lame. The 1980s also saw the

rapid expansion of ‘right-wing’ paramilitary forces which in 1997 coalesced into the Autodefensas Unidas de Colombia (AUC—United Self-Defense Organization of Colombia).

These various non-state armed groups ranged over most of the territory of Colombia and though estimates vary, may have had around 50,000 men and women under arms at the start of the 21st Century. They engaged in kidnapping, massacres of civilians, drug production and exportation, and regularly expropriated land and extorted income (‘collected the taxes’) from Colombian citizens. They also engaged in violent conflicts with each other and with the armed forces of the Colombian state.

### 3.2 Paramilitaries and the AUC

Colombia’s paramilitaries are thought to originate from 1960s counterinsurgency measures and Law 48 of 1968 which allowed the creation of self-defense militias by private citizens for the purposes of protecting their properties and lives (see Romero, 2000, 2002, Rangel, 2005, and Duncan, 2007, for overviews of the history and organization of the paramilitaries). Nevertheless, the period of *La Violencia* is also littered with various sorts of militias and spontaneous self-defense groups (see Roldán, 2002, on Antioquia). Small groups of paramilitaries also emerged in places where there were valuable resources whose exploitation was contested such as in the emerald mines of Muzo, in the department of Boyacá and the drug plantations on the coast near Santa Marta, Magdalena and in the nearby department of La Guajira.

The escalation of paramilitaries in the early 1980s is associated with the rise of the large drug cartels in Medellín and Cali that faced threats of kidnapping and extortion from left-wing groups. As the wealth of the drug cartels grew, many of their members began to buy up land and ranches in rural areas. Here their interests began to fuse with those of traditional rural elites who also wished to protect themselves from extortion and kidnappers (see Gutiérrez Sanín and Barón, 2005). This led to collaboration in the formation of paramilitary groups. One area of rapid expansion was the Magdalena Medio at the eastern periphery of the department of Antioquia which saw the emergence of groups such as Los Tangueros formed by the Castaño brothers (Carlos, Fidel and Vicente) whose father had been killed by the FARC in 1981.<sup>14</sup> In 1994 the Castaño brothers formed the ‘Autodefensas Campesinas de Córdoba y Urabá’ (ACCU—Peasant Self-Defense force of Córdoba and Urabá). This further expansion was facilitated in the same year by a law promoted by President Samper to allow the creation of CONVIVIR, a national program of neighborhood

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<sup>14</sup>There is also evidence suggesting involvement of the army in the training and organization of paramilitary groups, though in 1989 the Colombian Supreme Court declared that Law 48 was unconstitutional. One month later President Barco issued Decree 1194 which prohibited the creation, promotion or organization of paramilitary or self-defense groups and declared such activities illegal.

watch groups. An important supported of this program was Álvaro Uribe, then Governor of Antioquia, whose father was killed by the FARC in 1983.

In April 1997 the AUC was formed by Carlos Castaño and it included possibly 90% of the existing paramilitary forces. The creation of this national organization increased the effectiveness of the paramilitaries considerably; as a result, the FARC and ELN were thrown out of large areas of the country, though as our data will show these guerrilla groups are still active in many parts of Colombia (see Restrepo, Spagat and Vargas, 2004).<sup>15</sup>

Soon after coming to power in 2002, President Uribe began to negotiate the demobilization of the paramilitaries, something he had promised during his election campaign. Decree 128 issued by the president in January 2003 gave de facto amnesty for paramilitaries not under investigation for human rights violations and this has been applied to the vast number of demobilizations (around 92%). On July 15, 2003 in Santa Fé de Ralito in Córdoba the government signed an agreement with most of the groups of the AUC to disarm by the end of 2005.<sup>16</sup>

On November 25 2003 around 860 paramilitaries of Medellín's Cacique Nutibara Bloc led by 'Don Berna' (Diego Fernando Murillo) demobilized. This process was further institutionalized by the passing of the controversial Justice and Peace Law in June 2005 which was signed into law by President Uribe in the following month. Article 29 of this law limits sentences to those found guilty of human rights violations to between 5 and 8 years. Article 30 allows the government to determine the place of detention, which need not be a prison. In May 2006 the Colombian Constitutional Court altered many aspects of the law on the grounds that they were unconstitutional, in particular the Court stipulated that demobilizing combatants had to give a full confession of their activities in order for the law to apply to them. Both the demobilization process and the Justice and Peace Law have been widely criticized by human rights organization.<sup>17</sup>

There is a great deal of controversy about whether the paramilitary demobilization is real or whether it will lead to new armed groups (or simply to the institutionalization/legitimation of the power of the AUC; on this issue see Pardo, 2007, International Crisis Group, 2007, Porch and Rasmussen, 2008, Zuckerman, 2009).

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<sup>15</sup>The timing of the creation of the AUC was a consequence of both the collapse of the Medellín and Cali drug cartels which had previously exercised a large amount of control over the organizations and of the decision of the Pastrana government to attempt to negotiate a peace deal with the FARC by making concessions.

<sup>16</sup>The text of the agreement is available at the web page of the Office of the High Commissioner for Peace: [www.altocomisionadoparalapaz.gov.co/acuerdos/index.htm](http://www.altocomisionadoparalapaz.gov.co/acuerdos/index.htm)

<sup>17</sup>See Human Rights Watch (2005), Amnesty International (2005) and International Federation for Human Rights (2007).

### 3.3 The Involvement of Paramilitaries in Politics

Soon after the foundation of the AUC in 1997 there appears to have been a strategic decision to influence electoral politics. This change is traced to a historic meeting in Santa Fé de Ralito in 2001 where members of the *estado mayor* (the governing body) of the AUC along with politicians and members of Congress signed a secret document calling for the ‘refounding of the country’. Those who signed this document included prominent paramilitary leaders, such as Jorge 40 (Rodrigo Tovar Pupo), Don Berna (using a pseudonym ‘Adolfo Paz’) and Diego Vecino, and several politicians subsequently arrested for links with paramilitaries, including Senators William Montes and Miguel de la Espriella (see Table 1). An explicit aim of the accord was to have the AUC play a more important role in electoral politics.<sup>18</sup> This change in the strategy of the AUC will be crucial to our empirical approach, allowing us to investigate how electoral outcomes change differentially in high paramilitary areas before and after their involvement in politics in 2001.

The other notable, and related, development during the 2002 election is the emergence of brand new political parties, which we refer to as ‘*third parties*,’ such as Cambio Radical and MIPOL. These parties often had explicit or implicit links with the paramilitaries, and the case study evidence shows that paramilitary pressure was often to increase the vote for these parties. In many paramilitary-controlled areas they have replaced the traditional Liberal and Conservative parties. We will use the vote share of ‘third parties’ as a measure of paramilitary influence on electoral outcomes.

Beginning in 2005 there were increasing accusations of involvement of the AUC in the elections of 2002. Scandal mounted further with the demobilization of Jorge 40 and his 2,000 strong block on March 10, 2006 in La Mesa, César. Jorge 40’s computer fell into the hands of government officials and it contained emails ordering his men to recruit peasants to pretend to be paramilitaries during demobilization ceremonies.<sup>19</sup> The computer also listed over 500 murders and detailed many links between politicians and paramilitaries. These revelations led to intense scrutiny of the 2002 election results many of which exhibit some rather extraordinary features. These include massive

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<sup>18</sup>Although the meeting in Ralito was probably the most important one for the subsequent strategy of the paramilitaries, it was not the only such pact between them and politicians during this period. In the southern plains, paramilitary leader Hector Buitrago (Martin Llanos) organized a meeting in 2000 with all the candidates running for the governor’s and the mayor’s offices and explicitly traded political support against key positions in the local executive, allocations of public contracts, and a share in the resources of the municipality (“La Sombra de Martin Llanos” *Semana*, October 8, 2007). In Puerto Berio, Antioquia, four congressmen from Santander met with paramilitary leader Salvatore Mancuso in 2001 for a similar pact. In the Municipalities of Chivolo and Pivijay of the department of Magdalena, the pact with the paramilitaries involved 417 local politicians that committed to support the candidates linked with the paramilitaries for the legislative elections of 2002 through a movement called “Movimiento la Provincia Unida” (Movement United Province) (*Semana*, November 6, 2006).

<sup>19</sup>See also Inter-American Commission on Human Rights (2007, p. 5) on the apparently fake demobilizations in César.

changes in voting patterns and very high concentrations of votes for some candidates in particular municipalities.<sup>20</sup>

Since then there have been many investigations of supposed links between politicians and paramilitaries and a large case study literature has emerged documenting such links (see in particular the research of López, 2007, Valencia, 2007, and the other essays in Romero, 2007, Serrano Zabala, 2007 and the web site [verdadabierta.com](http://verdadabierta.com)). As of May 29, 2009, 39 members of Congress and the Senate were under investigation, 36 were arrested and in detention, and 11 had been found guilty of links with paramilitaries.<sup>21</sup> In total this represents almost 1/3 of Colombian legislators. Those previously arrested but released include Mario Uribe, President Uribe's cousin and main political adviser. Those arrested include Senator Carlos García, the president of the "U party" (U for Uribe—though this party is not officially recognized by the president as his party). The investigation and arrest of these politicians has been undertaken primarily by the Supreme Court.

### 3.4 Controlling the Vote

There is considerable case study evidence that following the meeting in Santa Fé de Ralito, paramilitary groups actively tried and succeeded in influencing votes in national elections (that is, in the 2002 and 2006 elections). The testimony of major paramilitary leaders suggests that these groups replaced the authority of the state in many areas and many of the paramilitary leaders have been quite articulate about their 'political project'. Of these the testimony of Salvatore Mancuso is perhaps most telling, noting that

“What I said is that 35% of the Congress was elected in areas where there were states of the Self-Defense groups, in those states we were the ones collecting taxes, we delivered justice, and we had the military and territorial control of the region and all the people who wanted to go into politics had to come and deal with the political representatives we had there.”<sup>22</sup>

The investigation into the 2002 and 2006 election results and the testimony of demobilized paramilitaries has revealed a large number of different 'pacts' between paramilitary leaders and politicians (detailed in López and Sevillano, 2008) and also demonstrates that a large number of different strategies were used to guarantee that candidates preferred by paramilitaries won elections. A salient strategy seems to have been to terrorize people into voting for specific candidates.

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<sup>20</sup>See for instance the article in the Colombian weekly *Semana* "Votaciones atípicas en las elecciones de congreso del 2002," September 11, 2005.

<sup>21</sup>This data is updated regularly on <http://www.indepaz.org.co>.

<sup>22</sup>Author's translation from [http://www.youtube.com/watch?v=0tsaMNqoa\\_k&feature=related](http://www.youtube.com/watch?v=0tsaMNqoa_k&feature=related)

In the municipality of San Onofre in the coastal department of Sucre,<sup>23</sup> for example, this was arranged by the paramilitary leader ‘Cadena’.

“For the elections of 2002, the trucks sent by ‘Cadena’ went through neighborhoods and rural areas of San Onofre picking people up. According to some people in this municipality in Sucre, thousands of peasants were taken to the corregimiento ‘Plan Parejo’ so they could see the candidate for whom they had to vote for in the legislative elections: Jairo Merlano for Senate and Muriel Benito for the House of Representatives.

‘Cadena’ put in a bag all the names of the councilors, he took two and said that he was going to kill them and other people chosen randomly if Muriel did not win”, says a peasant from this town. The threat seems to have been effective: each candidate obtained 40,000 votes in Sucre.”<sup>24</sup>

Sheer terror seems to have been used not just to induce people to vote for particular candidates but also to keep them away from the polls so that ballot stuffing and other forms of manipulation of vote totals could occur. Evidence of the use of coercion to keep people at home and away from the polls comes from La Jagua de Ibérico in the department of César.<sup>25</sup>

Another strategy, where coercion also played an important role, involved collecting people’s cédulas (national identity cards which a person must produce to vote) from their houses, using them to collect the ballots (the ‘tarjetón’) and filling them in for people.<sup>26</sup>

Further evidence on how votes were delivered emerged during the testimony of Rafael García Torres, the former director of information services for the Presidential intelligence service, the Administrative Security Department (DAS). García, under investigation for links with paramilitaries, told prosecutors that he had designed a computer program to use confidential information “that told us the list of voters by any category, for example, by polling station, zone, municipality and even by departments.” With this information in hand counterfeit ballots were created so “that by the end of the elections they would include fake votes of the people who did not vote, and if there were ballots favoring other candidates different from the ones from the paramilitary group Bloque Norte they would be replaced by ballots for our candidates”.<sup>27</sup>

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<sup>23</sup>Interestingly the mayor and ex-mayor of San Onofre were both signatories of the Pact of Santa Fé de Ralito.

<sup>24</sup>Quoted from “Redacción Nacional” *El Tiempo* November 11, 2006. Translation by the authors.

<sup>25</sup>From ‘Un Abrebecasa de estas Elecciones’ by Cristina Velez in *Votebien.com*, February 2006.

<sup>26</sup>This phenomenon is discussed in the article “Aquí nadie es un santo” *Semana*, September 29, 2007.

<sup>27</sup>See [www.cambio.com.co/portadacambio/712/ARTICULO-WEBNOTA\\_INTERIOR.CAMBIO-3444866.html](http://www.cambio.com.co/portadacambio/712/ARTICULO-WEBNOTA_INTERIOR.CAMBIO-3444866.html).

Other evidence reveals both the extent to which the political project of the paramilitaries was planned and also how votes were guaranteed. *Semana* documented how paramilitary leaders and politicians divided up coastal departments, see *Semana*, November 25th 2006.

All in all the evidence indicates that paramilitary groups used a wide variety of strategies to make sure that their preferred candidates got elected. This ranged from terrorizing voters to vote in particular ways, terrorizing them to stay away from the polls so they could stuff ballots, voting instead of citizens by confiscating their identify cards, terrorizing politicians so that they would not run against their preferred candidates, and manipulating subsequent vote totals electronically.<sup>28</sup>

### 3.5 The Colombian Political System

Here we emphasize a few institutional details of the Colombian system that are important for our empirical strategy. Under the 1991 Constitution the president of Colombia was elected for one four year term with no possibility of re-election. There has been a strong norm against re-election historically in Colombia and the last president to succeed himself was Rafael Núñez in 1886. Though under the 1886 Constitution re-election was permitted if not successive, it only happened once with Alfonso López Pumarejo being president between 1934 and 1938 and again between 1942 and 1945 (when he ended his second term early by resigning). The president is elected by a national vote and if no candidate receives 50% of the vote in the first round a run-off election is held between the two candidates with the largest number of votes in the first round.

It is also important to note that like most presidential systems in Latin America, Colombia's features strong presidential dominance of the legislature with presidents often ruling for long periods by issuing decrees.

For the Senate there is a national constituency where 100 senators are elected from lists. For the Congress there are 32 multi-member districts with each district corresponding to a department. The representation of departments depends on their population and there are 162 congressmen in total. Historically in Colombia even traditional party lists are very personalized so the typical situation is one where only one candidate is elected from each list. This situation did not change with the 2006 elections even though a reform in the electoral law stipulated that to win a seat in the legislature a list had to have at least 2% of the vote nationally. At the same time as this law was introduced, the electoral system was changed to allow for open-list proportional

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<sup>28</sup>Our empirical results will show that the AUC more than any non-state armed actor has been significantly influencing elections in Colombia. The FARC and ELN have also certainly influenced some elections and have used their power to sway or intimidate voters in favor of candidates they preferred. They have threatened and killed politicians. However, their involvement in elections has been more limited than that of the AUC. We conjecture that this is mostly because the FARC and ELN have been ideologically opposed to the institutions of the state in Colombia and their project was to overthrow the national government. As also emphasized by our theoretical discussion in subsection 2.5, this made a symbiotic relationship between them and the executive impossible. In contrast, the AUC are a continuation of local paramilitary groups allied with local elites and politicians. Again in light of our discussion in subsection 2.5, it was important that the AUC did not want to overthrow the state but to exercise control over certain peripheral areas and influence key legislation. This created a platform for a symbiotic relationship between the central state and the AUC, which would have been impossible for the FARC and ELN.

representation (with preference voting). Thus even though the number of lists fell dramatically, personal politics continued unabated via preference voting.

The organization of the Higher Courts in Colombia is rather intricate and we discuss it in the Appendix. The crucial point for the paper is that under the 1991 Constitution they were set up in a way which makes it very difficult for politicians and the president to determine their composition.

## 4 The Data

### 4.1 Data Sources and Construction

The most important data for the paper are on the presence of non-state armed actors, specifically paramilitaries and left-wing guerillas. Our main measure of the presence of non-state armed actors is one based on conflict incidents, which we refer to as ‘attacks’ for short. The database of attacks is from Centro de Estudios sobre Desarrollo Económico (CEDE) in the Facultad de Economía at the Universidad de Los Andes in Bogotá. CEDE collects data from the Observatory of Human Rights of the Vice-presidency and the National Department of Planning and aggregates variables in several categories by armed actor and type of action. The original data are a compilation of news from newspapers and from reports of the national police. Our measure of *attacks* is constructed by aggregating over many of these variables. For each armed actor we simply add the following variables: explosive terrorist acts, incendiary terrorist acts, other terrorist acts, assaults to private property, attacks on civil organizations, political assassination attempts, road blockades, armed contact between state and non-state armed forces initiated by the latter, ambushes of civilians, harassing (mainly threats to civilians), incursion into ‘villages’, overland piracy, illegal checkpoints, armed forces wounded by the non-state armed group, murders of civilians, murders of politicians, massacres, deaths of members of the state armed forces, kidnappings of members of the armed forces, kidnappings of politicians and kidnappings of civilians. We have this variable for each year in the period 1997 to 2005.

We check the robustness of our results with an alternative measure of the presence of non-state armed actors based on displaced people. The database from which we constructed our *displaced* measure comes from Acción Social an agency created by the presidency. This data is collected from people that report themselves and are classified as displaced in the Registro Único de Población Desplazada (unique register of displaced population) in order to obtain a set of subsidies. These data specify the municipality where the displacement originated, the year of the displacement and the armed actor that originated it. We have these data annually for the period



1997 to 2006.

We use these data to construct various measures of the presence of non-state armed actors. Because the time series variation in both the attacks and the displaced measures appears to be quite noisy, we focus on ‘averages’ of these data, though we also exploit over-time variation in some specifications. Our first main measure of paramilitary presence, referred to as *paramilitary attacks*, is total paramilitary attacks between 1997 and 2005 in municipality  $m$  per 1000 inhabitants where the population measure is the average population between the 1993 and 2005 censuses. The Appendix shows the distribution of paramilitary and guerrilla presence across Colombia according to this measure. Our second measure is a dummy that takes the value of 1 if municipality  $m$  has a value of *paramilitary attacks* above the 75th percentile.<sup>29</sup> We also construct two similar measures with the displaced variable and identical measures for guerrilla attacks (FARC and ELN combined).

We take elections results from the senate, congress and presidential elections 1991-2006 from the Registraduría Nacional del Estado Civil. Using the names of the political parties to which politicians belonged, we constructed party vote shares in each municipality. We then classified parties into ‘third’, ‘left’ and ‘traditional’ (Liberals or Conservatives) political parties, and calculated the vote share of third parties in each municipality.<sup>30</sup> For Presidential elections we took the numbers from the first round election results. Finally, we obtained data from two crucial roll-call votes from the *Gacetas del Senado*.<sup>31</sup>

As controls, we collected data on the vote share of Álvaro Gómez in the 1986 presidential election to construct a measure of the extent of ‘right-wing’ support in a municipality. Gómez was the son of the right wing conservative President Laureano Gómez from the earlier 1950s and ran on a very conservative platform as the presidential candidate for the Conservative party. Similarly, we use the vote share of Jaime Pardo Leal the presidential candidate for the Unión Patriótica in the same election. Since the Unión Patriótica was the unofficial political wing of the FARC, Pardo Leal’s vote share is a good measure of ‘left-wing’ support in a municipality. In many of our regressions, we also include interactions between a full set of time dummies and various municipality-level controls. These controls are the land Gini in 1985, the area of the municipality, altitude, distance to state capital, average municipality population between 1993 and 2005, an

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<sup>29</sup>Less than half of the municipalities have any paramilitary *Attacks*; in contrast, only two municipalities have zero *Displacements*, though several municipalities have very low levels.

<sup>30</sup>Given our focus on the impact of the AUC, when we examine votes for third parties, we do not consider parties in the left-wing coalition, the Polo Democrático (‘Democratic pole’), which are unconnected with the paramilitaries, as ‘third parties’. See Valencia (2007) for a similar distinction and calculation.

<sup>31</sup>Roll-calls are not taken for most votes in either the Senate or Congress.

index of how rural the population of the municipality is (in 1993), an index of ‘unfulfilled basic needs’ in 1993, proxying for the level of poverty in the municipality, and dummies for coca cultivation in 1994 and opium cultivation in 1994 (these controls are from the CEDE database).

## 4.2 Descriptive Statistics

Table 2 shows descriptive statistics for our sample. Columns 1 and 2 report the mean and standard deviation of the variables for the whole sample. Columns 3-6 report the same two variables for high paramilitary areas where we use the attacks dummy defined in the last section to decide whether or not a municipality has high or low paramilitary presence.

The first two sets of rows show the rapid increase in paramilitary presence between 1996-1997 and 2000-2001 with some evidence that this fell in 2004-2005. Interestingly, the next set of rows show a similar increase in guerilla presence (with no tendency to fall in the most recent period, despite President Uribe’s intensification of the war against the FARC). Looking at columns 3 and 5 it is evident that there is a positive correlation between paramilitary presence and guerilla presence, which is not surprising since, as we discussed above, paramilitary units were often formed to combat the guerilla.

There are several noteworthy features of the data highlighted by Table 2. Rows 9-12 show a large increase in the share of third parties after 2002, and this increase is more pronounced in high paramilitary areas. Finally, rows 13 and 14 show a noticeable increase in the vote share of the winning presidential candidate in the high paramilitary areas. These patterns give a preview of our regression evidence that will be presented in the next section, as part of the evidence of paramilitary involvement in politics.

Rows 15-25 show that there are also some notable differences between high and low paramilitary areas in terms of the covariates. Most importantly, low paramilitary areas appear to be more ‘right-wing’. This is reassuring in connection with the concerns that our measure of paramilitary presence will capture latent right-wing leanings. There are also some differences in terms of other covariates, though these appear relatively small.

## 5 The Impact of Non-State Actors on Elections

We now investigate econometrically the impact of non-state armed actors on electoral outcomes, in particular their impact on the vote share of third parties and the winning presidential candidate. Our basic regressions will be from a simple panel data model of the following form:

$$y_{m,t} = d_t + \delta_m + \alpha_t \cdot P_m + \beta_t \cdot G_m + \mathbf{X}'_{m,t} \cdot \boldsymbol{\pi} + \varepsilon_{m,t}, \quad (9)$$

where  $y_{m,t}$  is the outcome variable in municipality  $m$  at time  $t$ , the  $d_t$ 's denote time effects, the  $\delta_m$ 's are municipality fixed effects,  $\mathbf{X}_{m,t}$  is a vector of covariates, which contains the interactions between various geographic and political controls at the municipality level (described above) and a full set of time dummies that are included in some specifications;  $\varepsilon_{m,t}$  is an error term representing all omitted factors. Most importantly,  $P_m$  is our time-invariant measure of paramilitary presence and  $G_m$  as the corresponding measure of guerilla presence. The term  $\alpha_t \cdot P_m$  therefore estimates a potentially differential growth effect for every time period (relative to the base, initial date). This specification will enable us to focus on whether there is a change in an outcome variable (for example, the third party vote share) after the AUC became involved in politics. Our first dependent variable will be the vote share of third parties, proxying for the direct effect of the AUC in elections, and we have these data for the 1991, 1994, 1998, 2002 and 2006 elections. This enables us to include interactions with the 1994, 1998, 2002 and 2006 dummies and our measures of paramilitary presence as a check against pre-existing trends (1991 election is the omitted category). Our working hypothesis that the AUC influenced elections and forced citizens to vote for certain lists or candidates (or used ballot stuffing) implies  $\alpha_t > 0$  after 2002.

We also experimented with empirical models of the following form

$$y_{m,t} = d_t + \delta_m + \alpha_t \cdot P_{m,t-1} + \zeta \cdot P_{m,t-1} + \beta_t \cdot G_{m,t-1} + \eta \cdot G_{m,t-1} + \mathbf{X}'_{m,t} \cdot \boldsymbol{\pi} + \varepsilon_{m,t}, \quad (10)$$

which include both a time-varying main effect of paramilitary and guerrilla presence, and focus on the interaction between year effects and the time-varying measures. The disadvantage of this model is that, as noted above, year-to-year variation in paramilitary and guerrilla presence is often due to measurement error. To minimize the impact of year-to-year variations, we estimate (10) only using the election years for 1998, 2002 and 2006 and construct two dummy variables  $P_{m,t-1}$  and  $G_{m,t-1}$  using the two years prior to the election. We then set  $P_{m,t-1} = 1$  if municipality  $m$  is above the 75th percentile.  $G_{m,t-1}$  is constructed similarly. For the 1998 election we just use the 1997 data, for 2002 we used data from 2000 and 2001, and so on. Equation (10) also includes the direct effects of  $P_{m,t-1}$  and  $G_{m,t-1}$ .

## 5.1 Paramilitary Effect on Elections—Third Parties

We first investigate the impact of paramilitary presence on the vote share of third parties in the Senate elections. Given the link between paramilitaries and several third-party candidates, we expect that third parties should receive a higher vote share after 2002 in areas with greater paramilitary presence. More specifically, we estimate equations (9) and (10), with the dependent variable  $y_{m,t}$  corresponding to the vote share of third parties in municipality  $m$  in the elections

for Senate at time  $t$ . Our basic results, using the *attacks* measure, are reported in Table 3. In this and all subsequent tables, all standard errors are fully robust (allowing for arbitrary serial correlation at the municipality level), and Tables 3 and 4 include a full set of municipality and time dummies in all specifications.

Table 3 shows a robust positive and significant effect in both 2002 and 2006 of paramilitary presence on the vote share of third parties. For example, column 1 estimates  $\hat{\alpha}_{2002} = 20.97$  with a standard error of 3.14 and a similar estimate for 2006,  $\hat{\alpha}_{2006} = 22.10$  (s.e.=3.19). Both estimates are highly statistically significant and quantitatively large (the magnitudes will be discussed below).

Column 2 adds our basic covariates (the land Gini in 1985, the area of the municipality, altitude, distance to state capital, average population between 1993 and 2005, the index of rurality, the index of unfulfilled basic needs, dummies for coca and opium cultivation, and our measures of right and left leanings of the municipalities), all interacted with a full set of time dummies so as to allow for differential effects over time. To save space, we do not report the coefficients on these time interactions. The results in column 2 are similar to those in column 1, though smaller, but still highly significant (15.88 for 2002 and 10.79 for 2006). In column 3, we include interactions with guerrilla presence as well as our main interactions of paramilitary presence and time. These interactions are insignificant, consistent with the hypothesis that the left-wing guerrillas have played a much more limited role in national politics.<sup>32</sup>

The next three columns re-estimate the same models of the first three columns but now using the *attacks* dummy as the measure of paramilitary and guerilla presence. The results are very similar to the first three columns. For example, in column 4, we estimate  $\hat{\alpha}_{2002} = 13.71$  (s.e.=1.98) and  $\hat{\alpha}_{2006} = 14.54$  (s.e.=1.99), which are again statistically highly significant. The estimates in columns 5 and 6 are very similar. These estimates also clearly show the quantitative effects of paramilitary involvement. They imply that high paramilitary areas have, on average, 10 percentage points higher vote share for third parties after the AUC's involvement in politics. This is a very sizable effect, particularly in view of the fact that the average vote share of third parties before 2001 was about 15 percent (Table 2).

Prior to 2002, as the coefficients  $\hat{\alpha}_{1994}$  and  $\hat{\alpha}_{1998}$  illustrate there is no robust positive relationship between paramilitary presence and third party vote share. Though both of these coefficients are positive and significant in column 1, their significance vanishes when we add the covariates for columns 2 and 3. In column 4  $\hat{\alpha}_{1994}$  is again positive and significant, though  $\hat{\alpha}_{1998}$  is not. As with

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<sup>32</sup>This is not because we are focusing on the vote share of third parties. When we repeat these regressions using the vote share of the socialist coalition of parties, interactions with guerrilla presence are still insignificant.

the attacks data in levels these coefficients become completely insignificant once the covariates are added in columns 5 and 6.

One concern with the results in columns 1-6 is that the change in the coefficient of the time interactions might reflect the changing importance of paramilitaries or guerrillas in certain areas. Our data are not ideal to investigate these issues, since the year-to-year variation in the military and guerrilla presence are measured with considerable error. Nevertheless, in columns 7 and 8, we estimate equation (10) to provide some answers to these questions. The most parsimonious specification is presented in column 7. The results here are consistent with those in the first 6 columns using our time-invariant measure of paramilitary presence. The estimated coefficients are  $\hat{\alpha}_{2002} = 17.81$  (s.e.=2.87) and  $\hat{\alpha}_{2006} = 18.02$  (s.e.=3.01), and are highly statistically significant.<sup>33</sup> Table A2 in the Appendix shows the results for the votes for the Congress. The general patterns and in fact even the point estimates are very similar to those in Table 3. Table A3 then shows that our basic results are robust to measuring paramilitary presence in different ways.

A major concern for our empirical strategy is that paramilitary groups may be selecting into specific areas based on their political or ideological characteristics; paramilitary presence may be capturing a trend towards third parties unrelated to the paramilitaries' involvement in politics (this has to be a trend, since all specifications include a full set of municipality fixed effects). For example, there might be a trend in 'conservative ideology' in certain areas, and the increased vote share of third parties is a reflection of this trend in the areas where they have situated. While we cannot rule out this alternative explanation for the patterns shown in Table 3 we do not find it very plausible. First, the specifications with covariates flexibly control for potential differential trends in 'right-wing ideology' by interacting the vote share of Álvaro Gómez in the 1986 presidential election with a full set of time dummies (as well as for potential differential trends in 'left-wing ideology'). Remarkably, this has almost no effect on the estimates. Second, the case study evidence discussed in Section 3 supports our interpretation.

Overall, Table 3 provides robust correlations consistent with our basic hypothesis that following the AUC's decision to become involved in politics, paramilitaries have systematically influenced electoral outcomes.<sup>34</sup>

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<sup>33</sup>Notice that the direct effect of paramilitary presence is negative. We conjecture that this is because paramilitaries appear to have had a very strong effect on elections in departments on the Caribbean coast, such as Magdalena, Sucre, Córdoba and César. The third parties that existed prior to 2002 were not strong in these areas, hence the negative correlation between paramilitary presence and third party vote share in 1998.

<sup>34</sup>In addition to the third party vote share, we also investigated the effect of paramilitaries on electoral outcomes by looking at electoral concentration. This is motivated by case study evidence which shows how paramilitary influence creates a highly concentrated vote share pattern in a few municipalities (where they have presumably used coercion or manipulated the vote). We therefore constructed a variable *electoral concentration* which is defined as the vote share of the most popular list in a municipality (for the Senate or Congress). The results using a Herfindahl index to

## 5.2 Results for the Executive

Table 4 presents estimates from regression models similar to (9) and (10) for the period 1998-2006, with  $y_{m,t}$  defined as the share of votes of the winning presidential candidate in municipality  $m$  at time  $t$ . Once again we focus on the attacks measure (the results with the displaced measure are again very similar). The basic robust finding is that in both 2002 and in 2006 the vote share of the winning candidate (Álvaro Uribe) was systematically higher in high paramilitary areas than the vote share of the winning candidate in 1998 (Pastrana); this effect is in fact considerably stronger in 2006. For example, the estimate in column 4, 11.45 (s.e. = 1.67) suggests that Uribe obtained about 11 percentage points more votes in high paramilitary areas than Pastrana did. The same effect is present in models that exploit the time-varying measures of paramilitary presence (models as in (10)).

The pattern with a stronger effect in 2006 is plausible. President Uribe was favored by paramilitary groups already in 2002, but after his support for policies in line with these groups' interests during his first term, the support of the paramilitary groups for his election became much stronger. This pattern is thus consistent both with the notion that paramilitaries continued to heavily influence elections after 2002, and also with the hypothesis, documented further below, that a symbiotic relationship between the executive and the paramilitaries developed after certain key legislations proposed by Uribe.<sup>35</sup>

The evidence in this subsection is also particularly important since it suggests that, consistent with the assumptions of our theoretical model, the executive, President Uribe, electorally benefited from the presence of paramilitaries.<sup>36</sup>

## 5.3 Predicting Arrests

As noted in the Introduction, many congressmen and senators have been investigated, arrested for and even found guilty of links with illegal paramilitary organizations. A useful 'reality check' on

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measure electoral concentration are very similar. These regressions, available upon request, show that paramilitary presence is correlated with significantly higher electoral concentration in 2002 and 2006.

<sup>35</sup>Nevertheless, as always, there may be other interpretations of this finding. For instance, to the extent that President Uribe had been successful in de-mobilizing the paramilitaries, then people who had previously suffered under them might have rewarded the President by supporting his bid for re-election. Although we cannot rule out this alternative explanation, the case study evidence is more consistent with our proposed interpretation and with the implications of our model.

<sup>36</sup>In May 2008, somewhat surprisingly given his insistence that paramilitary crimes should not be extraditable, President Uribe extradited 14 paramilitary leaders, including Salvatore Mancuso, Jorge 40 and Don Berna. Our model gives two ways to think about this. First, the more popular President Uribe is with the general population, the less he needs the paramilitaries. It may therefore not be a coincidence that the extraditions took place soon after the killing by the military of FARC senior cadre, Raúl Reyes, which was hugely popular in Colombia. Second, it is possible that the paramilitary leaders began to develop national political aspirations, which our model suggests would make Uribe turn against them.

whether the evidence reported so far indeed represents the influence of paramilitaries on election outcomes is to see whether senators elected in areas under paramilitary control have explicit links with the paramilitaries and have voted for legislation favoring paramilitary interests. In this subsection, we investigate the presence of explicit links, exploiting the fact that Colombian judiciary, particularly the Supreme Court, is broadly independent and has prosecuted politicians with links with the paramilitaries. The voting behavior of these senators is discussed in the next subsection.

We adopt a simple empirical strategy to measure the extent to which senators relied on the support of paramilitaries for their election. First, we define  $\omega_{lP}$  to be the proportion of total vote that senate list  $l$  receives in municipalities with high paramilitary presence, where we measure high paramilitary presence by using our dummy variable constructed from our time-invariant measure of paramilitary presence. Similarly we define  $\omega_{lG}$  as the proportion of total vote that list  $l$  receives in municipalities with high guerilla presence, where high guerilla presence is measured in the same way as paramilitary presence. To investigate the links between senators and paramilitaries, we look at senators who are arrested for connections with paramilitary groups. We define  $\Delta_l$  as the proportion of the senators of list  $l$  that have been arrested for alleged connections with paramilitary groups and then estimate

$$\Delta_l = \rho \cdot \omega_{lP} + \lambda \cdot \omega_{lG} + \mathbf{X}_l' \cdot \boldsymbol{\pi} + \varepsilon_l. \quad (11)$$

Based on our hypothesis that senators and congressmen receiving a high fraction of their votes in paramilitary areas have explicit connections with paramilitaries, we expect to find  $\rho > 0$ . In the covariate vector  $\mathbf{X}_l'$  we also use party identity. Though, in general, this is an example of ‘bad control’ (Angrist and Pischke, 2009, pp. 64-68), since being a member of a third party is an outcome variable inbetween the causal variable of interest,  $\omega_{lP}$ , and the outcome variable,  $\Delta_l$ , in this case we include it to examine whether being a member of a third party absorbs all of the explanatory power of  $\omega_{lP}$  (thus acting as the channel through which paramilitary presence is impacting politician behavior and arrests).

Table 5 shows the results from estimating (11). In column 1, we look at the relationship between arrests and party identity. As we saw above, there is a close correspondence between paramilitary presence and the rise of third parties. Column 1 confirms this, showing that third party senators are significantly more likely to be arrested for links with the paramilitaries than Liberals, Conservatives and Socialists (Liberals are the omitted category).

In the next three columns, columns 2-4, we present estimates of (11) for the senate. Column 2 is the most parsimonious specification where we regress the proportion of senators on a list who were

arrested on  $\omega_{l,P}$  and  $\omega_{l,G}$ . We see that  $\hat{\rho} = 1.38$  (standard error=0.42) is statistically significant suggesting that the higher the share of its votes that a list obtained in paramilitary areas, the greater is the proportion of senators on the list who are arrested for links with paramilitaries. In column 3 we add as a covariate the proportion of its vote share that the list obtained in ‘right-leaning’ and ‘left-leaning’ areas.<sup>37</sup> Neither of these controls are significant in themselves and they do not influence the coefficients of interest.

In column 4 we then add the party dummies to investigate whether the entire effect of the paramilitaries is working through third parties. The estimates show that this is not the case. The third party dummy is still significant, but so is the share of votes from paramilitary areas. This suggests that the only channel of influence of paramilitaries on politicians behavior is not through third party affiliation (which, in hindsight, is not surprising, since in several municipalities, paramilitaries supported liberal or conservative candidates).

The next four columns report estimates of (11) for the congress. These are broadly consistent with the results for the senate; the proportion of the votes that a list won in high paramilitary areas is positively correlated with the proportion of congressmen on that list who have been arrested, though the results are typically somewhat less precisely estimated and less significant.

Overall, these results are important firstly because they provide some verification that our strategy for measuring the effects of the paramilitaries is indeed capturing what they are supposed to. Secondly, they also show that our findings so far are unlikely to be driven by some omitted characteristic of municipalities (making paramilitary presence ‘endogenous’ to voters’ preferences). The fact that paramilitary presence is positively correlated with arrests suggests that there is indeed a close relationship between paramilitaries and politicians such that paramilitary groups are either forming a coalition with local politicians, or are themselves running as candidates. In either case, it seems highly unlikely that politicians, particularly politicians elected in high paramilitary areas, are perfect agents of voters, supporting policies in line with their interests. Instead, it seems that these politicians are pursuing policies systematically preferred by paramilitaries.

## 5.4 Voting in the Senate

As a final demonstration of the potential influence of the paramilitaries on elections, we examine whether senators from lists that received large shares of their votes in paramilitary areas vote in systematically different ways. We do this in the very specific but revealing context of a roll-call

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<sup>37</sup>We define the ‘right-leaning’ and ‘left-leaning’ dummies again by looking at the vote shares of Álvaro Gómez and Jaime Pardo Leal in 1986; then, similar to the construction of the dummies for paramilitary and guerrilla presence, we constructed dummy variables for ‘right-leaning’ and ‘left-leaning’ areas depending on whether a municipality is above the 75th percentile of votes for the corresponding candidate in the 1986 presidential elections.



vote to re-introduce two clauses of the Justice and Peace Law. These were Article 70, which stipulated a 10% reduction in the sentences of demobilized paramilitaries who had been charged at the time of the passing of the law and Article 71, which specified that the crimes of former paramilitaries should be considered as ‘sedition’.<sup>38</sup> The main significance of sedition is that it would imply that the paramilitaries had committed political crimes and would therefore not be eligible to extradition.<sup>39</sup> These two articles were part of a first draft of the law presented by the president but they were both rejected in the first commissions of the senate and the congress. The rejection of these two articles was then appealed in the senate. In response to this appeal a commission was formed to inform the senate on how to proceed with the appeal pleading. The members of the commission were Mario Uribe (under arrest in 2008 for connections with paramilitaries and a cousin of President Uribe), Mauricio Pimiento (arrested and found guilty, see Table 1), Juan Gómez, Miguel de la Espriella (arrested and found guilty, see Table A1), Jesús Carrizosa, and Hernando Escobar. The members of the commission concluded that the appeal had to be approved by the plenary of the senate which it was and we have the roll-call for this vote. This vote went in favor of re-introducing the two articles into the Justice and Peace law.<sup>40</sup>

To the extent that there is a positive correlation between the proportion of votes a list received in paramilitary areas and the proportion of senators on the list who voted to re-introduce these two articles, this would be further evidence that paramilitaries have indeed influenced election outcomes, consistent with Proposition 2 of our model. Implicitly, it is also evidence of the ‘quid pro quo’ between paramilitaries and the executive, consistent with Proposition 4.<sup>41</sup>

To examine the impact of the paramilitaries on these roll-call votes, we estimate versions of model (11) in the previous sub-section. More specifically we now define  $\Delta_l$  to be the proportion of senators on list  $l$  that voted in favor of re-introducing these two clauses. The results are reported in columns 9-12 of Table 5.

Column 9 shows that senators from third parties and the conservatives are most likely to

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<sup>38</sup>At the time of the votes these clauses were actually Article 61 (sentence reduction) and Article 64 (sedition) but this changed in the final law.

<sup>39</sup>This is a topic with a long and contested history in Colombia. During the writing of the 1991 Constitution, Pablo Escobar systematically tried to intimidate delegates in order to make sure that the new Constitution made extradition unconstitutional. The day after this was written into the Constitution, Pablo Escobar, who had been in hiding, gave himself up to the authorities. However, the Constitution was subsequently amended to allow extradition.

<sup>40</sup>However the Supreme Court said that paramilitaries cannot be considered as seditious. So article 71 is currently not being applied. Interestingly, even though President Uribe supported this clause, he then extradited 14 of the paramilitary leaders as we discussed earlier.

<sup>41</sup>As we discussed in Section 3, a large literature has heavily criticized the Justice and Peace Law as being very weak and not forcing ex-combatants to account for their crimes or provide any sort of compensation for their victims. The structure of the law came from the executive.

support the re-introduction of the two controversial articles of the Justice and Peace Law. The fact that conservatives were as likely as third party candidates to support these clauses is probably related to the fact that in the senate they were also allied with President Uribe. The remaining columns show a positive significant correlation between paramilitary presence in areas where a list got a large proportion of its votes and the proportion of senators who voted in favor of making the Peace and Justice Law more ‘pro-paramilitary’. (This effect is no longer significant in column 12 when we introduce the party identity variables, suggesting that a large part of the effect is working through third party affiliation). Third party identity is again positive and significant. Note also that in none of the specifications is there any effect of guerilla presence or right or left orientation on these votes. Overall, we interpret this as evidence in support of our hypothesis that politicians receiving support from paramilitaries have in turn supported legislation in line with the interests of these groups.

## 6 The Persistence of the Paramilitaries

We next turn to two predictions of our model. First, the model suggests that to the extent that paramilitaries deliver votes to the President, the President will have a greater incentive to allow them to stay in control of the areas where they are. Second, this effect will be stronger in places which the President did not expect to do well without intervention by the paramilitaries.

We focus on the 2002 Presidential election and the subsequent persistence of paramilitaries. We restrict attention to only municipalities that had paramilitary presence in 2000-2001. A municipality is classified as having paramilitary presence if it experienced any paramilitary related incidents (attacks or displacement depending on the measure used) during either 2000 or 2001. We use a time varying measure of paramilitary presence to capture presence before the election, denoted  $P_{m,t<2002}$ , and presence after the election, denoted  $P_{m,t>2002}$ . In our baseline specification this is measured as the sum of either attacks or displacements during a two-year window, the periods 2000 and 2001 ( $t<2002$ ) or between 2004 and 2005 ( $t>2002$ ) in either case divided by the population of the municipality. Our results are robust to different ways of measuring these variables as we show. We can use this variable to explicitly examine how the persistence of paramilitary presence depends on the extent of voting for President Uribe, thus testing the first prediction. To test the second implication of the model we argue that even though when Uribe was Governor of Antioquia he was nominally a representative of the Liberal Party, in fact his key supporters, in the absence of coercion, were conservative voters who liked his emphasis on law and order. Direct evidence comes from the fact that the Conservative Party chose not to run

a candidate against him either in 2002 or 2006, while the Liberal Party did (Horacio Serpa in both cases). As a consequence, Uribe could anticipate doing well in places where Conservative President Andrés Pastrana had received a high vote share in 1998. We can therefore test the second hypothesis by interacting Pastrana’s vote share in 1998 with Uribe’s vote share.

More formally, we estimate the following model:

$$P_{m,t>2002} = \alpha \cdot P_{m,t<2002} + \beta \cdot v_{m,2002}^u + \gamma \cdot v_{m,2002}^u \cdot v_{m,1998}^p + \delta \cdot v_{m,1998}^p + \mathbf{X}_m' \cdot \boldsymbol{\pi} + \varepsilon_m \quad (12)$$

where  $v_{m,2002}^u$  is the vote share of President Uribe in municipality  $m$  in 2002 and  $v_{m,1998}^p$  is the vote share of Pastrana in 1998. Our model predicts that  $\beta > 0$  (a greater share of votes for Uribe would lead to greater paramilitary presence after 2002), and  $\gamma < 0$ —so that the higher was Pastrana’s vote share in 1998, the less Uribe would benefit from the support of the paramilitaries and thus according to our theoretical model, the more likely are the paramilitaries to be eliminated.

An alternative measure of the paramilitary-induced vote advantage of Uribe, which is more closely related to the predictions of Proposition 3, is to define the variable  $\max\{0, v_{m,2002}^u - v_{m,1998}^p\}$ , which directly captures the vote advantage of Uribe in 2002 relative to Pastrana’s vote in 1998, if any (in municipality  $m$ ). With the same reasoning, we expect the coefficient on this variable to be positive—the greater is  $v_{m,2002}^u - v_{m,1998}^p$ , the more Uribe gained relative to Pastrana and the more we would expect paramilitaries to persist.

The results from estimating various versions of (12) are shown in Table 6. All of the main effects are evaluated at the sample means to facilitate interpretation. The first six columns of Table 6 use the *attacks* measure non-state armed actor presence, while the next four use the *displaced* measure. The final two use the first principal component of attacks and displaced.

The results are broadly consistent with our model, in particular, with the predictions of Proposition 3. In column 1 of Table 6 we estimate the simplest version of (12). Consistent with these predictions, the estimate of Uribe’s vote share of value to the sample mean,  $\beta$ , is estimated at 0.14 (with a standard error=0.08). This estimate, which is marginally significant, suggests that other things equal, the greater the vote share for President Uribe in the 2002 election in municipality  $m$ , the greater the paramilitary presence in the municipality after 2002. Quantitatively this is a sizable, though not implausible, effect implying that a 10% increase in Uribe’s vote share in an average municipality under paramilitary control will increase paramilitary presence by 0.014. This is a large effect compared to the mean of paramilitary presence in the whole sample, which is 0.04, though smaller for the mean when we restrict attention to only those municipalities which had positive paramilitary presence, this being 0.15.<sup>42</sup>

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<sup>42</sup>Since this is the effect at the sample mean and  $\gamma < 0$ , the impact of Uribe’s vote share is significantly higher

Moreover, again consistent with the predictions of Proposition 3, the coefficient on the interaction between Uribe's and Pastrana's vote shares is negative and statistically significant at 5%,  $\hat{\gamma} = -0.63$  (standard error=0.33). This implies that, all else equal, paramilitaries were more likely to persist in areas where President Uribe received a high share of votes, *and* on the basis of the votes of President Pastrana in the 1998 election, he would have been expected to receive a lower vote share. Column 2 adds covariates to the basic model of Column 1 while Column 3 adds controls for guerilla presence in 2000-2001. In these columns, the interaction term remains negative and has a similar quantitative magnitudes to that in Column 1, but is no longer statistically significant (in several other specifications in this and the next table, the interaction term is again significant).

Column 4 reports a regression model more directly inspired by Proposition 3, which makes the persistence of paramilitaries a function of the vote gain of President Uribe relative to President Pastrana,  $\max\{0, v_{m,2002}^u - v_{m,1998}^p\}$ . This variable is positive though again marginally insignificant in column 3 (coefficient = 0.25, s.e. = 0.15), consistent with our theoretical predictions.

In Columns 5 and 6, we use the logarithms of all of the variables so we lose a lot of observations (all the zeros). In Column 5 with this specification the direct effect of Uribe's vote share is not significant, but the interaction term is negative and highly significant (this specification also includes guerrilla presence before 2002 as in Column 3). In Column 6, the coefficient on  $\max\{0, v_{m,2002}^u - v_{m,1998}^p\}$  is again positive and marginally significant (coefficient = 0.56, standard error = 0.30).

The next four columns examine the same models using the displaced measure of paramilitary and guerilla presence. In all of these specifications the direct effect of Uribe's vote share is positive and highly significant. The interaction term is also always negative, and statistically significant with levels, but not with logs. Moreover, when we use the specification with  $\max\{0, v_{m,2002}^u - v_{m,1998}^p\}$ , the estimated effect is positive and highly significant.

The final two columns use the first principal components of attacks and displaced. These results are similar, and in fact more supportive of the predictions of our model. The direct effect of Uribe's vote share evaluated at the sample mean is positive and statistically significant, and the interaction term is negative and significant. In this specification using  $\max\{0, v_{m,2002}^u - v_{m,1998}^p\}$ , the results are now much more precisely estimated and the coefficient on this table is now highly significant.

Table A4 in the Appendix investigates the robustness of the basic results in Table 6. In

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in municipalities with lower Pastrana share.

particular, as an alternative, we use a two-year window instead of the three-year window in Table 6 (that is, we define  $P_{m,t<2002}$  and  $P_{m,t>2002}$  using 1999, 2000 and 2001 ( $t<2002$ ) or between 2003, 2004, 2005 ( $t>2002$ ) in either case divided by the population of the municipality). The results are broadly similar to, in fact stronger than, those in Table 6. In particular, the interaction term is now more precisely estimated and is statistically significant in almost all specifications.

Overall, we interpret the results in this section as providing some support to our Proposition 3 that incumbent politicians in power will tend to refrain from eliminating paramilitaries in areas where these groups deliver votes and that this effect is stronger where they would not have otherwise done as well.

## 7 The Symbiotic Relationship

### 7.1 Econometric Evidence

The last section provided some evidence on a possible symbiotic relationship between the paramilitaries and the executive. In places where the paramilitaries delivered votes in 2002, they were more likely to survive. To investigate this symbiotic relationship, or the ‘quid pro quo,’ more extensively, it is useful to study key legislation the executive brought to the legislature, and how paramilitary presence may have influenced voting on these legislations. We can only examine the first issue, what laws the executive proposed, using case study evidence. To look at the second issue, how paramilitary presence may have influenced voting patterns, we again examine roll-call votes.

We focus on a very salient and relevant roll-call for which we have data: the vote on whether or not to change the Constitution to drop the single-period term limit on the president. If senators who were elected with support from paramilitaries were more inclined to support this change in the Constitution, then this would be direct, though naturally not definitive, evidence that the paramilitaries supported Uribe either as quid pro quo or because he would naturally choose policies more in line with their interests and preferences.

As in our previous analysis of roll-call votes we use a simple empirical strategy based on equation (11) in subsections 5.3 and 5.4. We now define  $\Delta_l$  to be the proportion of senators on list  $l$  that voted in favor of changing the Constitution to allow President Uribe to run for re-election. All of the remaining variables are defined as before.

Table 7 looks at the roll-call vote for re-election. The structure of this table is similar to that of Table 5, except that the two parts of the table now use the attacks and displaced measures. The first column again estimates a simple regression of  $\Delta_l$  on party dummies. It shows that members

of third parties tended to vote in favor of re-election, as did Conservatives, while members of Left parties tended to vote against (all relative to Liberals). Columns 2-4 then use the simple model (11) with the attacks data, while 5-7 estimate the same model using the displaced data. Using either strategy, and even holding party affiliation constant, there is a robust positive effect of the presence of paramilitaries in areas where senate lists received a high vote share on the propensity of senators on the list to vote in favor of changing the Constitution to allow President Uribe to run again. This effect is statistically significant in all columns, except in column 7 where we also include party identity (this suggests that in this instance most of the effects of paramilitaries on politicians behavior might be working through third party affiliation). These columns also again show that there is no robust impact of the presence of guerillas on the voting behavior of senators on this measure.

## 7.2 Case Study Evidence

There is a large case study literature which is consistent with the notion of a quid pro quo between executive and paramilitary politicians. One obvious arena is the formulation of the Justice and Peace Law which took place after the secret negotiations at Santa Fé de Ralito. This law was widely criticized both inside and outside Colombia as being far too lenient on paramilitaries.

Here we focus on a very revealing more recent series of events which also seem to speak to the symbiotic relationship. Even though many congressmen and senators have been arrested, they are replaced in the legislature by their alternates (in Spanish ‘suplentes’) who appear on the same list at the time of the election. In consequence, their political influence is little diminished. To change this situation members of congress proposed a political reform in 2008 to remove these politicians and their alternates from the legislature. This initiative was killed when many politicians failed to appear for a debate so that a quorum was not reached. The fact that senators failed to appear for the vote was widely blamed on President Uribe (see the remarks of Senators Gustavo Petro and Rafael Pardo (“Entierro de quinta” *Semana*, June 7, 2008),<sup>43</sup> and *Semana* notes “If Uribismo lost its majorities in congress, it would be difficult to get the approval of key projects, such as a new reform to that ‘little article’ of the Constitution.”<sup>44</sup> The ‘little article’ (used sarcastically) in the Constitution is the change to allow President Uribe to run for a third term of office. This experience shows how President Uribe relies on the legislative support of politicians deeply implicated with the paramilitaries to pass key bills.<sup>45</sup>

<sup>43</sup><http://www.semana.com/noticias-nacion/entierro-quinta/112489.aspx>

<sup>44</sup>*Semana*, June 7, 2008.

<sup>45</sup>In September 2009 both houses of the legislature voted to hold a national referendum on whether to allow Uribe to run for a third term. Socialists and members of the Liberal party abstained in these votes so we do not have

After this project failed the executive proposed an alternative political reform in August 2008 which involved changing the Constitution to take away the power of the Supreme Court to try congressmen. As José Miguel Vivanco, Americas director at Human Rights Watch put it “Uribe is brazenly trying to take the power to investigate congressmen away from the one institution that has done the most to uncover and break paramilitary influence in the congress ... This proposal serves no real purpose, other than to help members of Uribe’s coalition get off the hook” (Human Rights Watch, 2008).

## 8 Conclusions

Why are many states in less-developed societies unable to establish Weber’s famous monopoly of violence in their territories? The standard explanation relies on the inability of the central state to broadcast its power throughout the territories that it nominally controls and views an extension of this power to the periphery as a natural by-product of ‘political modernization’. In this paper we developed an alternative perspective, suggesting that the central state can develop (even ‘modernize’) without establishing such a monopoly of violence because there may be a symbiotic relationship between the parties controlling the central state and non-state actors exercising power in the peripheries of the country. The origins of this symbiotic relationship is that non-state armed actors can provide support to those controlling the central state. This is particularly important in democracies where non-state armed actors can control elections. Since they naturally have political preferences, they can (credibly) deliver votes for the national politicians in line with their ideological and policy biases. Politicians elected with the implicit support of these non-state actors will then have less incentive to eliminate them, leading to an equilibrium without a full monopoly of violence of the central state. We developed this idea theoretically and provided empirical support using recent political events from Colombia.

Our model makes a series of predictions, which we investigated using Colombian data. Our empirical evidence began by confirming that paramilitaries have indeed had a significant impact on elections in Colombia. Following the foundation of the AUC, there is a sharp increase in the vote share of third parties, which were explicitly or implicitly associated with paramilitaries, in areas that have high paramilitary presence. We also presented evidence that high paramilitary presence in areas where senators received large proportions of their votes predicts how they voted on key clauses of the Justice and Peace Law, and whether they get arrested for illicit links with the paramilitaries. We also found that paramilitary presence is correlated with vote share of the

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further roll-calls on this issue.

winning presidential candidate, Álvaro Uribe.

The two key predictions of our theoretical model are that paramilitaries should persist to the extent that they deliver votes to politicians whose preferences are closer to their own and that this effect is larger in areas where these politicians would otherwise not do well. These results illustrate the possible presence of a symbiotic relationship between the executive and the paramilitaries. We further illustrated this relationship by showing that the proportion of the votes which a senate list won in paramilitary areas is positively correlated with the proportion of Senators on the list that voted to change the Constitution to allow President Uribe to run for a second term.

Nevertheless, neither our results nor the case study literature suggests the presence of a formal ‘coalition’ between paramilitary groups and President Uribe. They are consistent, however, with the idea that Uribe’s policies are closer to those preferred by paramilitaries than those of other parties which naturally gives the paramilitaries an interest in generating support for him. As Jairo Angarita former leader of the AUC’s Sinú and San Jorge blocs and Salvatore Mancuso’s deputy declared in September 2005, he was proud to work for the

“reelection of the best President we have ever had”.<sup>46</sup>

Naturally, different interpretations of the data are possible. For instance, it is possible that people in paramilitary areas are naturally pro ‘law and order’ or more ‘conservative’ so that presence of paramilitaries is endogenous to ‘voter preferences’. If this were true our results connecting the presence of paramilitaries to Presidential vote share could be due to omitted variable bias. This might also undermine our interpretation of the roll-call votes since it would imply that senators who voted to change the Constitution to allow President Uribe to run again did so because their voters’ preferred it. These alternative hypotheses do not appear plausible explanations for the patterns, however. First, our identification comes from the timing of the formation of the AUC and their decision to develop an electoral strategy (relying on intimidation, murder and manipulation to get their candidates elected to national office). For example, prior to these events, there was no significant differences between electoral concentration in areas with or without paramilitaries, indicating that political preferences did not systematically differ between these two areas. The timing of the formation of the AUC stems mostly from the collapse of the Medellín and Cali drug cartels and is unlikely to reflect a change in political preferences on the part of voters. Second, to the extent that voter preferences differ with some areas being more conservative than others, this would be controlled for by our use of fixed effects as long as these differences are

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<sup>46</sup> *El Tiempo*, September 7, 2005.



time-invariant. Moreover, the case study literature suggests something of a ‘reality check’ on this argument since it provides extensive evidence of coercion and manipulation of elections in departments such as Magdalena, César, Córbona and Sucre with high paramilitary presence. Third, the fact that paramilitary presence predicts arrests of senators makes it improbable that politicians are simply representing voter preferences. These results, along with the case study literature, suggests that politicians formed coalitions with paramilitaries, or paramilitaries generated their own politicians. Fourth, we tried to explicitly control for the time varying effects of conservative leanings of certain municipalities.

A final and crucial question concerns the external validity of these findings. Although our arguments in this paper contrast with the emphasis of much of the existing literature on state formation, there are several other instances where non-state actors appear to play a similar role to that of paramilitaries in Colombia. For example, as mentioned in the Introduction, the existence of the tribal areas in Waziristan does not imply that the state has not formed in Pakistan, but is indicative of a different equilibrium pattern similar to that in Colombia. A related example comes from Italy and the role of the Mafia in delivering votes to the Christian Democratic Party (Walston, 1988). Finally, the long autonomy of the US South after the Hayes-Tilden agreement of 1877 until the Civil Rights and Voting Rights acts of the 1960s also presents many parallels with the Colombian case. Southern political elites were able to establish a one-party undemocratic political system based on the disenfranchisement and coercion of blacks. The power thus consolidated gave them great influence in national political institutions where they could both impede legislation they did not like, but where they also supplied votes, which was exactly what the Hayes-Tilden deal was about. A telling piece of evidence in favor of this interpretation is provided by Franklin D. Roosevelt’s reaction to a proposal to pass legislation to attempt to restrict lynching. In response he argued that Southern legislators “are chairmen or occupy strategic places on most of the Senate and House committees ... If I come out for the anti-lynching bill now, they will block every bill I ask Congress to pass” (quoted in Frederickson, 2001, p. 20). There is therefore some evidence that the mechanisms we have identified here are of quite general applicability.

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**Table 1: Top 20 Senators By Vote Share in Paramilitary Areas**

Senator		Third Parties (1)	Reelection (2)	Justice and Peace Law (3)	Status (4)	% Votes In Paramilitary Zones (5)
MAURICIO	PIMIENTO BARRERA	yes	yes	yes	Arrested (Guilty)	68.30
DIEB NICOLAS	MALOOF CUSE	yes	yes	yes	Arrested (Guilty)	56.93
ALVARO	ARAUJO CASTRO	yes		yes	Arrested	54.78
JUAN CARLOS	MARTINEZ SINISTERRA	yes	yes		Arrested	51.22
SALOMON DE JESUS	SAADE ABDALA	no	yes		Investigated	41.40
CARLOS ARTURO	CLAVIJO VARGAS	yes			Arrested	39.33
JUAN	GOMEZ MARTINEZ	yes	yes			34.96
ISABEL	CELIS YAÑEZ	no				33.96
PIEDAD	CORDOBA	no	no	no		33.20
GERMAN	HERNANDEZ AGUILERA	no	yes	yes		31.46
FLOR MODESTA	GNECCO ARREGOCES	yes	yes	yes		31.27
RUBEN DARIO	QUINTERO VILLADA	yes			Arrested	30.03
BERNARDO ALEJANDRO	GUERRA HOYOS	no		no		29.48
HUGO	SERRANO GOMEZ	no	no			29.21
WILLIAM ALFONSO	MONTES MEDINA	yes	yes	yes	Arrested (Not Guilty)	28.48
LUIS GUILLERMO	VELEZ TRUJILLO	no	yes	yes		28.44
CONSUELO	DE MUSTAFA	no	yes			28.22
JOSE RENAN	TRUJILLO GARCIA	no	yes	yes		26.80
VICTOR RENAN	BARCO LOPEZ	no	yes	yes	Investigated	26.11
GUILLERMO	GAVIRIA ZAPATA	no	no	yes	Investigated	25.07

Notes: Senators that obtained the twenty highest shares of votes in municipalities with high paramilitary presence. High paramilitary presence is measured by a dummy that takes the value of one if the municipality had a total number of attacks by the paramilitaries per 1.000 inhabitants above the 75<sup>th</sup> percentile in the 1997-2001 period. A Yes indicates that the senator belongs to a third party in the election of 2002 (column (1)), voted yes to approve reelection (column (2)) or yes to reintroduce Sedition and Reduction of Sentences articles in the Justice and Peace Law (column (3)). The status of the senator (column (4)) is that on May 21 of 2009 and is taken from Indepaz <http://www.indepaz.org.co> (for reelected senators) and from the news. A blank space in columns (2) or (3) means that the senator did not vote on the measure.

**Table 2: Descriptive Statistics**

Variable	Whole Sample		High Paramilitary Presence		Low Paramilitary Presence	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
	(1)	(2)	(3)	(4)	(5)	(6)
(1) Paramilitary Presence	0.12	(0.29)	0.42	(0.45)	0.02	(0.03)
(2) Paramilitary Presence 1996-1997	0.00	(0.02)	0.01	(0.04)	0.00	(0.01)
(3) Paramilitary Presence 2000-2001	0.04	(0.12)	0.15	(0.20)	0.01	(0.02)
(4) Paramilitary Presence 2004-2005	0.03	(0.13)	0.11	(0.25)	0.00	(0.01)
(5) Guerrilla Presence	1.03	(2.03)	1.82	(2.76)	0.77	(1.63)
(6) Guerrilla Presence 1996-1997	0.13	(0.31)	0.27	(0.48)	0.08	(0.20)
(7) Guerrilla Presence 2000-2001	0.21	(0.43)	0.44	(0.65)	0.14	(0.29)
(8) Guerrilla Presence 2004-2005	0.23	(0.87)	0.33	(0.67)	0.19	(0.92)
(9) Third Parties Vote Share in the Senate Before 2001	14.72	(15.90)	11.22	(13.06)	15.95	(16.61)
(10) Third Parties Vote Share in the Senate After 2002	32.88	(19.65)	38.59	(20.78)	30.90	(18.85)
(11) Third Parties Vote Share in the Congress Before 2001	26.80	(21.75)	22.84	(19.37)	28.17	(22.36)
(12) Third Parties Vote Share in the Congress After 2002	35.42	(21.48)	38.45	(22.12)	34.39	(21.19)
(13) Winning Presidential Candidate Vote Share Before 2001	42.29	(22.73)	39.21	(23.29)	43.38	(22.46)
(14) Winning Presidential Candidate Vote share after 2001	52.35	(21.47)	54.58	(21.66)	51.58	(21.37)
(15) Preferences for the Right	42.26	(27.47)	36.73	(28.32)	44.25	(26.91)
(16) Preferences for the Left	5.05	(11.41)	6.12	(11.47)	4.67	(11.37)
(17) Land Gini in 1985	70.11	(10.58)	69.63	(10.51)	70.28	(10.61)
(18) Unfulfilled Basic Needs in 1993	53.87	(19.56)	55.33	(16.43)	53.36	(20.55)
(19) Average Population in 1993 and 2005	34828.42	(202618.10)	17851.39	(23238.26)	40534.65	(233578.10)
(20) Rural Index in 1993	62.63	(24.50)	60.65	(20.29)	63.33	(25.81)
(21) Distance to the States' Capital	129.66	(105.54)	146.12	(115.71)	123.85	(101.16)
(22) Altitude	1157.38	(897.89)	983.56	(785.11)	1218.72	(927.16)
(23) Precipitation	1912.28	(1061.04)	2235.12	(1146.02)	1798.36	(1005.68)
(24) Dummy of Opium Cultivation in 1994	0.10	(0.29)	0.05	(0.23)	0.11	(0.31)
(25) Dummy of Coca Cultivation in 1994	0.05	(0.23)	0.04	(0.20)	0.06	(0.24)

Notes: Each variable in rows (1) to (8) is the sum of paramilitary or guerrilla attacks per 1.000 inhabitants over the corresponding time period averaged over different samples of municipalities. Whole sample columns report means and standard deviations of variables in the entire sample, High Paramilitary Presence columns restrict the sample to municipalities where the 1997-2005 attacks by the paramilitaries dummy takes the value of one (see footnote of table 3 for definition of this variable), Low Paramilitary Presence columns restrict the sample to municipalities where the 1997-2005 attacks by the paramilitaries dummy takes the value of 0.

**Table 3: Paramilitary Presence and Third Parties Share of Votes in the Elections for the Senate**

*Dependent Variable is Vote*

*Share obtained by Third*

*Parties in the Elections for  
the Senate*

	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1998-2006	Panel 1998-2006
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Armed Actors Presence is Measured by:							
	Attacks			Attacks Dummy		Time Varying Attacks Dummy		
Paramilitary Presence							-11.35 (2.67)	-10.79 (2.75)
Paramilitary Presence X 1994	4.95 (1.54)	0.79 (1.47)	0.57 (1.61)	4.15 (1.25)	1.91 (1.24)	1.33 (1.31)		
Paramilitary Presence X 1998	4.22 (1.99)	0.34 (2.09)	0.41 (2.20)	2.86 (1.68)	0.12 (1.73)	0.29 (1.86)		
Paramilitary Presence X 2002	20.97 (3.14)	15.88 (3.18)	15.80 (3.23)	13.71 (1.98)	10.62 (1.94)	10.47 (2.01)	17.81 (2.87)	17.02 (3.01)
Paramilitary Presence X 2006	22.10 (3.19)	10.79 (3.03)	10.29 (3.04)	14.54 (1.99)	8.48 (1.66)	8.31 (1.73)	18.02 (3.01)	17.21 (3.15)
Guerrilla Presence								-1.06 (1.78)
Guerrilla presence X 1994			0.20 (0.56)			2.49 (1.54)		
Guerrilla Presence X 1998			-0.06 (0.66)			-0.72 (1.89)		
Guerrilla Presence X 2002			0.07 (0.70)			0.66 (1.99)		2.00 (2.16)
Guerrilla Presence X 2006			0.45 (0.61)			0.70 (1.80)		2.79 (2.32)
Controls Interacted with Year Dummies	No	Yes	Yes	No	Yes	Yes	No	No
Observations	5379	4915	4915	5379	4915	4915	3286	3286

Notes: Robust Standard errors clustered at the municipality level in parentheses. Panel regressions with full set of municipality and year dummies. Dependent variable is share of votes of third parties lists (not Conservative, nor Liberal, nor from the left) in the elections for the Senate. We report results with three different measures of paramilitary presence: **i.** The sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 1997-2005 period in columns (1), (2) and (3); **ii.** A time invariant dummy that takes the value of one if the sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 1997-2005 period is above the 75<sup>th</sup> percentile in columns (4), (5) and (6); **iii.** A time varying attacks dummy that takes the value of one in municipality  $m$  and time  $t$  if time varying measure of attacks over population is above the 75<sup>th</sup> percentile (calculated over all municipalities and years) in columns (7) and (8). When guerrilla presence is included, in columns (3), (6) and (8), it is measured as the corresponding paramilitary presence measure. Columns (2), (3), (5) and (6) include the following controls interacted with time dummies: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.



**Tables 4: Paramilitary Presence and Winning Presidential Candidate Share of Votes**

<i>Dependent Variable is Winning Presidential Candidate Vote Share</i>								
	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006	Panel 1998-2006
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Armed Actors Presence is Measured by:								
	Attacks			Attacks Dummy			Time Varying Attacks Dummy	
Paramilitary Presence							-6.92 (3.59)	-6.91 (3.65)
Paramilitary Presence X 2002	10.16 (1.99)	5.31 (1.53)	7.43 (1.59)	3.11 (1.45)	1.26 (1.11)	2.14 (1.13)	8.87 (3.58)	10.49 (3.65)
Paramilitary Presence X 2006	21.60 (2.41)	13.67 (1.71)	12.32 (1.64)	11.45 (1.67)	8.17 (1.21)	6.66 (1.20)	12.53 (3.77)	12.23 (3.86)
Guerrilla Presence								-3.54 (1.61)
Guerrilla Presence X 2002			-1.73 (0.34)			-3.71 (1.14)		-5.53 (1.73)
Guerrilla Presence X 2006			1.22 (0.41)			6.47 (1.45)		1.70 (2.21)
Controls Interacted with Year Dummies	No	Yes	Yes	No	Yes	Yes	No	No
Observations	3297	2951	2951	3297	2951	2951	3297	3297

Notes: Robust Standard errors clustered at the municipality level in parentheses. Panel regressions with full set of municipality and year dummies. Dependent variable is share of votes of the winning presidential candidate. We report results with three different measures of paramilitary presence: **i.** The sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 1997-2005 period in columns (1), (2) and (3); **ii.** A time invariant dummy that takes the value of one if the sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 1997-2005 period is above the 75<sup>th</sup> percentile in columns (4), (5) and (6); **iii.** A time varying attacks dummy that takes the value of one in municipality  $m$  and time  $t$  if time varying measure of attacks over population is above the 75<sup>th</sup> percentile (calculated over all municipalities and years) in columns (7) and (8). When guerrilla presence is included, in columns (3), (6) and (8), it is measured as the corresponding paramilitary presence measure. Columns (2), (3), (5) and (6) include the following controls interacted with time dummies: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

**Table 5: Senators and Congressmen Arrested, Justice and Peace Law and Votes from High Paramilitary Presence Areas**

	Cross Section (1)	Cross Section (2)	Cross Section (3)	Cross Section (4)	Cross Section (5)	Cross Section (6)	Cross Section (7)	Cross Section (8)	Cross Section (9)	Cross Section (10)	Cross Section (11)	Cross Section (12)
									<i>Dependent Variable is the Fraction of Senators in List I that Voted Yes for Reintroducing the Articles of Sedition and Reduction of Sentences in the Justice and Peace Law .</i>			
<hr/>												
	Senate				Congress				Senate			
Dummy Conservative	0.05 (0.12)			0.12 (0.14)	-0.01 (0.06)			0.09 (0.09)	0.41 (0.12)			0.38 (0.14)
Dummy Left	-0.10 (0.06)			-0.03 (0.07)	-0.06 (0.03)			-0.02 (0.04)	-0.59 (0.12)			-0.54 (0.14)
Dummy Third Parties	0.19 (0.09)			0.21 (0.09)	0.06 (0.05)			0.08 (0.05)	0.34 (0.13)			0.33 (0.13)
<i>Share of Votes From:</i>												
Paramilitary Areas		1.38 (0.42)	1.03 (0.51)	0.92 (0.45)		0.26 (0.12)	0.20 (0.13)	0.18 (0.13)		0.83 (0.41)	1.33 (0.53)	0.93 (0.54)
Guerrilla Areas		-0.59 (0.72)	-0.13 (0.81)	0.02 (0.75)		-0.01 (0.07)	0.03 (0.07)	0.07 (0.08)		-0.86 (0.73)	-1.63 (0.89)	-1.26 (0.83)
Right Oriented Areas			-0.41 (0.42)	-0.55 (0.39)			-0.31 (0.12)	-0.44 (0.21)			1.37 (0.46)	0.52 (0.47)
Left Oriented Areas			-0.27 (0.18)	-0.29 (0.18)			-0.09 (0.06)	-0.10 (0.06)			-0.13 (0.27)	-0.05 (0.23)
Observations	96	96	96	96	162	162	162	162	57	57	57	57
R-squared	0.06	0.13	0.15	0.21	0.01	0.04	0.06	0.08	0.41	0.04	0.13	0.45

Notes: Robust standard errors in parentheses. **Left hand panel:** OLS regressions relating arrests of senators/congressmen to votes obtained in areas with presence of non-state armed actors. Dependent variable is the proportion of senators on list  $l$  arrested for being involved with the paramilitary. **Right hand panel:** OLS regressions linking votes in the senate to votes obtained in areas with presence of non-state armed actors. Dependent variable is the proportion of senators on list  $l$  that voted yes. The vote is for reintroducing the articles of Sedition and Reduction of Sentences in the Justice and Peace Law (since only three lists have more than one candidate in the senate in the legislature of 2002-2006 and since candidates in the same list voted in the same manner, the dependent variable is a dummy). **Both Panels:** To measure the share of votes of list  $l$  from a given area we first create dummies for places with high presence of paramilitary and guerrilla, Right oriented preferences or Left oriented preferences (municipality  $m$  is a high presence area if the value of the corresponding variable in municipality  $m$  is above the 75<sup>th</sup> percentile; paramilitary and guerrilla presence measures are the sum of attacks per 1,000 inhabitant in the 1997-2001 period, just before the elections of 2002). Then, with each of these dummies, we compute the share of votes in national elections obtained by list  $l$  in areas where the dummy takes the value of one.

**Table 6: Persistence of Paramilitaries and Vote Share for Alvaro Uribe**

<i>Dependent Variable is Paramilitary Presence in 2004-2005</i>	Cross-Section (1)	Cross-Section (2)	Cross-Section (3)	Cross-Section (4)	Cross-Section (5)	Cross-Section (6)	Cross-Section (7)	Cross-Section (8)	Cross-Section (9)	Cross-Section (10)	Cross-Section (11)	Cross-Section (12)
<i>Sample is Restricted to Municipalities with Paramilitary Presence in 2000-2001</i>												
Armed Actors Presence is Measured by:												
	Attacks			Log Attacks		Displaced		Log Displaced		Principal Component Attacks and Displaced		
Max{0, Uribe-Pastrana vote share}				0.25 (0.15)		0.56 (0.30)		10.16 (2.95)		0.39 (0.13)		2.57 (0.83)
Uribe Vote Share	0.14 (0.08)	0.15 (0.09)	0.15 (0.08)		0.11 (0.27)		4.09 (1.98)		0.32 (0.10)		1.17 (0.49)	
Pastrana Vote Share	-0.22 (0.08)	-0.09 (0.10)	-0.09 (0.11)		0.07 (0.41)		-0.85 (2.81)		0.31 (0.17)		-1.30 (0.66)	
Uribe Vote Share X Pastrana Vote Share	-0.63 (0.33)	-0.41 (0.33)	-0.42 (0.36)		-0.46 (0.22)		-12.68 (5.60)		-0.10 (0.09)		-3.65 (1.46)	
Paramilitary Presence in 2000-2001	0.42 (0.17)	0.42 (0.18)	0.42 (0.19)	0.40 (0.18)	0.35 (0.12)	0.34 (0.12)	0.04 (0.02)	0.03 (0.02)	0.22 (0.06)	0.21 (0.06)	0.37 (0.15)	0.35 (0.14)
Guerrilla Presence in 2000-2001			-0.00 (0.02)	0.00 (0.02)	0.00 (0.10)	0.01 (0.10)	0.05 (0.02)	0.05 (0.02)	0.21 (0.06)	0.21 (0.06)	-0.08 (0.09)	-0.08 (0.09)
Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	299	291	291	291	88	88	616	616	503	503	643	643
R-squared	0.25	0.27	0.27	0.27	0.64	0.61	0.19	0.20	0.43	0.41	0.21	0.22

Notes: Robust standard errors in parentheses. Cross Section regressions restricting the sample to municipalities with paramilitary presence in 2000-2001. Dependent variable is paramilitary presence in 2004-2005. We report results with three measures of paramilitary presence: **i.** Attacks by the paramilitaries in columns (1) to (6) is the sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 2004-2005 period (dependent variable) and during the 2000-2001 period (paramilitary presence before 2002 variable); **ii.** Displaced by the paramilitaries in columns (7) to (10) is the sum of people displaced by the paramilitary per 1,000 inhabitants in municipality  $m$  during the 2004-2005 period (dependent variable) and during the 2000-2001 period (paramilitary presence before 2002 variable); **iii.** The principal component of attacks by the paramilitary and displaced by the paramilitary in columns (11) and (12). Guerrilla presence before 2002 is measured as paramilitary presence before 2002. In columns (5), (6), (9) and (10) all variables are in logs. Uribe and Pastrana vote shares are the vote shares of Álvaro Uribe in 2002 and Andrés Pastrana in 1998 (first round), respectively. These two variables are measured in a scale from zero to one for ease of exposition (to report fewer decimals) and they are also demeaned to interpret the derivatives at the mean of the interactions in all columns except in columns (4), (8) and (12). In these columns, the variable of interest is the maximum between zero and the difference between Álvaro Uribe's vote share in 2002 and Andrés Pastrana's vote share in 1998 in municipality  $m$ . All specifications include the same controls as in Table 3: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

**Table 7 : Reelection and Senators Elected from High Paramilitary Presence Areas**

*Dependent Variable is the Fraction  
of Senators in List l that Voted Yes  
for Changing the Constitution to  
Allow the Reelection of the President*

	Cross Section (1)	Cross Section (2)	Cross Section (3)	Cross Section (4)	Cross Section (5)	Cross Section (6)	Cross Section (7)
	Armed Presence Measured By:						
	Attacks			Displaced			
Dummy Conservative	0.48 (0.11)			0.36 (0.12)			0.33 (0.12)
Dummy Left	-0.52 (0.11)			-0.48 (0.11)			-0.50 (0.12)
Dummy Third Parties	0.31 (0.13)			0.30 (0.12)			0.28 (0.13)
<i>Share of Votes From:</i>							
Paramilitary Areas		1.26 (0.41)	1.79 (0.55)	1.61 (0.60)	1.02 (0.41)	1.28 (0.44)	0.63 (0.36)
Guerrilla Areas		-0.92 (0.73)	-1.87 (0.82)	-1.39 (0.80)	-0.88 (0.79)	-1.05 (0.78)	-0.21 (0.65)
Right Oriented Areas			1.81 (0.36)	1.11 (0.34)		1.55 (0.34)	0.88 (0.32)
Left Oriented Areas			-0.17 (0.24)	-0.02 (0.21)		-0.27 (0.23)	-0.16 (0.21)
Observations	76	76	76	76	76	76	76
R-squared	0.38	0.07	0.21	0.45	0.04	0.17	0.39

Notes: Robust standard errors in parentheses. OLS regressions linking votes in the Senate to votes obtained in areas with presence of non-state armed actors. Dependent variable is the proportion of senators in list *l* that voted yes (since only three lists have more than one candidate in the senate in the legislature of 2002-2006 and since candidates in the same list voted in the same manner, the dependent variable is a dummy). The vote is for changing the constitution to allow the president to be elected for a second consecutive term. To measure the share of votes of list *l* from a given area we first create dummies for places with high presence of paramilitary, guerrilla, right-oriented preferences or left-oriented preferences (municipality *m* is a high presence area if the value of the corresponding variable in municipality *m* is above the 75<sup>th</sup> percentile; paramilitary and guerrilla presence measures are the sum of attacks per 1,000 inhabitant in the 1997-2001 period, just before the elections of 2002). Then, with each of these dummies, we compute the share of votes in national elections obtained by list *l* in areas where the dummy takes the value of one. Columns (2) to (4) use attacks to define the presence dummies, columns (5) to (7) use displaced.

## Appendix (Not-for-Publication)

### Alternative Modeling Assumption

An alternative modeling assumption, as noted in footnote 8 in the text, is to assume that paramilitaries in region  $j \in \mathcal{Z}$  are able to force a fraction  $m_j$  of the population to vote for their favorite candidate (say party A), while the remaining  $1 - m_j$  still vote freely, with exactly the same preferences as specified in the text. In this case, equation (6) will be replaced with

$$\begin{aligned}
P^A(q^A, q^B \mid \boldsymbol{\theta}, \mathbf{m}) &= \Pr \left[ V \geq \frac{N}{2} \right] \\
&= \Pr \left[ \sum_{j=1}^N m_j + \sum_{j=1}^N (1 - m_j) \left[ \frac{1}{2} + \phi(u_j(q^A) - u_j(q^B) + \theta_j + \xi) \right] \geq \frac{N}{2} \right] \\
&= \Pr \left[ \frac{1}{2} \sum_{j=1}^N m_j + \phi \sum_{j=1}^N (1 - m_j) (u_j(q^A) - u_j(q^B) + \theta_j + \xi) \geq 0 \right] \\
&= \frac{N}{2 \sum_{j=1}^N (1 - m_j)} + \frac{\phi \sum_{j=1}^N (1 - m_j) (u_j(q^A) - u_j(q^B) + \theta_j)}{\sum_{j=1}^N (1 - m_j)},
\end{aligned}$$

where the first line uses the fact that and the fact that  $\sum_{j \in \mathcal{Z}} m_j = \sum_{j=1}^N m_j$ , and we use the convention that  $m_j = 0$  for  $j \in \mathcal{J} \setminus \mathcal{Z}$  and the last equality again uses the fact that  $\xi$  is uniform over  $\left[-\frac{1}{2\phi}, \frac{1}{2\phi}\right]$ . In this case, the equilibrium policies of both parties will be given by  $q^*$  that maximizes  $\sum_{j=1}^N (1 - m_j) u_j(q)$ , and if interior, this will satisfy

$$\sum_{j=1}^N (1 - m_j) \nabla u_j(q^*) = 0,$$

so that now voters in the paramilitary-controlled areas also get some weight. Nevertheless, in line with our results in the text, the higher is  $m_j$  (i.e., the fraction of the population under the control of the paramilitaries), the lower is this weight. In equilibrium, we naturally have

$$P^A(q^*, q^* \mid \boldsymbol{\theta}, \mathbf{m}) = \frac{N}{2 \sum_{j=1}^N (1 - m_j)} + \frac{\phi \sum_{j=1}^N (1 - m_j) \theta_j}{\sum_{j=1}^N (1 - m_j)}.$$

One advantage of this alternative formulation is that we obtain exactly the same policy vector and the same probability of party A winning the election as  $\sum_{j=1}^N m_j \rightarrow 0$ , whereas with our baseline model in the text, this result is obtained as we take the limit where  $|\mathcal{Z}| \rightarrow 0$ .

The results on persistence also continue to apply in this modified setup. In particular, the cross partial of  $P^A(q^*, q^* \mid \boldsymbol{\theta}, \mathbf{m})$  with respect to  $m_j$  and  $\theta_j$  is negative (i.e.,  $\partial^2 P^A(q^*, q^* \mid \boldsymbol{\theta}, \mathbf{m}) / \partial m_k \partial \theta_k = \phi \sum_{j \neq k} (1 - m_j) / \left( \sum_{j=1}^N (1 - m_j) \right)^2$ ). This implies that the contribution of paramilitary votes to

the probability of winning is greater when  $\theta_j$  is lower, and thus the main result of Proposition 3 continues to apply (though the exact characterization of the set of municipalities that the state reconquers is more complicated in this case).

## **The Structure of Colombian High Courts**

We now discuss in more detail the structure of the Colombian High Courts to illustrate why they are able to act independently of the president. There are four High Courts: the Supreme Court, the Conseil d'Etat (State Council), the Superior Council of the Judiciary and the Constitutional Court. While the first two have been in place since the 1886 Colombian Constitution (although with some alterations), the latter ones were a creation of the 1991 Constitution. For the purposes of paramilitary involvement in politics it is relevant to briefly understand the basics of the Supreme Court and the Constitutional Court. The Supreme Court's main role is to review judgments of inferior (provincial) courts and decide whether there has been a correct interpretation of the law and/or the facts of the cases. The Court is divided in three sections: criminal, civil and labor. The Criminal Section of the Supreme Court is also in charge of trying and judging "the members of the Congress: Senate and Chamber of Representatives" (Article 235 # 3—Constitution). This gives the Supreme Court the authority to judge members of Congress accused of having links with paramilitary groups. Some members of Congress, once investigations for paramilitary links have started, have stepped down from their public office to avoid the jurisdiction of the Supreme Court and have subjected themselves to ordinary procedures under "lower-scale" prosecutors and judges.

The Constitutional Court has two types of roles: on the one hand it is in charge of reviewing the judgment of provincial and sectional judges regarding 'acciones de tutela,' which is a procedure that any person can start—generally against public officials—in order to seek the protection of his/her fundamental rights. On the other hand the Constitutional Court is in charge of judicial review of legislation. In this role the Court determines whether a particular statute (law enacted by Congress) is constitutional. The Constitution provides that some statutes should be automatically reviewed by the Court, while in other cases the Court will only intervene when a citizen challenges the constitutionality of a particular statute. In the case of the Justice and Peace Law, the Constitutional Court reviewed its constitutionality thanks to a challenge posed by a group of citizens (under Article 241 of the 1991 Constitution).

There is a relatively high degree of autonomy of these High Courts vis-à-vis the Executive Branch, particularly the Supreme Court. Supreme Court Justices serve one eight-year term with no re-election. The Supreme Court is in charge of choosing replacement justices from lists

prepared by the Administrative Section of the Superior Council of the Judiciary (another High Court also in charge of administrative functions regarding the judiciary). In turn, the justices of the Administrative Section are appointed by the Constitutional Court (1 judge), by the Supreme Court (2 judges) and by the Conseil d'Etat (3 judges). The impact of the legislative and executive branches is therefore very indirect on the Supreme Court. They can to some extent influence this process. For instance the Constitutional Court has 9 judges elected for life by the Senate. However, the election takes place over lists of candidates presented by the President (3 judges), the Supreme Court (3 judges) and the Conseil d'Etat (3 judges). Thus, from the nine justices sitting on the Constitutional Court in a particular term, three of them have come out from lists presented by the President.

### **Robustness Checks on Table 3**

Table A2 shows the results for the votes for third parties in the Congress. The general patterns and in fact even the point estimates are very similar to those in Table 3, with high paramilitary areas showing about a 8 percentage points higher vote shares for third parties after the AUC's involvement in politics. Nevertheless, the results are weaker than in Table 3, and in column 6 where we use the attacks dummy with the full set of covariates and guerilla presence neither  $\hat{\alpha}_{2002}$  not  $\hat{\alpha}_{2006}$  statistically significant. Importantly,  $\hat{\alpha}_{1994}$  and  $\hat{\alpha}_{1998}$  are small and statistically insignificant in all specifications in Table A2.

Table A3 investigates the robustness of the results presented in Table 3 further (focusing on the votes for the Senate; the results for the Congress are similar). In this table, all specifications include the time interactions with the full set of covariates introduced above, including the interactions with guerrilla presence (which are reported in the table, while other covariates are again not reported to save space). The first column again estimates (9) from the text, but uses the levels of displaced people as the presence measure for both paramilitary and guerilla presence. Now we see that, less supportive of our hypothesis, the estimates for the interactions between all the time dummies and the displaced measure of paramilitary presence are statistically significant (though the point estimates are different because the scale of the displaced variable is different). However, there is a large increase in the size of the coefficient in 2002, though it halves in 2006. In column 2 we use the dummy version of the displaced measure of paramilitary presence with results very similar to those in column 1 except that now the quantitative magnitudes of  $\hat{\alpha}_{2002}$  and  $\hat{\alpha}_{2006}$  are similar. Because we are now using a dummy variable for measuring paramilitary presence, the quantitative effects can also be directly compared to those in Table 3. The estimates suggest that high paramilitary areas experienced about 12 percentage points increase in the vote

share of third parties in 2002 and 2006, which is broadly consistent with the quantitative effects in Table 3.

In column 3 we again use the displaced measure, but now exploit the time series variation in the data estimating model (10). Here the estimates are imprecise and insignificant, though still positive. In column 4, we use a different strategy and extract the principal component of the attacks and displaced measures, and use this principal component as our measure of paramilitary presence. The advantage of this strategy is that both attacks and displaced numbers are noisy, thus their common component may contain more information. The results from this approach are very much in line with those of Tables 3 and 4. We find no impact of paramilitary presence prior to 2002 but a positive and highly significant one afterwards. In column 5, we use yet another strategy and construct a dummy that takes the value 1 if in our data a municipality has high paramilitary presence according to both our attacks data and our displaced data (according to this measure all areas for which we have data for displaced numbers but for which the attacks data are missing receive a value of zero). We construct a similar dummy for the guerilla presence measures. The results using this combined dummy are again very similar to our basic finding though  $\hat{\alpha}_{1998}$  is now statistically significant. Finally, in column 6, we estimate the model (10), but now using a time-varying dummy constructed combining information from attacks and displaced numbers as in column 5. In contrast to the imprecise results in column 3, the estimates now are consistent with the rest of our results and are highly significant.

### **Robustness Checks on Table 6**

Table A4 estimates equation (12), but instead of defining  $P_{m,t<2002}$  and  $P_{m,t>2002}$  using 1999, 2000 and 2001 ( $t<2002$ ) or between 2003, 2004, 2005 ( $t>2002$ ) as in Table 6, it uses a two-year window (2000 and 2001 for  $P_{m,t<2002}$  and 2003 and 2004 for  $P_{m,t>2002}$ ). The results in Table A4 are broadly similar to, in fact stronger than, those in Table 6.



**Table A1: Top 20 Senators By Vote Share in Paramilitary Areas Using Displaced**

Senator		Third Parties (1)	Reelection (2)	Justice and Peace Law (3)	Status (4)	% Votes In Paramilitary Zones (5)
FLOR MODESTA	GNECCO ARREGOCES	yes	yes	yes		65.67
JAIRO ENRIQUE	MERLANO FERNANDEZ	yes	yes	yes	Arrested (Not Guilty)	65.37
SALOMON DE JESUS	SAADE ABDALA	no	yes		Investigated	65.23
DIEB NICOLAS	MALOOF CUSE	yes	yes	yes	Arrested (Guilty)	61.17
MAURICIO	PIMIENTO BARRERA	yes	yes	yes	Arrested (Guilty)	59.71
ALVARO ALFONSO	GARCIA ROMERO	yes			Arrested (Guilty)	52.46
CARLOS ARTURO	CLAVIJO VARGAS	yes			Arrested	50.94
JUAN CARLOS	MARTINEZ SINISTERRA	yes	yes		Arrested	42.02
JESUS LEON	PUELLO CHAMIE	no	yes			38.94
WILLIAM ALFONSO	MONTES MEDINA	yes	yes	yes	Arrested (Not Guilty)	34.22
ALVARO	ARAUJO CASTRO	yes		yes	Arrested	32.74
PIEDAD DEL SOCORRO	ZUCCARDI DE GARCIA	no	yes	yes		31.72
VICENTE	BLEL SAAD	yes	yes	yes	Arrested	29.51
LUIS EDUARDO	VIVES LACOUTURE	yes	yes	yes	Arrested (Guilty)	27.86
PIEDAD	CORDOBA	no	no	no		27.63
GABRIEL	ACOSTA BENDEK	yes				26.05
HUGO	SERRANO GOMEZ	no	no			25.09
MIGUEL ALFONSO	DE LA ESPRIELLA BURG	yes	yes	yes	Arrested (Guilty)	23.96
LUIS ALBERTO	GIL CASTILLO	yes	yes		Arrested	23.78
RUBEN DARIO	QUINTERO VILLADA	yes			Arrested	23.33

Notes: Senators that obtained the twenty highest shares of votes in municipalities with high paramilitary presence. High paramilitary presence is measured by a dummy that takes the value of one if the municipality had a total number of displaced by the paramilitaries per 1,000 inhabitants is above the 75<sup>th</sup> percentile in the 1997-2001 period. A Yes indicates that the senator belongs to a third party in the election of 2002 (column (1)), voted yes to approve reelection (column (2)) or yes to reintroduce Sedition and Reduction of Sentences articles in the Justice and Peace Law (column (3)). The status of the senator (column (4)) is that on May 21 of 2009 and is taken from Indepaz <http://www.indepaz.org.co> (for reelected senators) and from the news. A blank space in columns (2) or (3) means that the senator did not vote on the measure.

**Table A2: Paramilitary Presence and Third Parties Share of Votes in The Elections for the Congress**

<i>Dependent Variable is Vote Share obtained by Third Parties in The Elections for the Congress</i>	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1991-2006	Panel 1998-2006	Panel 1998-2006
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Armed Actors Presence is Measured by:							
	Attacks		Attacks Dummy			Time Varying Attacks Dummy		
Paramilitary Presence							-3.12 (3.98)	-2.41 (4.06)
Paramilitary Presence X 1994	2.53 (2.29)	0.16 (2.33)	0.06 (2.35)	2.24 (1.99)	1.27 (2.10)	0.86 (2.17)		
Paramilitary Presence X 1998	-0.56 (2.36)	-1.49 (2.31)	-1.52 (2.39)	-1.74 (2.12)	-2.82 (2.11)	-3.63 (2.20)		
Paramilitary Presence X 2002	13.63 (4.05)	9.55 (4.07)	8.81 (4.06)	7.67 (2.92)	5.78 (3.02)	3.94 (3.16)	9.15 (4.26)	7.84 (4.39)
Paramilitary Presence X 2006	15.18 (2.31)	6.23 (2.08)	6.24 (2.20)	7.55 (2.24)	2.98 (2.09)	2.55 (2.17)	7.97 (4.53)	7.08 (4.63)
Guerrilla Presence								-1.23 (1.93)
Guerrilla Presence X 1994			0.08 (0.74)			1.68 (2.27)		
Guerrilla Presence X 1998			0.03 (0.79)			3.49 (2.41)		
Guerrilla Presence X 2002			0.62 (1.08)			7.86 (3.29)		3.80 (2.27)
Guerrilla Presence X 2006			-0.01 (0.69)			1.85 (2.38)		2.74 (2.85)
Controls Interacted with Year Dummies	No	Yes	Yes	No	Yes	Yes	No	No
Observations	5363	4899	4899	5363	4899	4899	3289	3289

Notes: Robust Standard errors clustered at the municipality level in parentheses. Panel regressions with full set of municipality and year dummies. Dependent variable is share of votes of third parties lists (not Conservative, nor Liberal, nor from the left) in the elections for the Congress. We report results with three different measures of paramilitary presence: **i.** The sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 1997-2005 period in columns (1), (2) and (3); **ii.** A time invariant dummy that takes the value of one if the sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 1997-2005 period is above the 75<sup>th</sup> percentile in columns (4), (5) and (6); **iii.** A time varying attacks dummy that takes the value of one in municipality  $m$  and time  $t$  if time varying measure of attacks over population is above the 75<sup>th</sup> percentile (calculated over all municipalities and years) in columns (7) and (8). When guerrilla presence is included, in columns (3), (6) and (8), it is measured as the corresponding paramilitary presence measure. Columns (2), (3), (5) and (6) include the following controls interacted with time dummies: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

**Table A3: Paramilitary Presence and Third Parties Share of Votes in the Elections for the Senate. Robustness to Alternative Definitions of Paramilitary Presence.**

<i>Dependent Variable is Vote Share obtained by Third Parties in The Elections for the Senate</i>	Panel 1991-2006	Panel 1991-2006	Panel 1998-2006	Panel 1991-2006	Panel 1991-2006	Panel 1998-2006
	(1)	(2)	(3)	(4)	(5)	(6)
Armed Actors Presence is Measured by:						
	Displaced	Displaced Dummy	Time Varying Displaced Dummy	Principal Component of Attacks and Displaced	Attacks and Displaced Dummy	Attacks and Displaced Time Varying Dummy
Paramilitary Presence			3.08 (3.76)			-5.17 (6.51)
Paramilitary Presence X 1994	0.13 (0.03)	4.64 (1.50)		1.17 (0.61)	1.81 (1.57)	
Paramilitary Presence X 1998	0.10 (0.04)	5.22 (2.07)		1.05 (0.74)	4.57 (2.23)	
Paramilitary Presence X 2002	0.32 (0.05)	11.74 (2.52)	3.80 (4.38)	5.68 (0.96)	14.59 (2.60)	15.35 (6.84)
Paramilitary Presence X 2006	0.16 (0.06)	10.25 (2.09)	3.41 (4.02)	3.20 (0.89)	10.20 (2.27)	13.78 (6.79)
Guerrilla Presence			-14.80 (3.59)			-10.60 (4.50)
Guerrilla Presence X 1994	-0.00 (0.02)	1.45 (1.70)		0.53 (0.92)	2.88 (1.88)	
Guerrilla Presence X 1998	-0.00 (0.02)	-1.91 (2.32)		0.13 (1.15)	-1.00 (2.42)	
Guerrilla Presence X 2002	-0.08 (0.03)	-1.13 (2.59)	13.09 (4.15)	-1.80 (1.21)	-1.69 (2.56)	9.52 (4.93)
Guerrilla Presence X 2006	-0.02 (0.03)	-2.41 (2.27)	15.94 (3.79)	-0.01 (1.06)	-0.49 (2.31)	13.08 (4.74)
Observations	4915	4915	3286	4915	4915	3286

Notes: Robust Standard errors clustered at the municipality level in parentheses. Panel regressions with full set of municipality and year dummies. Dependent variable is share of votes of third parties lists (not Conservative, nor Liberal nor from the left) in the elections for the Senate. We report results with six different measures of paramilitary presence: **i.** The sum of people displaced by the paramilitary per 1,000 inhabitants in municipality  $m$  during the 1997-2007 period in columns (1); **ii.** A time invariant dummy that takes the value of one if the sum of people displaced by the paramilitary per 1,000 inhabitants in municipality  $m$  during the 1997-2005 period is above the 75<sup>th</sup> percentile in column (2); **iii.** A time varying displaced dummy that takes the value of one in municipality  $m$  and time  $t$  if a time varying measure of attacks over population is above the 75<sup>th</sup> percentile (calculated over all municipalities and years) in column (3); **iv.** The principal component of attacks and displaced in column (4); **v.** A time invariant attacks and displaced dummy that takes the values of one if both attacks and displaced time invariant dummies take the value of 1 in column (5); **vi.** A time varying attacks and displaced dummy that takes the values of one if both attacks and displaced time varying dummies take the value of 1 in column (6). Guerrilla presence is measured accordingly. All specifications include the following controls interacted with time dummies: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

**Table A4: Persistence of Paramilitaries and Vote Share for Alvaro Uribe . Robustness Checks.**

<i>Dependent Variable is Paramilitary Presence in 2003-2005</i>	Cross-Section (1)	Cross-Section (2)	Cross-Section (3)	Cross-Section (4)	Cross-Section (5)	Cross-Section (6)	Cross-Section (7)	Cross-Section (8)	Cross-Section (9)	Cross-Section (10)	Cross-Section (11)	Cross-Section (12)
<i>Sample is Restricted to Municipalities with Paramilitary Presence in 1999-2001</i>												
Armed Actors Presence is Measured by:												
	Attacks			Log Attacks		Displaced		Log Displaced		Principal Component Attacks and Displaced		
Max{0, Uribe-Pastrana vote share}				0.27 (0.16)		0.44 (0.31)		9.95 (3.26)		0.25 (0.13)		1.85 (0.69)
Uribe Vote Share	0.14 (0.08)	0.13 (0.10)	0.13 (0.10)		0.03 (0.22)		2.58 (2.46)		0.15 (0.09)		0.66 (0.43)	
Pastrana Vote Share	-0.23 (0.09)	-0.07 (0.12)	-0.08 (0.13)		0.12 (0.39)		-0.36 (3.87)		0.29 (0.14)		-0.93 (0.60)	
Uribe Vote Share X Pastrana Vote Share	-0.77 (0.36)	-0.62 (0.39)	-0.63 (0.41)		-0.46 (0.19)		-19.11 (7.36)		-0.20 (0.07)		-3.84 (1.31)	
Paramilitary Presence in 1999-2001	0.41 (0.16)	0.40 (0.17)	0.40 (0.19)	0.39 (0.18)	0.31 (0.11)	0.29 (0.11)	0.12 (0.04)	0.12 (0.04)	0.23 (0.05)	0.23 (0.05)	0.36 (0.12)	0.35 (0.12)
Guerrilla Presence in 1999-2001			-0.00 (0.02)	-0.00 (0.02)	-0.06 (0.09)	-0.04 (0.10)	0.06 (0.03)	0.06 (0.03)	0.26 (0.05)	0.26 (0.05)	-0.01 (0.09)	-0.00 (0.09)
Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	319	309	309	309	134	134	622	622	524	524	654	654
R-squared	0.21	0.24	0.24	0.24	0.55	0.52	0.25	0.26	0.49	0.46	0.25	0.25

Notes: Robust standard errors in parentheses. Cross Section regressions restricting the sample to municipalities with paramilitary presence in 1999-2001. Dependent variable is paramilitary presence in 2003-2005. We report results with three measures of paramilitary presence: **i.** Attacks by the paramilitaries in columns (1) to (6) is the sum of paramilitary attacks per 1,000 inhabitants in municipality  $m$  during the 2003-2005 period (dependent variable) and during the 1999-2001 period (paramilitary presence before 2002 variable), **ii.** Displaced by the paramilitaries in columns (7) to (10) is the sum of people displaced by the paramilitary per 1,000 inhabitants in municipality  $m$  during the 2003-2005 period (dependent variable) and during the 1999-2001 period (paramilitary presence before 2002 variable), **iii.** The principal component of attacks by the paramilitary and displaced by the paramilitary in column (11) and (12). Guerrilla presence before 2002 is measured as paramilitary presence before 2002. In columns (5), (6), (9) and (10) all variables are in logs. Uribe and Pastrana vote shares are the vote shares of Álvaro Uribe in 2002 and Andrés Pastrana in 1998 (first round), respectively. These two variables are measured in a scale from zero to one for ease of exposition (to report fewer decimals) and they are also demeaned to interpret the derivatives at the mean of the interactions in all columns except in columns (4), (8) and (12). In these columns, the variable of interest is the maximum between zero and the difference between Álvaro Uribe's vote share in 2002 and Andrés Pastrana's vote share in 1998 in municipality  $m$ . All specifications include the same controls as in Table 3: altitude, distance to the state capital, precipitation, average population between 1993 and 2005, rurality index in 1993, land gini in 1985, unfulfilled basic needs in 1993, dummy for coca cultivation in 1994, dummy for opium cultivation in 1994, preferences for the Right in 1986 and preferences for the Left in 1986.

Figure A1: Guerrilla Attacks, 1997-2005

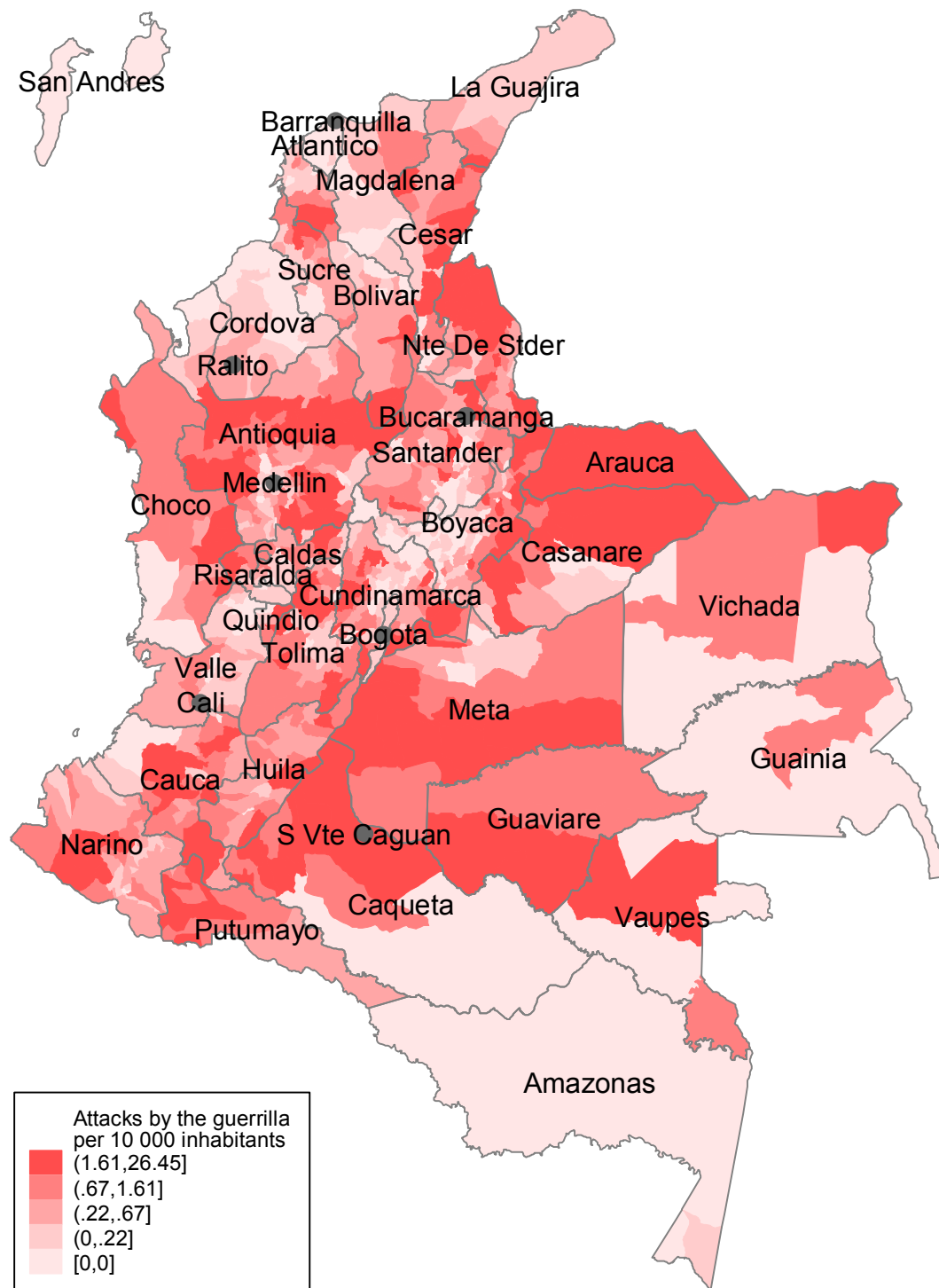


Figure A2: Paramilitary Attacks, 1997-2005

