THE MONOPOLY OF VIOLENCE: EVIDENCE FROM COLOMBIA

Daron Acemoglu
Massachusetts Institute of Technology

James A. Robinson
Harvard University

Rafael J. Santos
Yale University

Abstract
Many states in Latin America, Africa, and Asia lack the monopoly of violence, even though this was 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. We build a model to explain the incentive of central states to eliminate nonstate 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. We then investigate these ideas 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. Finally, we use roll-call votes to illustrate a possible "quid pro quo" between the executive and paramilitaries in Colombia. (JEL: D7, H11)

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

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E-mail: daron@mit.edu (Acemoglu); jrobinson@gov.harvard.edu (Robinson); rafael.santosvillagran@yale.edu (Santos)

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1. Introduction

Although state capacity is multifaceted, most scholars argue that 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" (Weber 1946, p. 78). States vary greatly in their capacities and the extent to which they monopolize violence and these differences are often viewed as key enablers of economic and political development (see for instance Evans, 1995, Besley and Pearson, 2011). Moreover, 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 inability of states to establish such monopoly because of "difficult geography" (Herbst 2000), "rough terrain" (Fearon and Laitin 2003), poverty (Fearon and Laitin 2003), or interstate competition and warfare (Tilly 1975; Brewer 1988; Herbst 2000; Besley and Persson 2011) have been suggested as key factors. Common to many these explanations is a type of "modernization" view, suggesting that as society modernizes, state capacity will develop and nonstate armed actors will be simultaneously eliminated. Some would even argue that establishing a monopoly of violence is a prerequisite for the other things to happen.[1]

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 eight representatives in the National Assembly elected by the tribal elders (the Maliks). Under General Musharraf's regime this was increased to twelve. 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 will see, as much as one third of the legislature in 2002 and 2006 may have been elected in elections heavily influenced by armed paramilitary groups.

These examples suggest that, differently from the conventional wisdom, 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

1. The classic example is the disarmament of the English aristocracy by the Tudors following the Wars of the Roses (Storey 1968), which allowed for the development of the state (Elton 1953; Braddick 2000), ultimately culminating in the reforms implemented after 1688 (Brewer 1988).

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 nondemocratic 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 nonstate armed actors (in our context, paramilitaries) can control citizens' voting behavior. Since paramilitaries naturally have preferences over policies, their political involvement creates an advantage for some politicians and may reduce these politicians' incentives to eliminate them. The model 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 nonstate armed actors can persist in part 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 leave them alone and possibly, implicitly or explicitly, support laws and policies that they prefer.[2]

We empirically investigate the implications of our model using the recent Colombian experience, where two main nonstate armed actors, the guerrilla group Fuerzas Armadas Revolucionarias de Colombia (FARC—The Revolutionary Armed Forces of Colombia) and various paramilitary forces, which in 1997 coalesced into the Autodefensas Unidas de Colombia (AUC—United Self-Defense Organization of Colombia), have shaped the 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 nontraditional "third parties" (that is, parties other than the liberals, the conservatives, and the socialists), which are 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 have supported two crucial clauses of the Justice and Peace Law, passed to govern paramilitary demobilization and generally viewed as highly lenient towards the paramilitaries.[3] Table 1 depicts some of the relevant information. On it we placed the 20 senators whose list got the greatest share of their

2. The implicit assumption, which seems very plausible, is that the central government cannot itself use the military to coerce voters in certain parts of the country to the same extent as the paramilitaries without causing a backlash in the rest of the country.

3. 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.

TABLE 1. Top 20 senators by vote share in paramilitary areas.

Senator		Third Parties (1)	Re-election (2)	Justice and Peace Law (3)	Status (4)	% Votes In Paramilitary Zones (5)
MAURICIO	PIMIENTO BARRERA	yes	yes	yes	Arrested (Guilty)	61.59
DIEB NICOLAS	MALOOF CUSE	yes	yes	yes	Arrested (Guilty)	57.73
ALVARO	ARAUJO CASTRO	yes		yes	Arrested	53.75
SALOMON DE JESUS	SAADE ABDALA	no	yes		Investigated	43.27
CARLOS ARTURO	CLAVIJO VARGAS	yes			Arrested	43.03
ISABEL	CELIS YAÑEZ	no				34.90
JUAN	GOMEZ MARTINEZ	yes	yes			33.60
PIEDAD	CORDOBA	no	no	no		31.77
GERMAN	HERNANDEZ AGUILERA	no	yes	yes		31.19
WILLIAM ALFONSO	MONTES MEDINA	yes	yes	yes	Arrested (Not Guilty)	30.94
FLOR MODESTA	GNECCO ARREGOCES	yes	yes	yes		29.46
RUBEN DARIO	QUINTERO VILLADA	yes			Arrested	29.45
BERNARDO ALEJANDRO	GUERRA HOYOS	no		no		29.19
LUIS GUILLERMO	VELEZ TRUJILLO	no	yes	yes		28.06
PIEDAD DEL SOCORRO	ZUCCARDI DE GARCIA	no	yes	yes	Arrested (Not Guilty)	26.54
VICTOR RENAN	BARCO LOPEZ	no	yes	yes	Investigated	26.37
JESUS LEON	PUELLO CHAMIE	no	yes			26.16
VICENTE	BLEL SAAD	yes	yes	yes		24.33
CONSUELO	DE MUSTAFA	no	yes			24.06
JUAN MANUEL	CORZO ROMAN	yes			Investigated	23.78

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 75th 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 re-elected senators) and from the news. A blank space in columns (2) or (3) means that the senator did not vote on the measure.

votes in areas with high paramilitary presence.[4] Column (1) shows that 50% 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 five senators are under arrest, while a further three 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. Our main hypothesis is that paramilitaries should persist more where they deliver votes to the executive, particularly in areas where the executive would otherwise not do well. This is because eliminating paramilitaries—which could be done with or without military intervention—would implicitly cost the executive valuable votes in the election. We 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 the "top 20" senators who voted, all but one supported re-election.[5]

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, the evidence we provide could also be consistent with a shift in the preferences of the electorate towards parties associated with the paramilitaries after 2001 in areas that already had strong paramilitary presence. Nevertheless, there are reasons to suspect that this is not the right explanation for the empirical patterns we observe. First, there is qualitative evidence documenting coercion and vote rigging by paramilitaries, suggesting that increased electoral support their allies enjoyed was not entirely voluntary. Second, we control for a range of variables capturing initial political attitudes (including initial vote shares of "left" and "right" presidential candidates) and municipality characteristics flexibly interacted with time, which should control for most

4. Table 1 uses our main measures of paramilitary presence using data on attacks and conflict incidents. Online Appendix Table A.1 reproduces Table 1 using a different measure of paramilitary presence, with very similar results.

5. There is no direct evidence that President Uribe is in some formal "coalition" with paramilitaries, and we do not believe or argue that he is. In fact, following some victories against the FARC which increased his popularity, he did take actions against the paramilitaries, specifically extraditing 14 top paramilitary leaders to the United States. Importantly, the politicians in our theoretical model are not in a formal coalition with paramilitaries either. What matters is that President Uribe's policies, which can be characterized as conservative, are closer to those preferred by the paramilitaries, who thus naturally have an interest in maintaining him in power. Some of our theoretical and empirical results exploit the fact that he may take this into account in several of his key decisions.

systematic changes in preferences. 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 nonstate 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 explanation for why many modern (and in fact democratic) states do not establish a monopoly of violence in their territory.[6] 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 creation of the monopoly of violence or even that such a monopoly is a prerequisite for some forms of state formation—mimicking the European experience—needs to be re-examined and perhaps 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 2007). Yet the state has not established a monopoly of violence. Moreover, several other countries, not only Pakistan (already mentioned), appear to have or could have had similar experiences. Most notably, these include the role of the Mafia in Southern Italy in delivering votes to the Christian Democratic Party (Walston 1988), and the long autonomy of the US South from the Hayes–Tilden agreement of 1877 until the Civil Rights and Voting Rights Acts of the 1960s. This autonomy was based on an exchange of the votes of Southern federal legislators for the right to maintain their economic and political system based on the disenfranchisement and coercion of blacks.[7]

In addition to the literature already cited, 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 endogenous creation of state capacity by an elite facing democratization. They argue that the elite may have an incentive to choose inefficient state institutions to form a post-democracy coalition limiting the amount of redistribution. In a related paper, Besley and Persson (2011) 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.[8]

6. Naturally, it is possible that the mechanism that we identify here may be less important in nondemocratic regimes, though even dictators require support. Recall, for example, that as noted previously 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.

7. Franklin D. Roosevelt's reaction to a proposal to pass legislation to attempt to restrict lynching in the South is telling in this context. He responded 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).

8. Within political science, the literature on "subnational authoritarianism", which has emphasized how democratization at the national level can coexist with highly authoritarian local practices (Gibson 2005;

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 (Fearon and Laitin, 2003). Nevertheless, most of the research on civil war focuses on the motivations that lie behind the decisions of people to take up arms against their governments and the symbiotic relationship between the state and nonstate actors does not arise.[9]

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 Losada (2000, 2005) and 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.[10]

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 nonstate armed actors depending on whether they receive electoral support from them. Section 3 provides a brief overview of the history and nature of nonstate armed actors in Colombia. Section 4 describes the data we use and provides some basic descriptive statistics. Section 5 presents our empirical results, while Section 6 concludes. The Online Appendix includes further details and robustness checks.

2. Model

In this section, we present a simple model to formalize the possible channels of interaction between the central government and paramilitaries. Motivated by the Colombian experience, our focus will be on democratic politics, where an incumbent is facing re-election and decides whether to eliminate paramilitaries from some of the areas they 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 to achieve their electoral objectives (see Persson and Tabellini 2000). 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 central

Mickey 2012), and within economics, papers such as Glaeser and Shleifer (2005) and Gregory, Schroeder, and Sonin (2011), which look at strategies for manipulating the electorate, are also related.

9. There is also a large literature about the origins of conflict in Colombia (see Bergquist, Peñaranda, and Sánchez 1992, 2001; Deas 1999; 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 nonstate armed actors; it is also about the lack of incentives to do so and therefore has to be seen as an equilibrium phenomenon.

10. A related, independent paper, Dube and Naidu (2009), looks at the effect of US military aid to the Colombian army on paramilitary attacks (our measure of the presence of paramilitaries).

government to eliminate the paramilitaries, militarily or otherwise, from different areas—the conditions of the formation of the modern Weberian state with a monopoly of violence over the entire country.

2.1. Electoral Competition with Paramilitaries

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, each inhabited by a large number of individuals normalized to one per region. 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 $t = 1$.[11] 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 commit).

We first introduce the details of electoral competition at date $t = 1$ and then return to the decisions at $t = 0$. Let us denote the subset of the regions under paramilitary control by $\mathcal{Z} \subset \mathcal{N}$ and the total number of these regions by Z. Let us also denote the complement of the set $\mathcal{Z}$ by $\mathcal{J} = \mathcal{N} \backslash \mathcal{Z}$ and the total number of regions in this (nonparamilitary-controlled) set by $J = N - Z$. The key feature of paramilitary-controlled areas for our purposes is that, as we will document in detail in what follows, voting is not free but influenced by the implicit or explicit pressure of the paramilitaries.

Let us start with voting in nonparamilitary-controlled areas, where voting is free. The utility of individual i in region $j \in \mathcal{J}$ 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 $j \in \mathcal{N}$, and $\tilde{\theta}^g$ is the ideological stance of party g, 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—that is, Y is a function that is increasing in $|\tilde{\theta}_j - \tilde{\theta}^g|$. We also assume that each u_j is strictly concave and differentiable, and the set of feasible policies Q is convex and compact. Finally, $\tilde{\varepsilon}_{ij}^g$ is an individual-specific utility term that helps smooth regional preferences over the two parties as in standard probabilistic voting models (Lindbeck and Weibull 1987). We assume that

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

11. This implies that we are looking at a "presidential system". Some of our empirical evidence, particularly those more directly substantiating the influence of paramilitaries on voting, comes from elections for the legislature. Focusing on a presidential system simplifies the theoretical argument without any major implications for our focus.

where ξ is an aggregate (common) "valence" term determining the relative popularity of party A, and ε_{ij} is an i.i.d. term. To simplify the discussion, we assume that each ε_{ij} has a uniform distribution over $[-1/2, 1/2]$, and ξ has a uniform distribution over $[-1/(2\varphi), 1/(2\varphi)]$. Therefore, conditional on the realization of ξ, the fraction of individuals in region $j \in \mathcal{J}$ who vote for party A is

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

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 $j \in \mathcal{J}$.

Consider next regions under paramilitary control. We assume, to simplify the exposition, that in each such region $j \in \mathcal{Z}$ a fraction $\tilde{m}_j + \xi$ of voters will vote for party A regardless of policies, where ξ is the same aggregate valence term, distributed uniformly over $[-1/(2\varphi), 1/(2\varphi)]$.[12] Let us also define $m_j \equiv \tilde{m}_j - 1/2$, which represents the bias of paramilitary-controlled municipality j for party A.

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

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

where m denotes the vector of the m_j (together with information on which the j are in the set $\mathcal{Z}$), and $\boldsymbol{\theta}$ is the vector of ideological biases in favor of party A. The second line uses (1), the third line the definition of $\tilde{m}_j$, and the fourth line the fact that ξ is distributed uniformly over $[-1/(2\varphi), 1/(2\varphi)]$. Throughout, we assume that ideological and non-electoral advantage of one party, in particular $|\sum_{j\in\mathcal{J}}\theta_j + \sum_{j\in\mathcal{Z}} m_j|$, is not so large (relative to the uncertainty in ξ) as to make one party win with probability one

12. This assumption implies that the voting behavior of all citizens in paramilitary-controlled regions is entirely *insensitive* to policies. An alternative would be 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 Online Appendix.

The alternative in which votes in paramilitary-controlled regions also respond to policy choices of the two parties is also discussed in the Online Appendix and leads to identical qualitative results.

when both parties choose the same platform. In the election at time $t = 1$, Party A's maximization problem is

$$\max_{q \in Q} P^A(q, q^B \mid \boldsymbol{\theta}, \mathbf{m}) R^A, \tag{2}$$

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

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

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

$$\sum_{j \in \mathcal{J}} \nabla u_j(q^A) = 0 \quad \text{and} \quad \sum_{j \in \mathcal{J}} \nabla u_j(q^B) = 0, \tag{4}$$

where ∇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 interior of 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 $q^A = q^B = q^*$ (regardless of whether the equilibrium is interior).[13] This leads to the following result.

PROPOSITION 1. *There exists a unique electoral equilibrium (at $t = 1$) where $q^A = q^B = q^*$. If q^* is interior, it satisfies equation (4). Party A wins the election with probability*

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

Two features are noteworthy. First, when $\mathcal{Z} = \emptyset$, our model nests the standard probabilistic model augmented with ideological preferences. In this special case policies cater to the preferences of all regions. In contrast, when $\mathcal{Z} \neq \emptyset$, because citizens in paramilitary-controlled areas cannot reward or punish a government according to the policy proposals that it makes, both parties target their policies to the voters in the nonparamilitary-controlled areas, $\mathcal{J}$ (see also the Online Appendix). This implies that public goods and other amenities will be reduced in the paramilitary-controlled areas beyond the direct effect of paramilitary presence.[14] Thus, all else equal, we may expect paramilitary presence to increase inequality across regions. Second, electoral

13. This follows because, given the uniform distribution of the stochastic variables, both equations (2) and (3) boil down to the same strictly concave maximization problem, which thus has a unique solution, corresponding to the unique equilibrium with $q^A = q^B = q^*$.

14. 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.

outcomes depend 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, other things equal, the probability that party A will win the election (and stays in power) is greater. The more areas are controlled by the paramilitaries, the stronger is this effect. In the empirical work that follows, we will provide indirect evidence consistent with Proposition 1 by showing the influence of paramilitaries on electoral outcomes.

2.2. 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 $t = 0$ to "eliminate" nonstate armed actors—which could be done either militarily or by co-opting them or their supporters. Let us model this in the simplest possible way and suppose that at time $t = 0$, the objective of the governing party is

$$\sum_{j \in \mathcal{R}} \gamma_j + P^A(q^A, q^B \mid \boldsymbol{\theta}, \mathbf{m}) R^A, \tag{5}$$

where $\mathcal{R} \subset \mathcal{Z}$ is a subset of the areas previously controlled by the paramilitary where the central government eliminates the paramilitaries, and γ_j is the net benefit of doing so, which accrues to the government at time $t = 0$.[15] This net benefit includes the additional tax revenues or security gains that the central government will derive and subtracts the potential "real" cost of eliminating paramilitaries (spending on the military, potential instability, 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 paramilitaries are eliminated from some area $j \in \mathcal{Z}$, then in the subsequent electoral equilibrium at time $t = 1$, party A will obtain, in expectation, a fraction $1/2 + \varphi\theta_j$ 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 2. *A subgame perfect equilibrium involves the electoral equilibrium characterized in Proposition 1 at time* $t = 1$, *and at time* $t = 0$, *Party A eliminates paramilitaries from all* $j \in \mathcal{Z}$ *such that* $\gamma_j + \varphi(\theta_j - m_j)(R^A/N) > 0$, *and does not eliminate them from any* $j \in \mathcal{Z}$ *such that* $\gamma_j + \varphi(\theta_j - m_j)(R^A/N) < 0$.

15. 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 $\sum_{j \in \mathcal{R}} \gamma_j + P^A(q, q^B \mid \boldsymbol{\theta})[R^A + \sum_{j \in \mathcal{R}} \gamma_j]$, slightly complicating the analysis.

This proposition will be investigated in our empirical work. It implies that the willingness of the state to eliminate paramilitaries from the areas they control, 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 authority on electoral outcomes. In particular, if many of these paramilitary-controlled areas have $m_j > \theta_j$, then the state, currently controlled by party A, will be reluctant to eliminate paramilitaries from 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, from the perspective of party A, the areas that are most valuable in the hands of the paramilitaries are those that have both low θ_j and high m_j; that is, *areas that would have otherwise voted for party B, but where paramilitaries are inducing citizens to vote in favor of party A*. A government that does not require electoral support (e.g., a "purely nondemocratic" government) would have decided to reconquer all areas with $\gamma_j > 0$. Therefore, to the extent that $\theta_j < m_j$ a democratic government may be less willing to establish a monopoly of violence and eliminate paramilitaries than such a nondemocratic government (or a government that is secure in its position).[16]

Note that the uniform distributions of idiosyncratic preference and valence terms, together with the assumption that $|\sum_{j\in\mathcal{J}} \theta_j + \sum_{j\in\mathcal{Z}} m_j|$ is not so large as to determine the election with probability one, imply that the value of additional votes to the party in power is constant and independent of its "expected winning probability". As a consequence, Proposition 2 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, the party in power may be less responsive to the votes delivered by paramilitaries when it is ex ante more likely to win the election.

2.3. 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

16. Naturally, the net benefit of eliminating paramilitaries from an area might be different for a nondemocratic government. For example, it might be $\hat{\gamma}_j > \gamma_j$ instead of γ_j, because a nondemocratic government can impose higher taxes on certain regions than democratic governments could or would. This would be another incentive for nondemocratic governments to monopolize violence. On the other hand, the cost of doing so may also be higher for nondemocratic governments for 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 $\hat{\gamma}_j < \gamma_j$.

national ambitions, making a coalition between them and the executive controlling the central state more feasible.[17]

A simple way of introducing this possibility would be to have a probability $\Phi(z)$ that the nonstate armed actors would become strong enough to challenge the central state, perhaps overthrow it, where z is the fraction of municipalities controlled by the nonstate actors in question.[18] 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 (5) 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 eliminate nonstate 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 nonstate armed actors reduces the scope for a coalition or a symbiotic relationship between these groups and the executive. This reasoning suggests that when nonstate 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 noncredible, making a coalition between them impossible, and also proposes a natural reason for why, in Colombia, such a coalition may have been much more likely to arise with the paramilitaries rather than with the FARC.

2.4. Summary and Empirical Predictions

In the rest of the paper, we investigate the effect of Colombian paramilitary forces on the electoral outcomes in the early 2000s. Our investigation is motivated by the theoretical ideas discussed previously—even though we do not formally test the model presented here. 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 1, paramilitaries, once they became sufficiently well-organized, started influencing electoral outcomes in the areas of Colombia they controlled.

2. Consistent with Proposition 2, we will show that paramilitaries located in areas that voted for the current conservative president in great numbers, but in past

17. 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 (see García Sánchez 2009).

18. Such an overthrow of the central government by nonstate 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.

elections tended to vote for more liberal politicians, were more likely to persist—that is, in a regression of the persistence of paramilitaries in a municipality, we expect a negative coefficient on the interaction between the vote share of the incumbent under paramilitary control and what it would have obtained without paramilitaries.[19]

3. 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 (see Proposition 4 in the Online Appendix).

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 nonstate armed actors and many of the most recent emerged from a civil war known as *La Violencia* which lasted from the late 1940s into the early 1960s. This civil war was initially the consequence of fighting between the Liberal and Conservative political parties. In 1964, the FARC formed as did the Ejército de Liberación Nacional (ELN—National Liberation Army). These "left-wing" guerrilla groups were relatively small during the 1960s and 1970s, but began to expand rapidly in the 1980s and they were joined by other 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 AUC.

These various nonstate armed groups ranged over most of Colombia and, though estimates vary, may have had around 50,000 men and women under arms at the start of the twenty-first century. They engaged in kidnapping, massacres of civilians, drug production and exportation, and regularly expropriated land and extorted income 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 2002; Duncan 2007). The escalation of paramilitary activity 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

19. A countervailing effect would be that eliminating paramilitaries might increase the popularity of the incumbent. But to the extent that this effect is independent of the additional votes for the incumbent brought by paramilitary control of an area, it would not affect the interaction effect we focus on.

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.[20] 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 watch groups. An important supporter 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).[21]

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 15 July 2003 in Córdoba, the government signed an agreement with most of the groups of the AUC to disarm by the end of 2005.[22]

On 25 November 2003 around 860 paramilitaries of Medellín's Cacique Nutibara Bloc led by 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 five and eight 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

20. 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.

21. 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.

22. 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

process and the Justice and Peace Law have been widely criticized by human rights organizations.[23]

There is a great deal of controversy about whether the paramilitary demobilization is real (or simply the institutionalization/legitimation of the power of the AUC; on this issue see Pardo 2007; International Crisis Group 2007; Zuckerman 2009) and how it is connected to the upsurge of new armed groups known by the acronym 'Bacrim' (Bandas Criminales—Criminal Bands).

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 Rodrigo Tovar Pupo ("Jorge 40"), Diego Fernando Murillo ("Adolfo Paz"—one of his several nicknames), Salvatore Mancuso ("Santander Lozada") and Edwar Cobos Téllez ("Diego Vecino"), and several politicians subsequently arrested for links with paramilitaries, including Senators William Montes (Tables 1 and A.1) and Miguel de la Espriella (Table A.1).[24] 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, Partido de la U, 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.

23. See Human Rights Watch (2005), Amnesty International (2005) and Inter-American Commission on Human Rights (2007).

24. 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 eastern 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, 8 October 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, 6 November 2006).

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; it contained emails ordering his men to recruit peasants to pretend to be paramilitaries during demobilization ceremonies,[25] and 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 changes in voting patterns and very high concentrations of votes for some candidates in particular municipalities.[26]

Since then there have been many investigations of links between politicians and paramilitaries and a large case study literature has emerged documenting such links (Losada 2000, 2005; López 2007; Valencia 2007; and the other essays in Romero (2007) and the web site verdadabierta.com). As of 29 May 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.[27] In total this represents almost one third of Colombian legislators. Those arrested include Mario Uribe, President Uribe's cousin and main political adviser and Senator Carlos García, the president of the "U 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. 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

> Thirty-five per cent 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.[28]

The investigation into the 2002 and 2006 election results and the testimony of demobilized paramilitaries has revealed a large number of different "pacts" between

25. See also Inter-American Commission on Human Rights (2007, p. 5) on the apparently fake demobilizations in César.

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

27. These data are updated regularly on http://www.indepaz.org.co.

28. Translation of the authors from http://www.youtube.com/watch?v=sf4XNpHbwOk.

paramilitary leaders and politicians (detailed in López and Sevillano 2008) and also demonstrates that a plethora 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. In the municipality of San Onofre in the coastal department of Sucre,[29] for example, this was arranged by the paramilitary leader "Cadena": "'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."[30]

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 Ibírico in the department of César.[31]

Another coercive strategy involved collecting people's cedulas (national identity cards which a person must produce to vote) from their houses, using them to collect the ballots (the "tarjeton") and filling them in for people (*Semana*, 29 September 2007).

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" (see *Semana*, 25 November 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.

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

29. Interestingly, the mayor and ex-mayor of San Onofre were both signatories of the Pact of Santa Fé de Ralito.

30. Quoted from "Redacción Nacional" *El Tiempo* 11 November 2006. Translation by the authors.

31. From "Un Abrebocas de estas Elecciones" by Cristina Velez in Votebien.com, February 2006.

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.

For the senate there is a national constituency where 100 senators are elected from lists. For the congress there are 32 multimember districts with each district corresponding to a department. The representation of departments depends on their population and there are 162 congresspeople 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 representation (with preference voting). Thus even though the number of lists fell dramatically, personal politics continued unabated via preference voting.[32]

4. The Data

4.1. Data Sources and Construction

The most important data for the paper are on the presence of nonstate armed actors, specifically paramilitaries and guerillas. Our main measure of the presence of nonstate 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 nonstate armed forces initiated by the latter, ambushes of civilians, harassing (mainly threats to

32. The organization of the higher courts in Colombia is rather intricate and we discuss it in the Online 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 manipulate their composition.

civilians), incursion into "villages", overland piracy, illegal checkpoints, armed forces wounded by the nonstate 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 these variables for each year in the period 1997 to 2005.

We use these data to construct measures of the presence of nonstate armed actors. Because the time series variation in the attacks data appears to be quite noisy, we focus on "averages" of these data, though we also exploit over-time variation in some specifications. Our main measure of paramilitary presence, referred to as *paramilitary attacks*, is total paramilitary attacks between 1997 and 2001 in municipality m per 1,000 inhabitants where the population measure is the average population between the 1993 and 2005 censuses. All results are similar if we use total paramilitary attacks between 1997 and 2005, but we prefer to restrict the attacks measure to the 1997–2001 period, since this is both prior to the meeting in Santa Fé de Ralito in 2001 which marks the involvement of paramilitaries in national politics, and prior to 2002, which will be our first post-paramilitary involvement election. The Online 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.[33] We construct identical measures for guerrilla attacks (FARC and ELN combined).[34]

We took elections results for the senate, congress and presidential elections 1991–2006 from the Registraduría Nacional del Estado Civil. Using party names, 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.[35] 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*.[36]

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 1950s and ran on a hardline 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

33. Less than half of the municipalities have any paramilitary *Attacks*.

34. In the Online Apppendix we check the robustness of our results with an alternative measure of the presence of nonstate armed actors based on the number of people displaced by armed groups in a municipality.

35. Given our focus on the impact of the AUC, when we examine votes for third parties, we do not consider left-wing parties, such as the Polo Democrático ("Democratic pole"), which are unconnected with the paramilitaries, as "third parties". See Valencia (2007) for a similar distinction and calculation.

36. In Colombia, roll-calls are not taken for most votes in either the senate or the congress.

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 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 set 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 guerrilla presence (with no tendency to decline in the most recent period, despite President Uribe's intensification of the war against the FARC). From columns (3) and (5), there is a positive correlation between paramilitary presence and guerrilla presence, which is not surprising since, as we discussed above, paramilitary units were often formed to combat the guerrilla.

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, which will document the implications of paramilitary involvement in politics more systematically.

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 Nonstate Actors on Elections

We now investigate the impact of nonstate armed actors on electoral outcomes, in particular their impact on the vote share of third parties in the senate (we present the analogous results for congress in the Online Appendix) and the winning presidential candidate. Our basic regressions will be from a simple panel data model of the following

TABLE 2. Descriptive statistics.

	Variable	Whole Sample Mean (1)	Whole Sample Standard Deviation (2)	High Paramilitary Presence Mean (3)	High Paramilitary Presence Standard Deviation (4)	Low Paramilitary Presence Mean (5)	Low Paramilitary Presence Standard Deviation (6)
(1)	Paramilitary Presence	0.053	(0.147)	0.207	(0.234)	0.001	(0.005)
(2)	Paramilitary Presence 1996-1997	0.002	(0.021)	0.009	(0.042)	0.000	(0.001)
(3)	Paramilitary Presence 2000-2001	0.041	(0.119)	0.160	(0.196)	0.001	(0.004)
(4)	Paramilitary Presence 2004-2005	0.029	(0.132)	0.060	(0.192)	0.018	(0.102)
(5)	Guerrilla Presence	0.421	(0.738)	0.836	(1.052)	0.284	(0.532)
(6)	Guerrilla Presence 1996-1997	0.128	(0.306)	0.257	(0.428)	0.085	(0.237)
(7)	Guerrilla Presence 2000-2001	0.210	(0.430)	0.438	(0.653)	0.134	(0.286)
(8)	Guerrilla Presence 2004-2005	0.226	(0.862)	0.279	(0.605)	0.208	(0.931)
(9)	Third Parties Vote Share in the Senate Before 2001	24.761	(18.448)	21.385	(15.624)	25.972	(19.220)
(10)	Third Parties Vote Share in the Senate After 2002	46.940	(21.304)	52.745	(21.287)	44.969	(20.953)
(11)	Third Parties Vote Share in the Congress Before 2001	20.953	(21.839)	17.798	(18.686)	22.085	(22.762)
(12)	Third Parties Vote Share in the Congress After 2002	46.662	(24.623)	50.564	(24.034)	45.333	(24.687)
(13)	Winning Presidential Candidate Vote Share Before 2001	42.983	(23.060)	38.625	(21.637)	44.510	(23.359)
(14)	Winning Presidential Candidate Vote share after 2001	53.594	(21.892)	55.138	(21.502)	53.066	(22.006)
(15)	Preferences for the Right	42.261	(27.470)	35.032	(25.765)	44.948	(27.621)
(16)	Preferences for the Left	5.053	(11.410)	6.671	(13.031)	4.452	(10.695)
(17)	Land Gini in 1985	70.108	(10.580)	70.487	(9.945)	69.973	(10.801)
(18)	Unfullfiled Basic Needs in 1993	53.874	(19.560)	54.694	(17.261)	53.582	(20.325)
(19)	Average Population in 1993 and 2005	34828.420	(202618.100)	23079.840	(27801.910)	38777.290	(233555.500)
(20)	Rural Index in 1993	62.628	(24.500)	57.599	(19.784)	64.455	(25.770)
(21)	Distance to the States' Capital	129.662	(105.544)	138.907	(107.423)	126.368	(104.738)
(22)	Altitude	1157.380	(897.893)	918.670	(785.390)	1242.438	(920.321)
(23)	Precipitation	1912.277	(1061.043)	2124.312	(1052.909)	1836.724	(1054.328)
(24)	Dummy of Opium Cultivation in 1994	0.095	(0.293)	0.072	(0.258)	0.103	(0.305)
(25)	Dummy of Coca Cultivation in 1994	0.054	(0.225)	0.036	(0.186)	0.060	(0.238)

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 1997–2001 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 1997–2001 attacks by the paramilitaries dummy takes the value of 0.

form:

$$y_{m,t} = d_t + \delta_m + \alpha_t \cdot P_m + \beta_t \cdot G_m + \mathbf{X}'_{m,t} \cdot \boldsymbol{\pi} + \varepsilon_{m,t}, \quad (6)$$

where $y_{m,t}$ is the outcome variable in municipality m at time t, the d_t denote time effects, the δ_m are municipality fixed effects, and $\varepsilon_{m,t}$ is an error term representing all omitted factors. In addition, $\mathbf{X}_{m,t}$ is a vector of covariates comprising the interactions between various geographic and political controls at the municipality level (described previously) and a full set of time dummies. We include these interactions in robustness checks to control flexibly for any time trend related to initial municipality characteristics.

Most important for our focus is P_m, which is our time-invariant measure of paramilitary presence and G_m is the corresponding measure of guerrilla 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. We estimate equation (6) using the election years of 1991, 1994, 1998, 2002, and 2006. Our first dependent variable will be the vote share of third parties. We have this variable for all the election years listed above. 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 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:

$$y_{m,t} = d_t + \delta_m + \alpha_t P_{m,t-1} + \zeta P_{m,t-1} + \beta_t G_{m,t-1} + \eta G_{m,t-1} + \mathbf{X}'_{m,t}\boldsymbol{\pi} + \varepsilon_{m,t}, \quad (7)$$

which include both a time-varying main effect of paramilitary and guerrilla presence, and focus on the interaction between year effects and these time-varying measures. The disadvantage of this model is that, as noted previously, 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 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 at time t. $G_{m,t-1}$ is constructed similarly. For the 1998 election we just use the 1997 data, for 2002 we use data from 2000 and 2001, and so on. Equation (7) 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. We estimate equations (6) and (7), 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 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

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 (1)	Panel 1991-2006 (2)	Panel 1991-2006 (3)	Panel 1991-2006 (4)	Panel 1991-2006 (5)	Panel 1991-2006 (6)	Panel 1998-2006 (7)	Panel 1998-2006 (8)
	Armed Actors Presence is Measured by:							
	Attacks			Attacks Dummy			Time Varying Attacks Dummy	
Paramilitary Presence							−10.21	−9.58
							(2.72)	(2.81)
Paramilitary Presence X 1994	10.04	3.13	0.05	5.26	2.42	1.93		
	(2.956)	(2.899)	(2.956)	(1.137)	(1.127)	(1.189)		
Paramilitary Presence X 1998	12.54	5.20	2.98	5.67	2.49	2.86		
	(4.118)	(4.653)	(4.719)	(1.508)	(1.543)	(1.615)		
Paramilitary Presence X 2002	42.22	31.85	27.82	16.59	11.73	11.12	16.48	15.56
	(5.944)	(5.639)	(5.764)	(1.815)	(1.798)	(1.849)	(2.90)	(3.04)
Paramilitary Presence X 2006	38.66	20.89	16.86	16.18	7.99	7.52	16.90	16.01
	(5.478)	(5.090)	(5.063)	(1.856)	(1.604)	(1.666)	(3.06)	(3.20)
Guerrilla Presence								−1.14
								(1.76)
Guerrilla presence X 1994			1.73			1.70		
			(0.939)			(1.458)		
Guerrilla Presence X 1998			1.25			−1.28		
			(0.993)			(1.777)		
Guerrilla Presence X 2002			2.27			2.16		2.38
			(1.264)			(1.940)		(2.13)
Guerrilla Presence X 2006			2.26			1.60		2.99
			(1.091)			(1.784)		(2.33)
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 1997–2001 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 1997–2001 period is above the 75th 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 75th 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 4. Paramilitary presence and winning presidential candidate share of votes.

Dependent Variable is Winning Presidential Candidate Vote Share	Panel 1998-2006 (1)	Panel 1998-2006 (2)	Panel 1998-2006 (3)	Panel 1998-2006 (4)	Panel 1998-2006 (5)	Panel 1998-2006 (6)	Panel 1998-2006 (7)	Panel 1998-2006 (8)
	Armed Actors Presence is Measured by:							
	Attacks			Attacks Dummy			Time Varying Attacks Dummy	
Paramilitary Presence							−6.92	−6.91
							(3.59)	(3.65)
Paramilitary Presence X 2002	13.75	6.71	10.91	4.55	1.26	2.23	8.87	10.49
	(4.310)	(2.720)	(2.717)	(1.393)	(1.112)	(1.159)	(3.58)	(3.65)
Paramilitary Presence X 2006	37.19	24.71	17.85	10.86	5.92	3.65	12.53	12.23
	(5.584)	(3.283)	(3.307)	(1.568)	(1.197)	(1.201)	(3.77)	(3.86)
Guerrilla Presence								−3.54
								(1.61)
Guerrilla Presence X 2002			−2.39			−3.43		−5.53
			(0.634)			(1.121)		(1.73)
Guerrilla Presence X 2006			3.86			7.85		1.70
			(0.927)			(1.390)		(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 1997–2001 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 1997–2001 period is above the 75th 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 75th percentile (calculated over all municipalities and years) in columns (7) and (8). 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.

time dummies in all specifications. 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.

Table 3 shows a robust positive and significant effect of paramilitary presence on the vote share of third parties in both 2002 and 2006. For example, column (1) estimates $\hat{\alpha}_{2002} = 42.22$ with a standard error of 5.944 and a similar estimate for 2006, $\hat{\alpha}_{2006} = 38.66$ (s.e. $= 5.478$). Both estimates are highly statistically significant and quantitatively large (the magnitudes will be discussed in what follows).

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 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 (31.85 for 2002 and 20.89 for 2006). In column (3), we include interactions with guerrilla presence as well as our main interactions of paramilitary presence and time. The interactions between guerrilla presence and time dummies are marginally significant in column (3) but not robust across specifications (see column (6)). This is consistent with the hypothesis that the left-wing guerrillas have played a more limited role in national politics.[37]

The next three columns re-estimate the same models, but now using the attacks dummy as the measure of paramilitary and guerrilla presence. The results are very similar. For example, in column (4), we estimate $\hat{\alpha}_{2002} = 16.59$ (s.e. $= 1.815$) and $\hat{\alpha}_{2006} = 16.18$ (s.e. $= 1.856$), which are again statistically highly significant. The estimates in columns (5) and (6) are smaller in magnitude but still highly significant: $\hat{\alpha}_{2002} = 11.73$ (s.e. $= 1.798$) and $\hat{\alpha}_{2006} = 7.99$ (s.e. $= 1.604$). These estimates also show the quantitative effects of paramilitary involvement in a very transparent manner. They imply that high paramilitary areas have, on average, 16 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 25% (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). Something similar happens in columns (4) to (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

37. This is not because we are focusing on the vote share of third parties, typically allied with paramilitaries. When we repeat these regressions using the vote share of the socialist coalition, interactions with guerrilla presence are still insignificant.

the year-to-year variation in paramilitary and guerrilla presence are measured with considerable error. Nevertheless, in columns (7) and (8), we estimate equation (7) to provide some answers to these questions. The most parsimonious specification is presented in column (7), while column (8) also adds guerrilla presence. The results are consistent with those in the first six columns using our time-invariant measure of paramilitary presence. For example, the estimated coefficients in column (7), $\hat{\alpha}_{2002} = 16.48$ (s.e. $=$ 2.90) and $\hat{\alpha}_{2006} = 16.90$ (s.e. $=$ 3.06), are highly statistically significant and quantitatively similar to the comparable specification in column (4).[38]

Table A.2 in the Online Appendix shows the results from the estimation of the same models for votes cast for congressmen. The general patterns and in fact even the point estimates are very similar to those in Table 3. Table A.3 then shows that our basic results are robust to measuring paramilitary presence in different ways, in particular, either using an entirely different measure of paramilitary and guerrilla presence based on number of people displaced by these groups or combining the displaced and attack measures.

A major concern is the possibility that the electorate may be becoming more pro-paramilitary in some municipalities after 2002. Though this possibility cannot be ruled out entirely, we find it unlikely that it accounts for the patterns shown in Table 3 and elsewhere in the paper. First, as discussed in Section 3, paramilitaries often coerced voters or obtained votes through other illegal channels, not primarily by becoming more popular. Second, such changes in preferences could only account for our results if they are systematically related to the pre-2002 presence of paramilitaries. That the results are essentially unchanged when we control for a range of covariates, including initial vote shares for "right-wing" and "left-wing" candidates, interacted with a full set of time dummies (in even-numbered columns in Table 3), suggests that such systematic changes are unlikely.[39]

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.[40]

38. 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, Córboda, 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.

39. Finally, in contrast to what might be expected if support for paramilitaries increased because of guerrilla activity, we never find any interaction effects between paramilitary and guerrilla presence. These results are not reported to save space.

40. 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 the congress) and also found that paramilitary presence is correlated with significantly higher electoral concentration in 2002 and 2006.

5.2. Results for the Executive

Table 4 presents estimates from regression models similar to (6) and (7) 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. We cannot use the 1991–2006 period as in the previous section because we have data on presidential elections just for the 1998–2006 period. 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), 10.86 (s.e. = 1.586) suggests that Uribe obtained about eleven 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 (7)).

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 in what follows, that a symbiotic relationship between the executive and the paramilitaries developed after certain key legislations proposed by Uribe.[41]

The evidence thus suggests that, consistent with the assumptions of our theoretical model, the executive, President Uribe, electorally benefited from the presence of paramilitaries.

5.3. Predicting Arrests

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

41. 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, people who had previously suffered under them might have rewarded him 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.

To measure the extent to which senators relied on the support of paramilitaries for their election, we define $\omega_{l,P}$ 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 $\omega_{l,G}$ as the proportion of total vote that list l receives in municipalities with high guerrilla presence, where high guerrilla presence is measured in the same way as high paramilitary presence. We then investigate the links between senators and paramilitaries by studying the relationship between these variables and the proportion of the senators of list l that have been arrested for alleged connections with paramilitary groups, Δ_l. In particular,

$$\Delta_l = \rho \cdot \omega_{l,P} + \lambda \cdot \omega_{l,G} + \mathbf{X}_l' \cdot \boldsymbol{\pi} + \varepsilon_l. \tag{8}$$

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 sometimes also include party identity. In general, this is an example of "bad control" (Angrist and Pischke 2009, pp. 64–68) because being a member of a third party is an outcome variable inbetween the causal variable of interest, $\omega_{l,P}$, and the outcome variable, Δ_l. Nevertheless, we include it to examine whether being a member of a third party absorbs all of the explanatory power of $\omega_{l,P}$ (thus acting as the channel through which paramilitary presence is impacting politician behavior and arrests).

Table 5 shows the results from estimating (8). In column (1), we look at the relationship between arrests and party identity. As we saw earlier, 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 (8) 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 $\hat{\rho} = 1.43$ (s.e. $= 0.41$) 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 arrested for links with paramilitaries. In column (3) we add as covariate the proportions of votes obtained in "right-leaning" and "left-leaning" areas.[42] Neither of these controls is significant, and their inclusion does 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

42. We defined 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.

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)
	Dependent Variable is the Fraction of Arrested Senators/Congressmen in list l.								*Dependent Variable is the Fraction of Senators in List l that Voted Yes for Reintroducing the Articles of Sedition and Reduction of Sentences in the Justice and Peace Law.*			
	Senate				Congress				Senate			
Dummy Conservative	0.05			0.09	−0.01			0.09	0.41			0.38
	(0.117)			(0.139)	(0.06)			(0.09)	(0.12)			(0.14)
Dummy Left	−0.10			−0.03	−0.06			−0.02	−0.59			−0.54
	(0.058)			(0.073)	(0.03)			(0.04)	(0.12)			(0.14)
Dummy Third Parties	0.21			0.22	0.06			0.08	0.34			0.33
	(0.089)			(0.085)	(0.05)			(0.05)	(0.13)			(0.13)
Share of Votes From:												
Paramilitary Areas		1.43	1.13	1.01		0.26	0.20	0.18		0.83	1.33	0.93
		(0.413)	(0.493)	(0.431)		(0.12)	(0.13)	(0.13)		(0.41)	(0.53)	(0.54)
Guerrilla Areas		−0.24	0.15	0.30		−0.01	0.03	0.07		−0.86	−1.63	−1.26
		(0.727)	(0.803)	(0.740)		(0.07)	(0.07)	(0.08)		(0.73)	(0.89)	(0.83)
Right Oriented Areas			−0.33	−0.41			−0.31	−0.44			1.37	0.52
			(0.415)	(0.373)			(0.12)	(0.21)			(0.46)	(0.47)
Left Oriented Areas			−0.24	−0.27			−0.09	−0.10			−0.13	−0.05
			(0.183)	(0.183)			(0.06)	(0.06)			(0.27)	(0.23)
Observations	96	96	96	96	162	162	162	162	57	57	57	57
R-squared	0.072	0.159	0.174	0.241	0.01	0.04	0.06	0.08	0.41	0.04	0.13	0.45

Notes: Robust standard errors in parentheses. Left 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 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 75th 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.

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 third party affiliation is not the only channel of influence of paramilitaries on politicians behavior (which, in hindsight, is not surprising, since in several municipalities, paramilitaries supported liberal or conservative candidates).

The next four columns report estimates of (8) 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 both provide some verification that our strategy for measuring the effects of the paramilitaries is indeed capturing what they are supposed to and suggest 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.

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 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".[43] 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.[44] These two articles were part of a first draft of the law presented by the president, but were both rejected in the first commissions of the senate and the congress. Their 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 A.1), Jesús Carrizosa, and Hernando Escobar. The members of the commission concluded that the appeal had to

43. 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.

44. 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.

be approved by the plenary of the senate which it was and we have the roll-call for this vote.[45]

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. Implicitly, it is also evidence of the "quid pro quo" between paramilitaries and the executive.[46]

To examine the impact of the paramilitaries on these roll-call votes, we estimate versions of model (8) introduced in the previous section. More specifically, we now define Δ_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 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 do we see an effect of guerrilla presence or of right or left orientation of the municipality 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 paramilitary interests.

5.5. The Persistence of the Paramilitaries

We next turn to two implications 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 municipalities that had paramilitary presence

45. Though this vote went in favor of re-introducing the two articles into the Justice and Peace Law, the supreme court ruled 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 mentioned earlier.

46. As we discussed in Section 3, a large literature has heavily criticized the Justice and Peace Law as too lenient. The structure of the law came from the executive.

in 1999–2001. A municipality is classified as having paramilitary presence if it experienced any paramilitary related incidents during either 1999 or 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 $P_{m,t>2002}$. This is measured as the sum of attacks during a three-year window, 1999–2001 ($t < 2002$) or 2003–2005 ($t > 2002$) in either case divided by the population of the municipality. We can use this variable to explicitly examine how the persistence of paramilitary presence depends on the extent of voting for President Uribe, thus investigating the first prediction.

To investigate the second implication of the model we argue that even though when as Governor of Antioquia Uribe was nominally a representative of the Liberal Party, in fact his key supporters 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 elections). 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:

$$P_{m,t>2002} = \alpha \cdot P_{m,t<2002} + \beta \cdot v^{u}_{m,2002} + \gamma \cdot v^{u}_{m,2002} \cdot v^{p}_{m,1998} + \delta \cdot v^{p}_{m,1998} + \mathbf{X}'_{m} \cdot \boldsymbol{\pi} + \varepsilon_{m} \tag{9}$$

where $v^{u}_{m,2002}$ is the vote share of President Uribe in municipality m in 2002 and $v^{p}_{m,1998}$ 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).

The results from estimating various versions of (9) are shown in Table 6. All of the main effects are evaluated at the sample means to facilitate interpretation. Columns (4)–(6) add a quartic on Pastrana's vote share to control in a more flexible way for Uribe's expected vote share given Pastrana's performance in the elections of 1998.

The results are broadly consistent with our hypothesis. In column (1) of Table 6, we estimate the simplest version of (9). Consistent with these predictions, the impact of Uribe's vote share in 2002, evaluated at the sample mean, β, is estimated to be 0.14 (s.e. = 0.084). This estimate, which is only 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. In comparison, the mean of paramilitary

TABLE 6. Persistence of paramilitaries and vote share for Alvaro Uribe.

Dependent Variable is Paramilitary Attacks in 2003-2005	Cross-Section (1)	Cross-Section (2)	Cross-Section (3)	Cross-Section (4)	Cross-Section (5)	Cross-Section (6)
	Sample is Restricted to Municiaplities with Paramilitary Presence in 1999-2001					
Uribe Vote Share	0.14	0.13	0.13	0.17	0.15	0.14
	(0.084)	(0.096)	(0.097)	(0.088)	(0.099)	(0.097)
Uribe Vote Share X Pastrana Vote Share	−0.77	−0.62	−0.63	−1.53	−1.36	−1.42
	(0.357)	(0.386)	(0.410)	(0.545)	(0.619)	(0.662)
Patrana Vote Share	−0.23	−0.07	−0.08	−0.39	−0.04	−0.05
	(0.087)	(0.123)	(0.125)	(0.144)	(0.166)	(0.166)
Paramilitary Presence in 1999-2001	0.41	0.40	0.40	0.34	0.34	0.35
	(0.160)	(0.170)	(0.187)	(0.152)	(0.160)	(0.178)
Guerrilla Presence in 1999-2001			−0.00			−0.01
			(0.025)			(0.025)
Controls	No	Yes	Yes	No	Yes	Yes
Quartic on Pastrana's Vote Share	No	No	No	Yes	Yes	Yes
F test on Pastrana's Vote Share Higher Order Terms				4.66	2.73	2.83
P Value of F test				0.003	0.044	0.038
Observations	319	309	309	319	309	309
R-squared	0.21	0.24	0.24	0.259	0.274	0.276

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. Paramilitary presence 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). 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. Controls are 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. Columns (4) to (6) add a quartic on Pastrana's vote share.

presence in the whole sample is 0.05, and the mean in municipalities with positive paramilitary is 0.21.[47]

More importantly for our focus, the coefficient on the interaction between Uribe's and Pastrana's vote shares is negative and statistically significant at 5%, $\hat{\gamma} = -0.77$ (s.e. $= 0.357$). This significant negative coefficient 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 guerrilla presence in 1999–2001. The magnitude of the estimates of both β and γ are very similar to those in column (1), though they are somewhat less precisely estimated (the estimates of γ are significant at 10%).

In column (4)–(6), where we add the quartic on Pastrana's vote share, the results are similar, and in fact the estimates of both β and γ are larger and statistically more significant.

Tables A.4 and A.5 in the Online Appendix investigate the robustness of the basic results in Table 6. First, 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 2000 and 2001 ($t < 2002$) or 2004 and 2005 ($t > 2002$) in either case divided by the population of the municipality). Second, we report results using the alternative displaced measure or a combination of the attacks and the displaced measures. In both cases, the results are very similar to those in Table 6. Finally, Table A.6 reports results of two falsification exercises. First, we repeat the same regressions as in Table 6, but using paramilitary presence 2000–2002 on the left-hand side and 1997–1999 on the right. Since this is before the involvement of paramilitaries in national politics, the same pattern as in Table 6 should not arise. The results are consistent with this. Though the main effect of Uribe's vote share has a similar magnitude to that in Table 6 (but not significant at 5%), the interaction between Uribe's and Pastrana's vote shares, our main focus, is very small and insignificant (and sometimes of the wrong sign). Second, we also repeat the same regressions using neighboring municipalities' vote shares. Once again, this exercise does not show a statistically significant relationship, again reassuring us that the patterns documented in Table 6 are unlikely to be spurious.

Overall, we interpret the results in this section as providing some support to our Proposition 2 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.

5.6. The Symbiotic Relationship

We now present some evidence on a possible symbiotic relationship between the paramilitaries and the executive, focusing on a very salient and relevant roll-call for

47. Since this is the effect at the sample mean and $\gamma < 0$, the impact of Uribe's vote share is significantly higher in municipalities with lower Pastrana share.

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.[48]

As in our previous analysis of roll-call votes, we use a simple empirical strategy based on equation (8), and now define Δ_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 analogous to that of Table 5. The first column again estimates a simple regression of Δ_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-wing parties tended to vote against (all relative to liberals). Columns (2)–(4) show that, 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 (at the 5% level in columns (2) and (4) and at the 1% level in column (3)). 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.

6. 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 nonstate actors exercising power

48. Another set of salient events also illustrates how President Uribe relied on the legislative support of politicians deeply implicated with the paramilitaries to pass key bills. Even though many congressmen and senators were arrested, they were 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 continued. 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*, 7 June 2008)), 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." The "little article" (used sarcastically) in the constitution was the change to allow President Uribe to run for a third term of office.

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)
Dummy Conservative	0.48			0.36
	(0.11)			(0.12)
Dummy Left	−0.52			−0.48
	(0.11)			(0.11)
Dummy Third Parties	0.31			0.30
	(0.13)			(0.12)
Share of Votes From:				
Paramilitary Areas		1.26	1.79	1.61
		(0.41)	(0.55)	(0.60)
Guerrilla Areas		−0.92	−1.87	−1.39
		(0.73)	(0.82)	(0.80)
Right Oriented Areas			1.81	1.11
			(0.36)	(0.34)
Left Oriented Areas			−0.17	−0.02
			(0.24)	(0.21)
Observations	76	76	76	76
R-squared	0.38	0.07	0.21	0.45

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 75th 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.

in the peripheries of the country. The origins of this symbiotic relationship is that nonstate armed actors can provide support to those controlling the central state. This is particularly important in democracies where nonstate 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 nonstate 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 empirical evidence documents the significant electoral impact of paramilitaries in Colombia. Following the foundation of the AUC, in areas with high paramilitary presence there is a sharp increase in the vote share of third parties, which were explicitly or implicitly associated with paramilitaries. 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. Moreover, paramilitary presence is correlated with the vote share of the incumbent presidential candidate, Álvaro Uribe. We also document that, consistent with the ideas developed in this paper, paramilitaries persist more in places where they deliver votes to politicians whose preferences are closer to their own, and in particular, this effect is stronger in areas where these politicians would otherwise not do well. Finally, 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, possibly illustrating the symbiotic relationship between the paramilitaries and the executive.

Though our evidence is from a specific country and a specific time period, the discussion in the Introduction suggests that similar dynamics may be at play in other countries. Future research could investigate whether similar symbiotic relationships between nonstate actors and politicians in control of the central government is holding back the formation of the monopoly of violence by the central state in other contexts.

Supporting Information

Additional Supporting Information may be found in the online version of this article:

Online Appendix Table A.1: Top 20 senators by vote share in paramilitary areas using displaced.

Online Appendix Table A.2: Paramilitary presence and third parties share of votes in the elections for the congress.

Online Appendix Table A.3: Paramilitary presence and third parties share of votes in the elections for the senate. Robustness to alternative definitions of paramilitary presence.

Online Appendix Table A.4: Persistence of paramilitaries and vote share for Alvaro Uribe (Robustness checks using two years attacks windows).

Online Appendix Table A.5: Persistence of paramilitaries and vote share for Alvaro Uribe (Robustness checks using displaced).

Online Appendix Table A.6: Falsification exercise - Persistence of paramilitaries before 2002 and vote share for Alvaro Uribe.

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