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# Transnational insurgents

Evidence from Colombia's FARC at the border with  
Chávez's Venezuela

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# Transnational Insurgents: Evidence from Colombia's FARC at the border with Chávez's Venezuela

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## Abstract

Many insurgent groups operate across international borders, but transnational insurgent activities are seldom observable and little is known about their consequences. In this paper, I show that activity by Colombian insurgent group FARC increased disproportionately in Colombian municipalities next to the border with Venezuela after Hugo Chávez became president of the latter. This finding is consistent with increased FARC presence in Venezuela during the Chávez administration, given that the military and transport technologies employed by the insurgents severely constrained the area in which a safe haven across the border allowed them to expand their operations. Exploiting the plausible exogeneity of the change of government in Venezuela, I find that municipalities more exposed to a cross-border guerrilla sanctuary experience large increases in the intensity of violence, as well as reductions in local tax revenue and educational enrolment.

Keywords: *civil conflict, foreign influence, irregular warfare, FARC, Hugo Chávez*

JEL Classification: D740, F590

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# 1. Introduction

Recent research on internal conflict has increasingly explored its international dimension.<sup>1</sup> However, insurgent groups' ability to operate outside of their target state has received little scholarly attention. This is somewhat surprising, given that as many as 55 % of insurgencies active after 1945 have operated across international borders (Cunningham et al., 2007). Some well-documented historical examples include the presence of Palestinian rebels in Jordan and Lebanon in the 1970s, of the Nicaraguan Contras in Honduras and Costa Rica in the 1980s and of Rwandan Hutu militias in what at the time was Zaire in the 1990s (Byman et al., 2001; Salehyan, 2009). These examples, two of which led to costly inter-state military confrontations (the 1982 Lebanon war and the first Congo war, respectively), highlight the threat that “transnational” insurgent activities pose for conflict resolution and development.<sup>2</sup>

One major obstacle for research on transnational insurgency has been the limited availability of information on this topic. Some host nations welcome foreign insurgent groups into their territory, but often keep this sponsorship secret to avoid diplomatic or military reprisals (Byman et al., 2001; Salehyan, 2010). Other insurgent groups impose their presence on weak neighboring states, but the low state capacity that these groups exploit also limits data availability and compromises its quality. Despite these difficulties, the “Non-

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<sup>1</sup>For example, Hegre and Sambanis (2006) and Gleditsch (2007) document robust correlations between the onset of internal conflict and political and economic conditions in neighbouring countries, while Gleditsch et al. (2008) show a positive correlation between internal conflict and international disputes. Buhaug and Gates (2002) report that internal conflicts taking place near an international border tend to have a larger geographical scope. Refugee flows as a mechanism through which conflict propagates across borders have been studied by Salehyan and Gleditsch (2006) and Salehyan (2008b). Doyle and Sambanis (2000) find that foreign intervention, in the form of multilateral peacebuilding operations, is correlated with less violence, while Regan (2002) shows that third-party intervention has a positive correlation with conflict duration. A more recent strand of literature has systematically uncovered the detrimental effects of superpower intervention on political stability and conflict, particularly in the context of the cold war (Kalyvas and Balcells, 2010; Dube et al., 2011; Berger et al., 2013a,b; Albornoz and Hauk, 2014; Nunn and Qian, 2014).

<sup>2</sup>The term “transnational” has been used in other contexts to refer to internal conflicts that draw significant numbers of foreign fighters (Malet, 2013) or to refer to terrorist groups with activities in more than one target state (Rosendorff and Sandler, 2005).

State Actor” dataset constructed by Cunningham et al. (2007) includes some information on the extraterritorial presence of many insurgent groups.<sup>3</sup> Using that data, Idean Salehyan (2007, 2008a) has shown that conflicts involving transnational insurgents tend to last longer and are positively correlated with the probability of war between the target and host states, but standard issues of endogeneity prevent a causal interpretation of these findings.

The present paper furthers our understanding of transnational insurgency by employing sub-national data from the target state to provide evidence on cross-border rebel activity and its effects on local levels of violence and living conditions. For this purpose, I exploit the change of government in a neighboring country as a source of plausibly exogenous variation in rebels’ access to foreign territory. The setting is the border between conflict-ridden Colombia and Venezuela, where left-wing candidate Hugo Chávez took office as president in 1999. The change of government in Venezuela affected the dynamics of the Colombian conflict, as Chávez (who would remain in power until his death in 2013) never hid his sympathy for Colombia’s leftist insurgencies, FARC and ELN.<sup>4</sup> Evidence from various sources, discussed in detail below, indicates that Chávez had close ties with these insurgent groups and that their presence in Venezuela increased during his administration.

The availability of a safe haven across an international border reduces the cost and increases the probability of success for various insurgent activities, allowing transnational rebels to expand their operations. However, the Colombian guerrillas’ ability to exploit a cross-border refuge was not homogeneous throughout their target state. In particular, the insurgents’ short-range weaponry and scarce use of mechanized transport limited their increased operational ability to the immediate vicinity of the border with Venezuela. As a result, Colombian municipalities at the border with Venezuela were the ones exposed to the effects of increased guerrilla access to the other side of the border.

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<sup>3</sup>For example, variables “rebpresosts” and “presname” indicate for dyad 237 (FARC vs. Colombian government) that there is “some” FARC presence in “Venezuela.”

<sup>4</sup>FARC is the the acronym for “Fuerzas Armadas Revolucionarias de Colombia” (Revolutionary Armed Forces of Colombia). ELN stands for “Ejército de Liberación Nacional” (National Liberation Army).

Focusing on FARC, the largest guerrilla group, I show that the intensity of its activities increased disproportionately in Colombian municipalities located at the border with Venezuela after Chávez took office in 1999. Figure 1 illustrates this result with the raw data. It displays the yearly average of FARC Events and the corresponding 95 % confidence interval for border municipalities and for all others. The graph shows that the intensity of insurgent activity was identical in the two groups up to 1998, but diverged from 1999 onwards, increasing disproportionately at the border.<sup>5</sup>

Regression results, including municipality and region-year fixed effects, confirm that FARC activity was 0.3 standard deviations higher in border municipalities than in the rest of the country during the Chávez administration. This is a large increase in insurgent activity and corresponds to 1.16 extra FARC events per 10,000 inhabitants, relative to a sample mean of 1.11. It is also quite a costly increase, since it mainly involves acts of terrorism, town sieges, terrestrial piracy and armed clashes with government forces. I further show that, as a result, border municipalities had higher homicide rates, collected less local taxes (property and business tax) and had lower educational enrolment rates.<sup>6</sup>

These results are robust to (i) the inclusion of a broad set of control variables for the time-varying effect of various municipality characteristics; (ii) the employment of different measures of proximity to the border; (iii) the use of different datasets on the Colombian conflict; (iv) the estimation of models for count data; and (v) the addition of further controls for both the paramilitary expansion and for the increase in U.S. military aid that roughly coincided with the start of the Chávez administration. I also provide evidence against alternative explanations based on changes in economic or political conditions specific to the border region.

Additional exercises reveal two other interesting results. First, activity by

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<sup>5</sup>The difference diminishes substantially between 2002 and 2004, but reappears in the following years. This pattern matches existing evidence on the distancing between Chávez and FARC that took place during the period of heightened political instability in Venezuela.

<sup>6</sup>Rohner et al. (2013) employ a similar research design that exploits distance to an international border as a source of plausibly exogenous variation in exposure to conflict. See also Miguel and Roland (2011); Dube et al. (2013); Caselli et al. (2015); Serneels and Verpoorten (2015).

ELN, the other main insurgent group present in Colombia, also increased disproportionately at the border with Venezuela in the early years of the Chávez administration but declined as FARC expanded into some of its main areas of operation. Secondly, FARC activity increased disproportionately in municipalities at the border with Ecuador after 2003, when FARC commander Raúl Reyes is known to have relocated across the border, but not after 2007, when Chávez’s political ally, Rafael Correa, became president.<sup>7</sup>

The remainder of the paper is structured as follows. Section 2 provides some background information on the Colombian conflict and Venezuela’s involvement. Section 3 presents the theoretical framework. Section 4 introduces the data. In section 5, I discuss the empirical strategy. Section 6 presents the main results, robustness checks and evidence against alternative explanations. Finally, section 7 concludes.

## 2. Background

### 2.1. A Recent History of the Colombian Conflict

Left-wing insurgent groups have been trying to overthrow the Colombian government since 1964. FARC is the largest guerrilla group in the country and had as many as 20,000 operatives at its peak around 2002 (Boraz, 2007; El Tiempo, 2012; Dube and Vargas, 2013). The other main insurgent group, ELN, is much smaller and has never had more than 5,000 operatives (Boraz, 2007). Neither rebel group has ever had the military capacity nor the popular support necessary to succeed in its political ambitions. However, the state’s limited presence in rural areas allowed the insurgents to find a stable source of income in the extortion of local businessmen, at the same time as they carried out guerrilla warfare amid favourable geographic conditions (Rangel, 2000; Semana, 2005; Pizarro, 2007; Palacios, 2012; Richani, 2013). The result

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<sup>7</sup>This finding is consistent with existing evidence on FARC’s ability to recurrently exploit weak patrolling of the border by Ecuador and on its inability to obtain protection from the Ecuadorian government (ICG, 2004; IISS, 2011a,b).

was a long-lasting but relatively low-intensity armed conflict.<sup>8</sup>

Throughout most of the conflict, FARC activity was concentrated in a handful of sparsely-populated jungle and mountain areas. But in the 1990s the organization became increasingly able to raise revenue from the various stages of drug processing and trafficking as coca cultivation soared in Colombia (Boraz, 2007; Angrist and Kugler, 2008; Otis, 2014). The additional resources allowed FARC to expand throughout the country, particularly towards the south and the east, as the maps in Figure 4 illustrate. ELN, on the other hand, was at a financial disadvantage due to its limited involvement in the drug business and only remained active in its traditional strongholds, mainly near the border with Venezuela (El Espectador, 2014).

A series of military successes for FARC in the mid-1990s led president Andrés Pastrana (1998 - 2002) to hold peace negotiations with the group in a demilitarised zone (DMZ) comprising 5 municipalities in the departments of Meta and Caquetá (See panel (a) of Figure 3). The peace talks took place simultaneously with the dramatic escalation of the conflict shown in Figure 2. FARC kept expanding in the south and the east and increasingly moved into ELN territories, further adding to the latter's decline (El Tiempo, 2005a,b; IISS, 2011a; Avila, 2012).

The collapse of Pastrana's peace process a few months before the 2002 presidential elections contributed to Alvaro Uribe's victory. Uribe was elected (and re-elected in 2006) with a clear mandate to fight the guerrillas (Cortés et al., 2012; Rozo, 2016). Uribe's counterinsurgency strategy profited from a U.S. military aid package worth more than \$1 billion and known as "Plan Colombia" (Dube and Naidu, 2015). The resulting increase in military activity, shown in Figure 2, allowed government forces to deal a series of major blows to FARC, including the death of several of its top leaders and the rescue of its most high-profile hostages (Fergusson et al., 2014).

It was also during the Uribe administration that the paramilitary organi-

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<sup>8</sup>In the well-known UCDP/PRIO armed conflict dataset the Colombian conflict has always surpassed the 25 battle-death threshold since 1964, but only in eight years did it surpass the threshold of 1,000 battle deaths.

zation AUC demobilized.<sup>9</sup> The first paramilitary groups were created in the early 1980s by land owners and drug lords who decided to organize private armies in response to extortion from the guerrillas (Acemoglu et al., 2013). These groups survived thanks to their involvement with the drugs trade and to contributions from businesses who paid for security in their areas of operation. In 1997 many of these groups united as the AUC, with the explicit purpose of defeating the guerrillas. Between 1999 and 2004 the paramilitaries expanded significantly, as documented in Figure 2. It is estimated that they had around 15,000 combatants at their peak in 2003 (Dube and Vargas, 2013).

A new round of peace talks between FARC and the Colombian government of Juan Manuel Santos (2010-2018), Uribe’s successor, started in 2012. An agreement for FARC to lay down their weapons was reached in 2016.

## 2.2. Venezuela and the Colombian Conflict

The presence of Colombian insurgent groups at the border with Venezuela dates back at least to the 1980s, when occasional skirmishes between ELN and Venezuelan security forces were not infrequent. FARC’s presence at the border was weaker than ELN’s at the time but also less visible, partly because of the group’s “border policy” of not carrying out military operations in foreign territory (Semana, 1995; Ramírez, 2003; IISS, 2011a). To address the threat from the Colombian guerrillas, Venezuelan president Rafael Caldera (1994-1998) created two new military units to patrol the border, curtailed the local population’s civil rights and provided military tribunals with legal authority in the area (El Tiempo, 1995a, 1997). Caldera allowed Colombian troops into Venezuela when in hot pursuit of insurgents and demanded the same from Colombia (El Tiempo, 1995b, 1996, 1998; Avila, 2012). Still, by the time of the Venezuelan presidential elections of December 1998, six of FARC’s ‘fronts’ were active at the border (Boraz, 2007; IISS, 2011a).<sup>10</sup>

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<sup>9</sup>AUC stands for “Autodefensas Unidas de Colombia” (United Self-defense Groups of Colombia).

<sup>10</sup>Each front has between 100 and 500 operatives. Each front belongs to one of seven ‘blocs’, each led by a member of FARC’s top decision-making body, the Secretariat.



This election was won by Hugo Chávez, a former army lieutenant who had led a failed coup attempt in 1992 and was imprisoned until 1995. He allegedly received a contribution of \$130,000 from FARC during that time.<sup>11</sup> Shortly after taking office in February 1999, Chávez discontinued Caldera's border security policies. He declared Venezuela a neutral party in Colombia's armed conflict, breaking away from his country's long-standing support for the Colombian government (Ramírez, 2003). Chávez apparently thought of the Colombian guerrillas as potential allies in case of a U.S. invasion (Avila, 2012). News reports on Venezuela's supply of weapons and provision of sanctuary to the insurgents soon started appearing (El Tiempo, 1999, 2000a,b; El Universal, 2002; Semana, 2002; Robinson, 2003).

Following the approval of a new constitution in 2000, Chávez was re-elected for a six-year presidential term (2001-2006), but political polarization rose quickly afterwards. In April 2002 a failed coup attempt took place and in December of that same year employees from Venezuela's national oil company (PDVSA) went on a prolonged strike lasting over two months. Domestic political instability, a changing international environment following the 9/11 attacks and FARC's excesses inside Venezuela apparently prompted Chávez to moderate his relationship with the Colombian insurgencies in this period (El Tiempo, 2004b; IISS, 2011a; Avila, 2012). Bilateral cooperation resumed as the Venezuelan security forces proved willing to strike against the rebels (El Tiempo, 2004a,c; Boraz, 2007). But the illegal capture of a FARC spokesman in Caracas by Colombian security forces in December 2004 triggered a diplomatic crisis and apparently rekindled Chávez's relation with the insurgents (BBC News, 2004, 2005b; IISS, 2011a).

Political stability had recently returned to Venezuela following the failed recall referendum of August 2004 (Hsieh et al., 2011). The price of oil was on the rise and this allowed the Venezuelan government to pursue a more aggressive foreign policy that would see friendly candidates win presidential elections in several Latin American countries over the next years (Corrales, 2009; Clem

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<sup>11</sup>See items I.22, I.773, I.782, I.2995 and I.2997 of the personal correspondence of FARC commander "Raúl Reyes" in IISS (2011b).

and Maingot, 2011). Chávez also implemented more aggressive domestic policies under the banner of “21st Century Socialism” (Rodríguez, 2008; Ortega and Rodríguez, 2008; Grier and Maynard, 2016).

He was re-elected for a second six-year term (2007-2012) in 2006, as the Colombian government and FARC tried to agree terms for a prisoner exchange. In 2007, Chávez was designated as mediator for the process and publicly hosted senior FARC representatives at the presidential palace in Caracas (BBC News, 2007). He also allegedly held parallel private meetings with FARC representatives in which he offered to provide the group with \$300 million.<sup>12</sup> Following Chávez’s dismissal as mediator by the Colombian government, FARC released several hostages as a friendly gesture towards him (The Washington Post, 2007; BBC News, 2008c). Chávez reciprocated during his annual address to the Venezuelan National Assembly in January 2008 when he stated:

“They are not terrorist groups, they are true armies that occupy territory in Colombia. [Political] recognition must be given to FARC and ELN, they are insurgent forces that have a political project, a ‘bolivarian’ project that we respect here” (El Tiempo, 2008, own translation).

In March 2008, the attack on a FARC camp in neighbouring Ecuador by Colombian government forces resulted in the death of the rebels’ second-in-command, “Raúl Reyes”. Colombia’s violation of Ecuadorian sovereignty led to the suspension of diplomatic relations by the Venezuelan government, which also deployed troops at the border (BBC News, 2008b,d). Documents found in Reyes’ laptop provide extensive evidence of the ties between FARC and the Chávez administration (IISS, 2011a,b). They also indicate that Reyes moved into Ecuador in 2003 after the suspension of the Pastrana peace talks led to the closure of the DMZ. This was well before the election of pro-Chávez candidate Rafael Correa as president of Ecuador in 2007. FARC apparently tried on repeated occasions to strike a deal regarding the safety of its operatives with

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<sup>12</sup>See items I.2838, I.2850, I.2866, I.2890, I.2907 and I.2929 of the personal correspondence of “Raúl Reyes” in IISS (2011b).

the different governments of Ecuador since 2000 but were unsuccessful (ICG, 2004; IISS, 2011a).

In 2009, Colombian troops seized weapons at a FARC camp that had apparently been sold by a Swedish manufacturer to the Venezuelan Armed Forces (Semana, 2009; The New York Times, 2009a). Intercepted FARC communications provided additional evidence on Venezuela's role as an intermediary in arms deals involving the insurgents (The New York Times, 2009b). Coincidentally, Gonsalves et al. (2009) report in the account of their experience as FARC hostages that the tags on the military uniforms given to them read "Made in Venezuela." Chávez denied the allegations and imposed restrictions on bilateral trade.

At a summit of the Organisation of American States (OAS) in 2010, the Colombian government divulged satellite images of alleged FARC camps inside Venezuela (BBC News, 2010). Colombian intelligence reports estimated at the time that over 1,500 FARC operatives were distributed among 28 camps inside Venezuela (El Espectador, 2010a,b). Chávez again denied the allegations but also criticised FARC and invited them to demobilize, something he had sporadically done in the past (BBC News, 2008a; El Tiempo, 2010). Chávez was re-elected for a third six-year term (2013-2018) in 2012, but died from cancer in March 2013.

### **3. Theoretical Framework**

Following the seminal work of Becker (1968), the academic literature has understood insurgent groups as rational actors who make decisions (such as whether to rebel or not, when and where to strike, etc.) after carefully weighing their costs and benefits (Kalyvas, 2006; Weinstein, 2007). From this perspective, we expect rebel groups to avoid actions that are likely to have a high cost (all else equal), such as the seizure of weapons or the loss of operatives. These negative outcomes not only reduce the insurgents' resources, but may allow counterinsurgents to acquire valuable information on the group's members and activities. They can also reduce group morale and popular support. Hence, a

decrease in the probability of a negative outcome should lead to an increase in the overall level of insurgent activity.<sup>13</sup>

One way in which insurgent groups can reduce the riskiness of their actions is by moving their operations outside of their target state, as governments face potentially high costs for unauthorized counterinsurgency activities within another country's territory.<sup>14</sup> These costs range from economic and diplomatic sanctions to a heightened risk of inter-state war (Salehyan, 2008a). Thus, insurgent groups that are able to operate on foreign soil can potentially set themselves beyond the reach of the target state's military and judiciary.

Naturally, the extent to which an international border protects insurgents depends on the behaviour of the host state. In order to become transnational, a rebel group must find either a weak neighbor who is unable to repel it or a welcoming one who is unwilling to do so (Salehyan, 2007). The discussion above suggests that FARC's expansion into Venezuela and Ecuador provides good examples of 'welcoming' and 'weak' host nations, respectively.<sup>15</sup> More generally, Byman et al. (2001) report that 59% of insurgent groups active after the end of the cold war have relied critically on support from foreign states, often neighboring ones that have provided sanctuary.<sup>16</sup>

Access to foreign territory can have a profound effect in an irregular conflict, as it allows insurgents to better prepare and execute their actions (Lindsay, 1962). Across the border, rebels can safely train operatives until it is optimal to act and, by crossing back, they can evade opposition forces after an action has taken place. El Tiempo (2002) provides an example: on March 17 of 2002, FARC operatives entered the Colombian municipality of Tibú from Venezuela and burnt eleven vehicles on the main road. As troops from the

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<sup>13</sup>The equilibrium outcome will also depend on efforts in counterinsurgency, which may increase in response (Berman et al., 2011).

<sup>14</sup>Salehyan (2009, p. 26) notes that "state boundaries are perhaps the most fundamental international institutions in the modern state system."

<sup>15</sup>This characterization fails to account that armed groups also exploited the limited state control over the Colombia-Venezuela border (Boraz, 2007; Avila, 2012).

<sup>16</sup>Salehyan et al. (2011) find that insurgent groups are more likely to receive foreign support if they are of intermediate strength, if they represent a supranational group and if the government they are fighting against is itself a recipient of foreign assistance.

Colombian Army approached, the insurgents crossed back into Venezuela, but re-entered Tibú three days later and engaged in combat with the Colombian military, with twelve insurgents and five soldiers dying as a result. The remaining rebels retreated back into Venezuela and attacked from across the border with gas cylinders filled with explosives. The following day the guerrillas attacked yet again and the ensuing fight led to the death of nine insurgents and seventeen soldiers.

The episode above illustrates the strategic advantage that insurgent groups obtain from access to foreign territory as well as the high human cost from additional insurgent activity. It also highlights how this advantage is circumscribed to targets located relatively near to the border. If the insurgents penetrate deeper into the target state, they are more likely to be attacked by government forces, both before and after the action has taken place. Thus, rebels' ability to exploit access to foreign territory has a limited geographic scope. This feature sets it apart from other forms of foreign influence, like the provision of weapons or funding, as those resources can be delivered and employed in areas far from the border.

Some characteristics of Colombian insurgencies particularly limit their ability to exploit a cross-border refuge. The guerrillas' arsenal consists mostly of short-range weapons, such as AK-47 rifles and 60 mm mortars, which have an effective range of no more than 5 or 6 km (Cragin and Hoffman, 2003; BBC News, 2005a; Gonsalves et al., 2009). The rebels also mostly refrain from using motorized vehicles or the existing road network due to the increased vulnerability to attacks. Former FARC hostages report moving mainly on foot, with thick forests and jungles providing cover from military aircraft (Gonsalves et al., 2009; Betancourt, 2011). Given that troops on foot can cover around 25 km per day on rough terrain (U.S. Army, 1990), it is unlikely that FARC could have exploited a safe haven in Venezuela to carry out activities in municipalities not located right at the border. On average, non-border municipalities that are immediate neighbors of border ones are 92 km away from the border line. Operating even in those municipalities would require the insurgents to go relatively deep into Colombian territory, giving up the strategic advantage

provided by their cross-border refuge.

The key hypothesis that emerges from this discussion is that rebels' access to territory in a neighbouring country leads to an increase in their activities in the vicinity of the respective border. An additional hypothesis is that rebels' access to foreign territory has a heterogeneous effect across different types of insurgent activities.<sup>17</sup> Actions that require many operatives and have a high probability of retaliation, such as an attack on a military installation, may become increasingly attractive. Also those that require the transportation and sheltering of hostages or goods, such as kidnapping or road piracy. On the other hand, the rebels' ability to carry out actions that require few operatives and little time, like a murder, are less likely to be affected.

## 4. Data

I use sub-national panel data on the Colombian conflict from research centre CEDE at Los Andes University in Bogotá. CEDE collects information from official government sources and provides 19 different activity indicators for each non-state armed group (FARC, ELN, AUC) and nine activity indicators for the Colombian Armed Forces.<sup>18</sup> Data is available for 1,099 municipalities (98% of the total) from 1993 until 2008. Municipalities lacking CEDE conflict data are shown in grey in the maps in Figures 3 and 4. Following Acemoglu et al. (2013) and Camacho and Rodríguez (2013), I create an "Events" variable for each actor by adding all of its activity indicators in the CEDE data and dividing by 1993 population (Mueller, 2016).<sup>19</sup> Nine of the 19 indicators

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<sup>17</sup>I thank an anonymous referee for pointing this out. For more information on rebels' tactical choice, see Bueno de Mesquita (2013) and Wright (2016).

<sup>18</sup>For non-state armed groups, these indicators are: terrorist act (explosive, incendiary, other), assault to private property, road block, terrestrial piracy, illegal checkpoint, armed contact, ambush, siege, incursion, attack against installation, massacre, political assassination (failed, succesful), murder of civilian, kidnap (politician, military, civilians). For government forces: arrest, explosive defusal, demobilization, destruction of cocaine laboratory, other anti-narcotic operation, raid, seizure of weapons, hostage release, hostage rescue.

<sup>19</sup>For new municipalities created during the sample period I divide by initial population. The results in the paper are robust to the use of contemporary population figures instead of the 1993 values. They are also robust to the exclusion of new and broken-up municipalities.

for non-state armed groups take no non-zero values for several years, but the results are unaffected if I exclude them.<sup>20</sup> I also analyze separately each of the indicators of FARC activity that have at least one non-zero value every year.

To check the sensitivity of the results to the source of information on the conflict, I use the replication data from Dube and Vargas (2013), which I will refer to as the DV dataset. This data is produced by CERAC, a Colombian think-tank that collects information from national and local newspapers and complements it with reports from non-government organizations working in remote areas (Restrepo et al., 2004; Fergusson et al., 2014). The DV dataset includes the yearly number of attacks, massacres and political kidnappings by “Guerrillas” for 966 municipalities from 1988 to 2004. I create a “Guerrilla Events” variable by adding these three indicators and dividing again by 1993 population. For ease of comparison, all “Events” variables from both datasets are standardized.

For most of the analysis, I divide municipalities into three groups: municipalities that share a border with Venezuela (“border”), municipalities that do not share a border with Venezuela but are contiguous to those that do (“one-from-border”) and municipalities that are none of the above. There are 41 municipalities at the border (from seven different departments) and 43 one-from-border municipalities, out of a total of 1,123. These are shown in panel (a) of Figure 3. I classify municipalities near the border with Ecuador using analogous criteria.

To check the robustness of the results to the way in which proximity to Venezuela is measured, I calculate the great-circle distance from the border to the urban centre of each municipality (the “Cabecera municipal” where the seat of local government is located).<sup>21</sup> This is the appropriate metric in the

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The estimates are available upon request.

<sup>20</sup>The following indicators have no non-zero values from the year in brackets until the end of the sample in 2008: incendiary terrorist acts (2004), massacres (2004), incursion (2007), attack on installation (2007), political murder attempt (2004), political murder (2007), military kidnap (2004), political kidnap (2007). Additionally, the indicator on road blocks has all zeros before 2003. Results are also unaffected if I set 2003 as the final year of the sample.

<sup>21</sup>The great-circle distance is the shortest distance between two points on a sphere. Similar metrics have often been used in previous work (Miguel and Roland, 2011; Rohner et al.,

present context, rather than the distance to the nearest border crossing or the driving distance (i.e. Dube et al. (2013); Dell (2015)) because Colombian guerrilla groups move mainly on foot and do not usually employ the road network. Panel (b) in Figure 3 shows the results.

Municipal data on fixed physical characteristics (area, altitude, distance to the nearest market), state presence (notary office, agricultural bank office, tax collection office, health center or hospital), homicides, educational enrolment and electoral results comes from CEDE (Acevedo and Bornacelly, 2014; Pachón and Sánchez, 2014). The Unmet Basic Needs (NBI) index and the population figures (total and urban/rural shares) are provided by the National Department of Statistics (DANE). DANE also provides information on the date of creation and the location of new municipalities.<sup>22</sup> Yearly information on local public finance (natural resource royalties, transfers from central government, local tax revenue) is provided by the National Department of Planning (DNP).

Table 1 shows summary statistics for the main variables employed in the paper.

## 5. Empirical Strategy

The main specification for the empirical analysis is the following:

$$\begin{aligned}
 y_{i,j,t} = & \beta_1 [D(\text{Chávez})_t \times D(\text{Border Venezuela})_i] \\
 & + \beta_2 [D(\text{Chávez})_t \times D(\text{One-from-border Venezuela})_i] \\
 & + \alpha_i + \gamma X_{i,t} + \delta_{j,t} + \epsilon_{i,j,t}
 \end{aligned} \tag{1}$$

where  $y_{i,j,t}$  is an outcome of interest (mainly FARC Events) in municipality  $i$  from region  $j$  in year  $t$ .  $D(\text{Chávez})_t$  is a dummy equal to one from 1999 onwards.  $D(\text{Border Venezuela})_i$  and  $D(\text{One-from-border Venezuela})_i$  are time-invariant

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2013; Caselli et al., 2015; Serneels and Verpoorten, 2015).

<sup>22</sup>69 new municipalities were created between 1993 and 2008. They separated from 92 existing ones in 20 different departments



dummies created in accordance with the definitions above. The coefficients of interest,  $\beta_1$  and  $\beta_2$ , capture the difference-in-the-difference in the dependent variable between the corresponding municipalities and the rest of the country (non-border and non-one-from-border) after Chávez came to power, conditional on the controls that I list below.

$\alpha_i$  is a municipality fixed effect. It accounts for persistent heterogeneity between municipalities near the border with Venezuela and the rest of the country.<sup>23</sup> Its inclusion is desirable because these municipalities are different on various observable characteristics, as can be seen in panel C of Table 1. The estimates could still be biased if the characteristics that are correlated with proximity to the border had time-varying effects that coincided with the Chávez years (e.g. higher conflict intensity after 1999 affecting disproportionately poorer or more rural municipalities). To address this concern, I include as controls ( $X_{i,t}$ ) a full set of year fixed effects interacted with each of the variables listed in panel C of Table 1.

$\delta_{j,t}$  is a region-year fixed effect that controls for events that simultaneously affect the entire country, as well as those that only affect municipalities within a given region. For example, the region-year fixed effect captures the effect of changes over time in various forms of foreign influence, such as the provision of weapons or money to the insurgents, that have a large geographic scope. To construct the region-year fixed effect, I classify the 32 departments in the country in six ‘regions’, roughly corresponding to natural geographic divisions.<sup>24</sup> Low levels of within-department variation in proximity to the border with Venezuela prevent me from using a more conservative department-year

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<sup>23</sup>Previous research has shown that the intensity of civil conflict tends to be higher in border areas. For example, Buhaug and Rod (2006) find that proximity to the border was positively correlated to separatist conflict in Africa between 1970 and 2001. Michalopoulos and Papaioannou (2016) show that political violence is higher in the vicinity of international borders that divide the traditional homelands of African ethnic groups.

<sup>24</sup>**Andean:** Cundinamarca, Boyacá, Santander, Norte de Santander; **North-West:** Córdoba, Antioquia, Chocó, Quindío, Risaralda, Caldas; **Caribbean:** Atlántico, Bolívar, Magdalena, Sucre, Cesar, La Guajira; **South-West:** Cauca, Valle, Nariño, Tolima, Huila; **Eastern Plains:** Meta, Casanare, Arauca, Vichada; **South:** Caquetá, Vaupés, Amazonas, Guainía, Putumayo, Guaviare.

fixed effect.<sup>25</sup>

The error term,  $\epsilon_{i,j,t}$ , is two-way clustered by municipality and department-year, following Cameron et al. (2011). Double clustering allows for arbitrary correlation of the residuals within a municipality across years and across a department for a given year. Thus, the two-way clustering accounts for serial correlation within a municipality and for spatial correlation within a department.

Equation (1) corresponds to a standard differences-in-differences research design. In the present context, the “parallel trends” identifying assumption implies that the difference in the intensity of FARC activity between the border area and the rest of the country would have remained unchanged after Chávez came to power in the absence of FARC’s increased access to Venezuela. This assumption is plausible given the exogenous events that led to the change of government in Venezuela.<sup>26</sup> Below, I use data from the pre-Chávez period to formally test the parallel trends assumption.

## 6. Results

### 6.1. Main Results

I begin the analysis by estimating a simplified version of equation (1) for FARC Events with only municipality and year fixed effects. The estimates in column 1 of Table 2 indicate that, on average, FARC activity grew 0.24 standard deviations (SD) more in border municipalities than in the rest of the country after Chávez came to power. FARC activity in one-from-border municipalities had a relative increase of almost the same magnitude, but the

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<sup>25</sup>The adjusted R-squared from a cross-sectional regression of a “border or one-from-border” dummy on the six region dummies is 0.10, but rises to 0.65 if I replace them with department dummies. However, estimates with department-year fixed effects (not reported) show a 0.32 SD increase in FARC activity in municipalities at the border with Venezuela between 1999 and 2002 ( $p < 0.001$ ).

<sup>26</sup>Chávez’s electoral success was driven by popular discontent with the traditional political parties following years of sluggish economic performance (Corrales, 2013). Up to election day there was a large degree of uncertainty regarding the ability of the candidates from the traditional parties to catch up with Chávez (McCoy, 1999).

standard error is somewhat larger. The inclusion of controls for the time-varying effects of fixed municipal characteristics (column 2) leads to a slight decrease in the magnitude of the point estimate for border municipalities, but it remains statistically significant at the 10 % level. The point estimate for one-from-border municipalities decreases substantially.

Column 3 shows results from my preferred specification with municipality and region-year fixed effects, plus the additional controls. The results indicate that there was a 0.32 SD relative average increase in FARC activity in border municipalities when Chávez was in office.<sup>27</sup> Not only is this coefficient statistically significant at the 1 % level, but it also represents a quite sizable effect: 1.16 extra FARC events per 10,000 inhabitants, relative to a sample mean of 1.11. The point estimate for one-from-border municipalities is further reduced by the additional controls. This result is consistent with the hypothesis that FARC’s ability to exploit their increased access to Venezuela was limited to the immediate vicinity of the border and did not extend to one-from-border municipalities.

To further test this hypothesis, I exploit the more fine-grained variation in proximity to Venezuela provided by the distance to the border. I modify equation (1) by interacting the Chávez time indicator with four dummies that partition the distance to the border. The results in column 4 of Table 2 show that, as expected, the increase in insurgent activity decreases with distance to the border and disappears after 30 km. The mean distance to Venezuela from the urban center of border municipalities is 27 km, while from one-from-border municipalities it is 92 km.

Column 5 re-estimates the model from column 3 but with ELN Events as the dependent variable. The point estimate is positive for border municipalities and negative for one-from-border municipalities, but in both cases the magnitude is quite small and statistically insignificant. However, these average

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<sup>27</sup>The increase in the magnitude of the coefficient following the inclusion of region-year fixed effects reflects the intensification of the conflict that took place after 1999 in “control” areas far from the border with Venezuela, such as the coffee-growing regions of Caldas/Quindío in the west (Dube and Vargas, 2013) and the area near the border with Ecuador in the south-west (see below).

effects mask substantial variation over time and across different segments of the border, which I turn to next.

Panels (a) and (b) of Figure 5 show point estimates and 95% confidence intervals for the interaction between the border dummy and a full set of year indicators (instead of the post-1999 Chávez's time dummy), using my preferred specification. Panel (a) shows results for FARC Events, while the dependent variable in panel (b) is ELN Events. Looking at panel (a), I find that FARC activity in border municipalities increased by roughly 0.25 SD as soon as Chávez came to power in 1999 (relative to the omitted year - 1993) and remained high until 2003. It decreased somewhat in 2004 but increased again between 2005 and 2007. This pattern is consistent with the anecdotal evidence discussed in section 2.2 on the deterioration and posterior rekindling of the insurgents' relation with the Venezuelan government during those years. Furthermore, the graph shows that the difference in FARC activity between border municipalities and the rest of the country was stable between 1993 and 1998, lending credibility to the parallel trends assumption underlying the empirical strategy.

Regarding ELN, the results in panel (b) indicate that the intensity of the group's activities in border municipalities rose throughout most of the 1990s (which led to the Caldera border policies mentioned in section 2.2). However, there is evidence of a statistically significant increase in ELN activity in these municipalities during the early years of the Chávez administration, but also of a substantial decrease after 2003.<sup>28</sup>

The decline in ELN activity is consistent with FARC's expansion into the group's stronghold in Arauca, which can be seen in panels (c) and (d) of Figure 5. These panels show results from another modified version of equation (1) that includes interactions of the Chávez time indicator with separate border dummies for each Colombian department.<sup>29</sup> Panel (c) shows that FARC acti-

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<sup>28</sup>If I regress ELN Events on separate interactions of  $D(\text{Border Venezuela})_i$  with the early (1999-2003) and late Chávez periods (2004-2008), the point estimates (standard errors) using my preferred specification are 0.22 (0.10) and -0.20 (0.15), respectively.

<sup>29</sup>I join Boyacá with Arauca and Vichada with Guainía due to the small number of municipalities in these departments.

vity increased throughout the border area during the Chávez years, with the exception of Vichada and Guainía in the southernmost section (see Figure 3a). The point estimates for Guajira, Cesar and North Santander are all around 0.25 SD, but the standard error is larger for the latter ( $p=0.106$ ). The increase in the segment of the border corresponding to Arauca was much larger (0.72 SD) and is matched by an equally large decrease in ELN activity in that segment (-0.83 SD), shown in panel (d). These findings match the information made public by the Colombian government on FARC's bases in Venezuela, which were near Guajira and Cesar but mostly in the Venezuelan state of Apure, near Arauca (Robinson, 2003; El Espectador, 2010a; IISS, 2011a). Panel (d) also shows that ELN events rose 0.3 SD ( $p=0.013$ ) during the Chávez administration in the group's other traditional stronghold, the segment of the border belonging to North Santander.

Going back to Table 2, I find that the increase in insurgent activity at the border with Venezuela during the Chávez years led to increased violence and to the deterioration of local living conditions. Column 6 shows that the homicide rate in border municipalities increased by almost 20 murders per 100,000 inhabitants, which is a very large increase (35 %) relative to the sample mean of 56 per 100,000 inhabitants. In columns 7 and 8, I also observe decreases in the main sources of local tax revenue, the business and property taxes. These reductions are also quite large and represent a more than 30 % decrease relative to the sample mean. They reflect the deterioration of local state capacity and the weakening of the local economy as a result of increased insurgent activity.<sup>30</sup> Additional insurgent activity also has negative effects on human capital accumulation.<sup>31</sup> The results in column 9 show that educational enrolment (measured as the percentage of 5-24 year-olds attending an educational institution) decreased in border municipalities after 1999 by 6 percentage points (10 % decrease relative to sample mean).

Most of these negative outcomes are also observed in one-from-border mu-

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<sup>30</sup>On the negative economic effects of violence, see Abadie and Gardeazabal (2003); Besley and Mueller (2012); Camacho and Rodríguez (2013); Besley et al. (2015); Rozo (2016).

<sup>31</sup>For more information, see Ichino and Winter-Ebmer (2004); Akresh et al. (2012a,b); León (2012); Herrera (2014).

nicipalities, but the magnitude of the coefficient is always smaller than in border municipalities. This indicates that increased cross-border insurgent activity affected mostly border municipalities, but also had negative spill-over effects on neighboring municipalities.

## 6.2. Heterogeneity across types of insurgent activity

As discussed in section 3, the availability of a cross-border refuge is likely to enable the insurgents to carry out particularly risky activities that would otherwise be unfeasible. Riskier actions involve many operatives or require a long time to be carried out, leaving the insurgents more exposed to a response by government forces. To explore this hypothesis, I estimate equation (1) using as dependent variable each of the ten disaggregate indicators of FARC activity that have at least one non-zero value every year.

The results, shown in panel A of Table 3, indicate that the largest increases in FARC activity were in town sieges (0.31 SD), terrestrial piracy (0.30 SD), explosive terrorist acts (0.26 SD) and armed contact with government forces (0.23 SD). These results prove that the findings from the previous section are not driven by one specific type of insurgent activity. More importantly, they bring to light the high cost of transnational insurgency in terms of political violence and conflict intensity.

The activities that experienced the largest increases, except perhaps for acts of terrorism, imply substantial risks for the insurgents. For example, town sieges require many operatives to surround the urban centre of a municipality and exert sustained military pressure on local police and other government forces stationed there. The example from the FARC incursion in Tibú in section 3 illustrates how increased access to Venezuela facilitated these actions, as FARC operatives could attack when it was most convenient and withdraw when military reinforcements arrived. Similarly, the availability of a cross-border refuge in which to store loot made it more profitable to carry out acts of land piracy.

A more nuanced picture emerges if we look separately at the first five years

of the Chávez administration (1999-2003) and at the remaining years for which data is available (2004-2008). This is a useful exercise because the latter period could also reflect an endogenous response in counterinsurgency to the increase in insurgent activity in the border area (Berman et al., 2011). The results in panel B show that terrestrial piracy and town sieges (columns 6 and 9), the two risky activities just discussed, were the ones that grew the most in border municipalities during the first years of the Chávez administration. Column 8 shows that ambushes also grew (another risky activity that requires detailed preparations and many operatives), as well as murder and explosive terrorist acts (columns 1 and 2).

In the later years, we observe a substitution from terrestrial piracy, ambushes and town sieges to armed contact with government forces (column 10). This result suggests that security improved as the government’s counterinsurgency efforts adjusted to the heightened insurgent threat in the border area. The large increase in explosive terrorist acts in the later period (column 2) provides additional evidence that improved counterinsurgency forced FARC to resort to more irregular tactics.

### 6.3. Robustness Checks

The results presented above provide evidence of a large and costly increase in FARC activity at the border with Venezuela after Chávez became president. In this section I provide various tests of the robustness of this finding. Unless otherwise stated, for these tests I employ my preferred specification with municipality and region-year fixed effects, plus additional controls (column 3 of Table 2).

I first test whether the main result is robust to the use of the DV dataset on the Colombian conflict. This is a relevant test as the correlation between the CEDE and DV datasets is not very high.<sup>32</sup> Column 1 in Table 4 shows

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<sup>32</sup>The correlation between “FARC Events” from CEDE and “Guerrilla Events” from DV is only 0.33. Of course, “FARC Events” is constructed adding 19 activity indicators while “Guerrilla Events” is the sum of only three, but even for a single and comparable indicator, such as the number of political kidnappings, the correlation is only 0.55.

estimates of equation (1) with Guerrilla events, constructed using the DV dataset, as the dependent variable. Although data from this source is available for a smaller number of municipalities and for a shorter time period (1993-2004), the standardized estimates are remarkably similar to those obtained using the CEDE conflict dataset and they are equally precise.

The DV data also allows me to benchmark the increase in guerrilla activity at the border with Venezuela caused by Chávez against the effect of commodity price shocks reported in Dube and Vargas (2013). If I re-estimate the model using the number of guerrilla attacks as the dependent variable (without normalizing for population or standardizing), the point estimate for  $D(\text{Chávez})_t \times D(\text{Border Venezuela})_i$  is 0.96 ( $p=0.012$ ). This effect is one order of magnitude larger than the increase in guerrilla attacks that Dube and Vargas (2013, p. 1403) find for the average coffee-growing municipality following a 50% drop in coffee prices.

I next address the concern that disproportionately high growth in coca cultivation in the border region may be confounding the results. This is a valid concern because coca cultivation expanded dramatically in Colombia during the 1990s and Venezuela became an increasingly important point in drug-trafficking routes (Angrist and Kugler, 2008; Avila, 2012). For this purpose, I expand the set of controls by including the interaction between year dummies and an indicator for presence of coca crops in 2000, which is the earliest date for which municipality-level data is available. These are potentially “bad controls”, since the location of coca crops in 2000 could be affected by FARC’s increased access to Venezuela after 1999 (Angrist and Pischke, 2008). However, the estimates in column 2 of Table 4 are very robust to their inclusion.

One concern with the findings above is that they could be capturing a disproportionate increase in insurgent activity in municipalities close to any of the country’s borders. This could be the case if the borders are endogenously located in areas that are well suited to insurgent activity and the guerrillas retreated to these advantageous areas when the conflict intensified around the turn of the century.<sup>33</sup> For example, the evidence from the seized laptop

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<sup>33</sup>On the endogenous shape of nations, see Alesina and Spolaore (2003). See Fearon and



of FARC's second-in-command, "Raúl Reyes", indicates that he moved into Ecuador in 2003 (IISS, 2011b). Regression results, displayed in Figure 6, confirm that FARC activity at the border with Ecuador increased after 2003.<sup>34</sup> Hence, it is important to examine whether the growth in FARC activity near Venezuela was part of a more general trend in the geography of insurgent activity.

In column 3 of Table 4, I include the interaction between year dummies and the distance to the nearest of Colombia's borders as additional controls. The results are robust to this modification and, thus, not driven by heterogeneity in guerrilla growth by proximity to a border. A more stringent test is presented in column 4, which uses a reduced sample of municipalities located at any of Colombia's borders and their contiguous non-border neighbors. I find that the results remain unchanged if I only use Colombia's other borders as a control group for the border with Venezuela.

The estimates in column 5 are obtained when I include the interaction between year dummies and the value of the dependent variable in 1998 as additional controls. The results are unaffected by this modification, which implies that the increase in FARC activity after 1999 is not due to border municipalities having different levels of FARC activity before Chávez (i.e. FARC growing more where it was originally stronger).

The results are even robust to the inclusion of a quadratic trend specific to municipalities near the border with Venezuela. This is a particularly stringent test, as the trend is likely to capture a large portion of the variation in FARC activity near the border over time. Nevertheless, the results in column 6 still show a 0.2 SD increase in FARC activity in border municipalities when Chávez was in power ( $p=0.091$ ).

Column 7 shows results from a negative binomial model with the count of FARC Events (without dividing by population or standardizing) as dependent variable. The model, which includes municipality and year fixed effects, is

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Laitin (2003) and Nunn and Puga (2012) on terrain ruggedness and exposure to violence.

<sup>34</sup>Figure 6 also shows that FARC Events decreased after Rafael Correa came to power in 2007, which is consistent with the qualitative evidence on FARC's inability to obtain protection from the new Ecuadorian government (IISS, 2011a).

ideal for count data with overdispersion.<sup>35</sup> The results once more point to a statistically significant increase in FARC activity at the border with Venezuela when Chávez was in power.

FARC activity at the border could have also increased due to variation in local economic conditions during the Chávez years.<sup>36</sup> However, column 8 shows that the results are very robust to the inclusion of the interaction between Venezuela's GDP growth rate and the border and one-from-border dummies as additional controls in equation (1). Thus, it is not economic dependence on Venezuela what is leading to greater FARC activity at the border. In column 9, I include the interaction between the price of oil and the indicators for municipalities near Venezuela as additional controls. This regression is motivated by the high dependence of the Venezuelan economy on oil, the price of which rose dramatically during the Chávez years. It is also motivated by the fact that Colombia's main oil-producing region is in the eastern plains, relatively near the border. The results remain unchanged.<sup>37</sup>

To further explore the possibility of local economic shocks, in column 10 I include log real GDP of the department to which the municipality belongs as an additional control in equation (1). This is the most disaggregate level at which GDP is available in Colombia and the data is available up to 2005. Again, the results are quite robust, suggesting that it is not departmental variation in economic conditions what is driving the results.

Finally, I check the robustness of the results to the inclusion of controls for local political conditions. This way, I address the concern that the border region may have tilted politically to the left at the same time as Venezuela did. This is a particularly relevant concern given Chávez's observed willingness to export his political agenda throughout Latin America (Clem and Maingot,

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<sup>35</sup>The variance of the count of FARC Events is more than one order of magnitude greater than the mean. However, the results are very similar if I use a fixed-effects Poisson model or a zero-inflated negative binomial model with year fixed effects (not reported).

<sup>36</sup>On the effect of economic conditions on conflict onset and intensity, see Collier and Hoeffler (2004); Miguel et al. (2004); Dube and Vargas (2013).

<sup>37</sup>It is likely that the restrictions on bilateral trade imposed by Chávez had a negative effect on the border economy, but these only began in 2009, after the end of the sample period (BBC News, 2009).

2011). Column 11 shows that the results on FARC Events are robust to the inclusion as controls of the vote share for the winning candidate and the main left-wing party in the last presidential election. I also include separate dummies for the party in control of the local government (Liberal or Conservative).

Figure 7 provides additional evidence on the stability of political conditions in the border region over time. It shows point estimates and 95 % confidence intervals for the interaction between the border dummy and indicators for election years in a modified version of (1). The dependent variable is specified in the caption. Panels (a) and (b) look at presidential elections, which take place every four years (omitted year is 1986), while panels (c) and (d) look at mayoral elections, which were more frequent during the sample period (term length changed in 1994 and 2003 and the omitted year is 1988).

The results in panel (a) indicate that there was no systematic change in the vote share of the Liberal party (only party to present its own candidate in all presidential elections) in border municipalities when Chávez was in power. Panel (b) shows a similar result for the main left-wing party taking part in the presidential race. The main left-wing party in the 1986 presidential election (omitted year) was “Unión Patriótica” (UP), a party created by FARC and other left-wing groups. Thus, the results in panel (b) indicate that there was no significant change in popular support for left-wing parties relative to the baseline support revealed for FARC’s UP party in the 1986 presidential elections. Panel (c) shows that there was also no significant change in the vote share for the two traditional parties (Liberal and Conservative) in the elections for municipal mayor after Chávez came to power in 1999. Panel (d) looks at the competitiveness of elections, using as dependent variable the winner’s vote share in the mayoral election. The graph shows that the difference in the winning mayor’s vote share between border municipalities and the rest of the country was fairly stable over time.

## 6.4. Activity by AUC and the Colombian military

In this section I provide evidence against two possible explanations, other than increased FARC access to Venezuela during the Chávez administration, for the previous findings. The first one is the expansion of the paramilitary organization AUC after 1997. The second one is the large contemporary disbursement of US military aid to Colombian and the consequent strengthening of the Colombian military.

As discussed in section 2.1, several atomized paramilitary groups combined to form AUC around 1997. This move was driven to a large extent by FARC’s military success at the time, making the defeat of the leftist guerrillas the paramilitaries’ main objective. AUC’s intense counterinsurgency campaign roughly coincided with the start of the Chávez administration (see Figure 2) and could potentially explain the previous results.

Column 1 of Table 5 shows estimates of equation (1) using AUC Events as the dependent variable. The results indicate that AUC activity decreased in border municipalities after 1999 but increased in one-from-border municipalities, which is consistent with FARC having a military advantage at the border.<sup>38</sup> However, these estimates are imprecise and statistically insignificant. Column 2 further shows that the results on FARC are very robust to controlling for AUC Events, suggesting that the paramilitary expansion is not the mechanism underlying the increase in guerrilla activity at the border. Column 3 shows that the results are also robust to allowing for heterogeneous yearly variation in FARC Events in municipalities that had paramilitary presence (non-zero AUC Events) at any point in the sample period.

Another alternative explanation for the increase in FARC activity at the border with Venezuela after 1999 has to do with improved counterinsurgency around the same time. The U.S. started disbursing the “Plan Colombia” military aid package in 2000. Better funding and the breakdown of peace talks in 2002 led to an aggressive military campaign against FARC during the Uribe administration (see Figure 2).

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<sup>38</sup>The results are unchanged if I set 2003 as the final year of the sample period to account for the demobilization of AUC.

The results in column 4 of Table 5 provide evidence of a small and imprecisely estimated increase of 0.10 SD in military activity near the border with Venezuela during the Chávez years. This increase is consistent with counter-insurgency efforts following the trail of insurgent activity and crowding out paramilitary activity. More importantly, column 5 shows that the result on FARC Events is robust to controlling for Armed Forces Events, despite the strong correlation between the two variables. Column 6 shows that the results are robust to the inclusion as additional controls of interactions between yearly nationwide FARC losses (captures + demobilizations) and the border and one-from-border dummies. This means that the results are not driven by FARC retreating to the border with Venezuela in years when they were suffering higher losses. Column 7 shows that the results are robust to the inclusion of a similar set of interactions with the yearly amount of U.S. aid instead. The magnitude of the increase in FARC Events in border municipalities drops to 0.2 SD, but this is understandable given that the correlation between U.S. aid and the Chávez time dummy is 0.83.

## 7. Concluding remarks

This paper documents a large and robust increase in FARC activity at the border with Venezuela after Hugo Chávez became president of the latter in 1999. Such an increase is consistent with FARC enjoying increased access to Venezuela during the Chávez administration, but being unable to exploit it beyond the immediate vicinity of the border. I show that the additional guerrilla activity had a high human and material cost. It led to more armed clashes, acts of terrorism and town sieges, as well as to higher homicide rates and lower local tax revenue and educational enrolment rates.

These quantitative findings are consistent with a large body of qualitative evidence in support of the hypothesis that the Chávez administration actively collaborated with Colombian insurgent groups. If this hypothesis is true, the local effects reported for municipalities near Venezuela probably provide a lower bound on the effects of foreign support, as financial assistance and the

provision of weapons would have also stimulated guerrilla activity in control municipalities far from the border. However, it is likely that the findings in this paper also reflect a deterioration in border security during the Chávez years (Boraz, 2007; Avila, 2012). Incidents such as the murder of seven Venezuelans by FARC in 2004 certainly suggest that not all of the group's activities inside Venezuela were coordinated with the government.

Regardless of the degree of active collaboration between the government of Venezuela and the Colombian rebels, this paper shows that access to foreign territory allows insurgent groups to expand their operations significantly and leads to large increases in conflict intensity. In consequence, domestic counter-insurgency campaigns may prove unsuccessful if they lack support from neighboring countries or if state capacity in border areas is too weak. But as long as insurgent presence leaves a geographical trail, forensic strategies such as the one employed in this paper can prove useful for detecting and further studying transnational insurgent activities.

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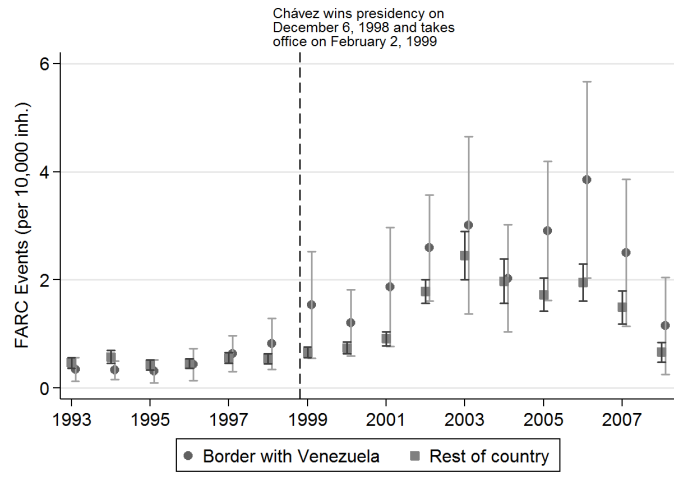
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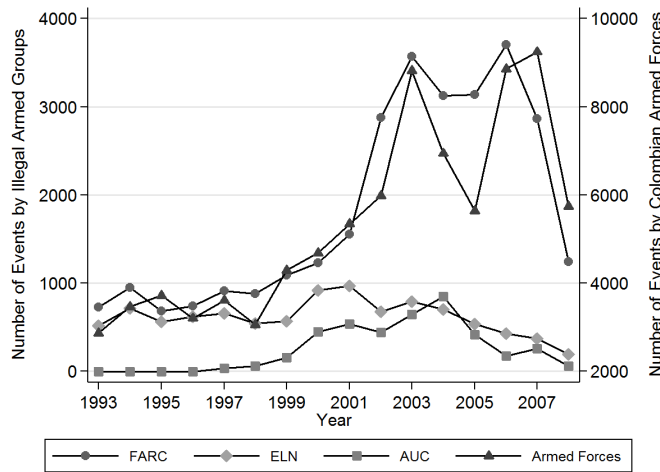
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**Figure 1: FARC activity at the border with Venezuela**



Note: The graph shows yearly averages and 95 % confidence intervals of the variable “FARC Events” for municipalities at the border with Venezuela and for all others. FARC Events is the sum of 19 activity indicators, divided by 1993 population.

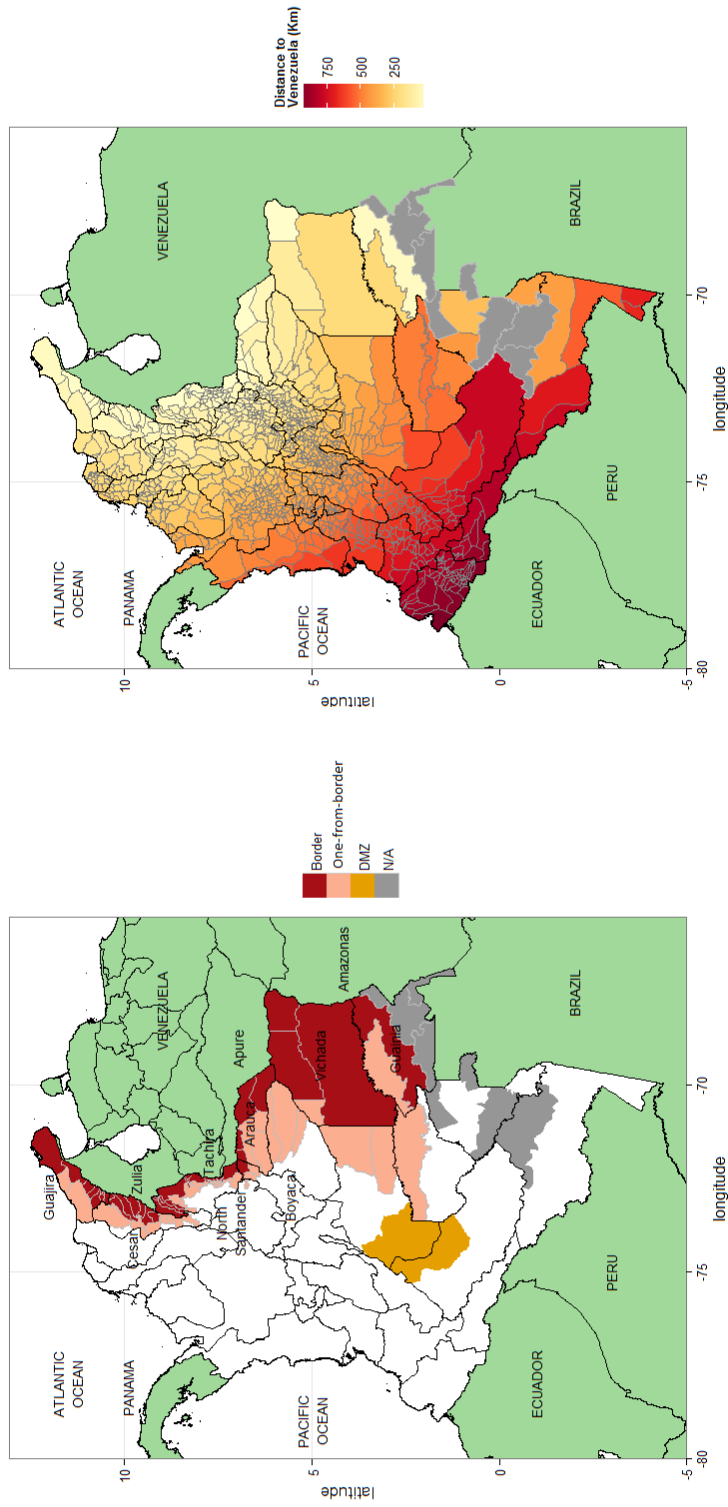
**Figure 2: Activity by non-state armed groups and the Colombian military**



Note: The graph shows the aggregate number of events per year for each agent. For FARC, ELN and AUC, “Events” is the sum of 19 activity indicators (left axis), while for the Armed Forces it is the sum of 9 indicators (right axis).



**Figure 3: Measuring proximity to Venezuela**

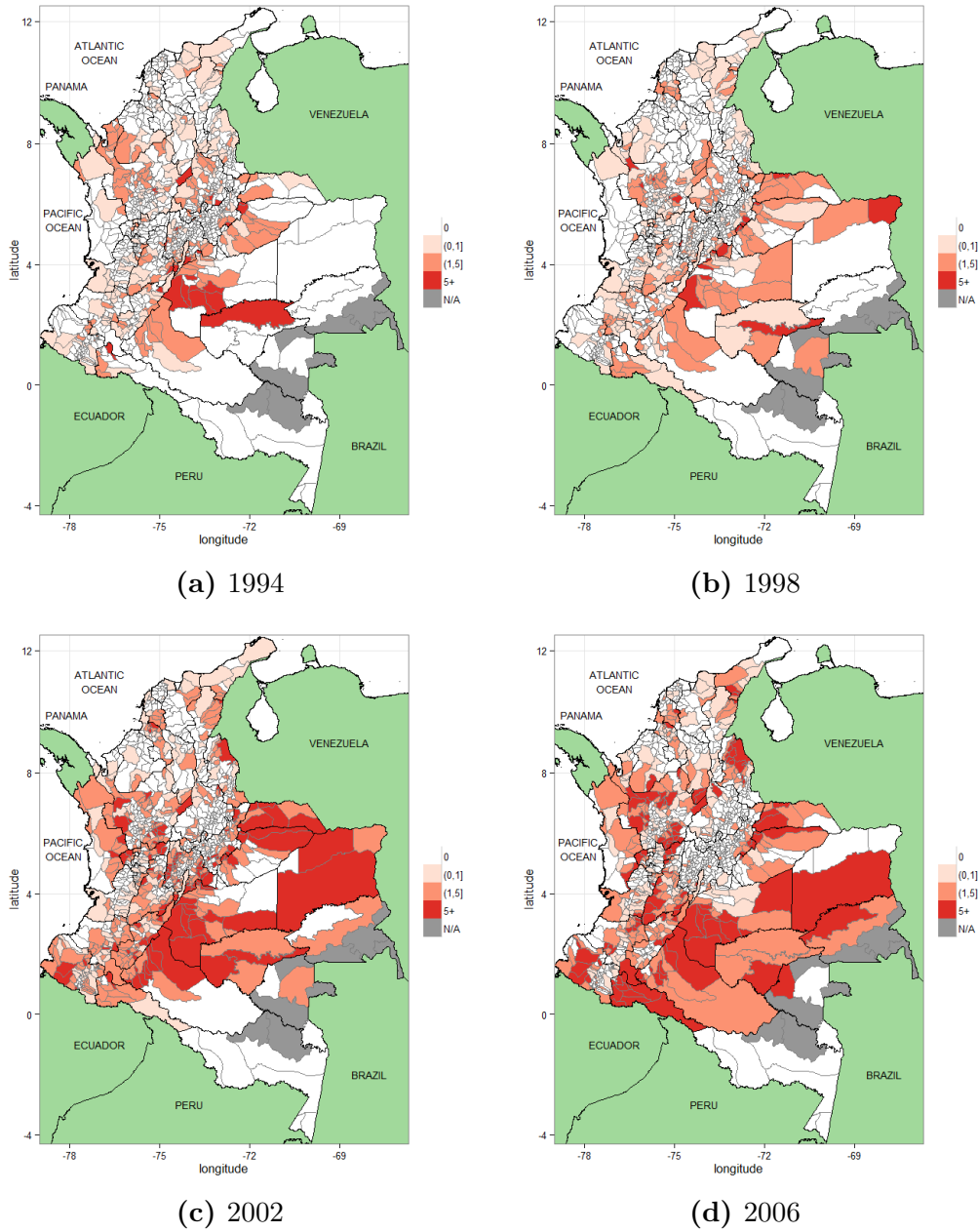


**(a) Border and One-from-border municipalities**

**(b) Distance to Venezuela (Km)**

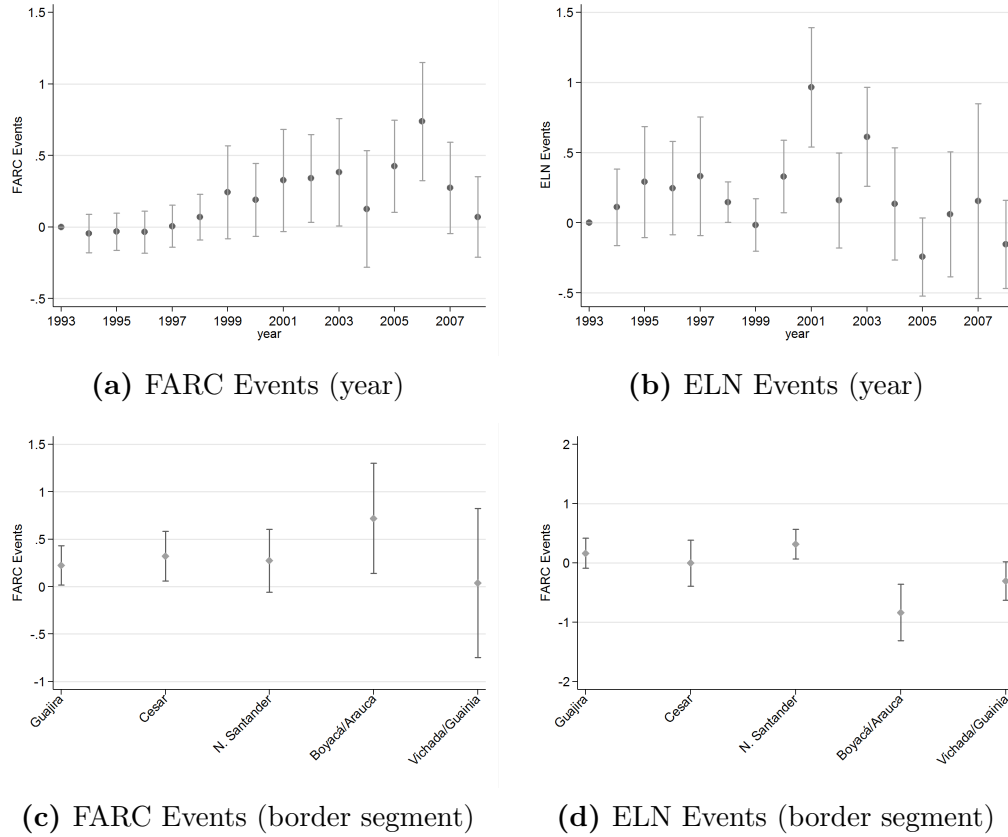
Note: Panel (a) shows municipalities located at the border with Venezuela and their non-border contiguous neighbors inside Colombia (One-from-border). The demilitarized zone (1998-2002) is also highlighted. Panel (b) shows the great-circle distance from the urban center of each municipality (“Cabecera municipal”) to the border with Venezuela. Areas in grey correspond to municipalities with missing data.

**Figure 4:** The geographic distribution of FARC Events



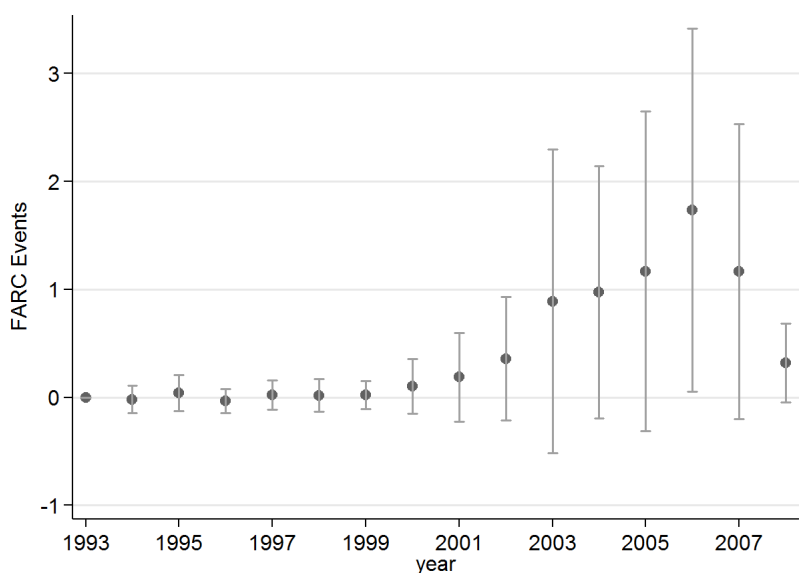
Note: The maps show the number of FARC events per 10,000 inhabitants. Events is the sum of 19 activity indicators. Areas in grey correspond to municipalities with missing data.

**Figure 5:** Heterogeneity in guerrilla activity in border municipalities



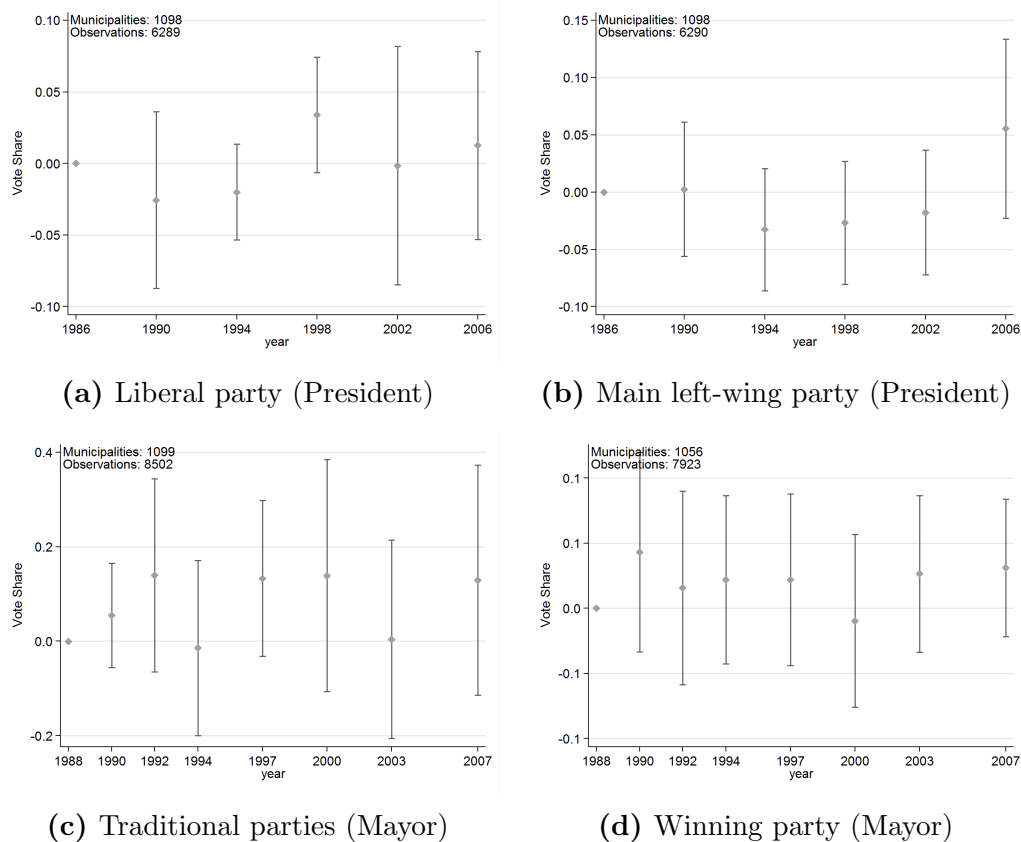
Note: Panels (a) and (b) show point estimates and 95% confidence intervals for the interaction between year dummies and the indicator for border municipalities in a regression with FARC and ELN Events as dependent variable. The regression includes municipality and region-year fixed effects, as well as yearly interactions with fixed municipality characteristics and with the one-from-border dummy(not reported). The omitted year is 1993. The standard errors have been clustered two-way by municipality and department-year. The dependent variable is the standardized sum of 19 indicators of activity by the group in the caption divided by 1993 population. Panels (c) and (d) show results from a regression with identical controls, except that the Chávez time dummy has been interacted with a series of segment-specific “Border” and “One-from-border” dummies. All regressions use 17,338 observations from 1,099 municipalities.

**Figure 6:** FARC activity at the border with Ecuador



Note: The graph shows point estimates and 95% confidence intervals for the interaction between year dummies and an indicator for municipalities at the border with Ecuador in a regression with FARC events as dependent variable. The omitted year is 1993. The regression includes municipality and region-year fixed effects, as well as yearly interactions with fixed municipality characteristics and a “one-from-border-with-Ecuador” dummy. The standard errors have been clustered two-way by municipality and department-year. The dependent variable is the standardized sum of 19 indicators of activity by FARC divided by 1993 population.

**Figure 7:** Electoral results in border municipalities



Note: The graphs show point estimates and 95% confidence intervals for the interaction between dummy variables for each presidential (mayoral) election year and the border dummy. The omitted year is 1986 for presidential elections, 1988 for mayoral ones. The regression includes municipality and region-year (election) fixed effects. It also includes a full set of election year interactions with fixed municipality characteristics and with a dummy for one-from-border municipalities. The standard errors have been clustered two-way by municipality and department-year. The dependent variable in panel (a) is the share of votes (0-1) for the candidate of the Liberal party in that year's presidential election. In panel (b) it is the share of votes (0-1) for the candidate of the main left-wing party in that year's presidential election: UP (1986), M19 (1990-1998), PDI (2002), PDA (2006). In panel (c) it is the share of votes (0-1) for the two traditional parties (Liberal and Conservative) in that year's mayoral election. In panel (d) it is the share of votes (0-1) for the winning party in that year's mayoral election.

**Table 1: Summary statistics**

Variable	(1)	(2)		(3)		(4)		(5)	(6)		(7)		(8)		(9)	(10)	
	Mean	Std. Deviation	Min.	Max.	N	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	p-value	
PANEL A: Panel-level Variables																	
FARC Events <sup>1</sup>	1.11	3.88	0	149.37	17338												
ELN Events <sup>1</sup>	0.33	1.55	0	89.15	17338												
AUC Events <sup>1</sup>	0.14	0.75	0	27.45	17319												
Guerrilla Events <sup>1</sup> (DV)	0.37	1.12	0	39.15	11736												
Armed Forces Events <sup>1</sup>	2.21	7.67	0	340.61	17328												
Murder Rate (per 100,000 inh.)	55.93	83.72	0	2724.71	17338												
5-24 year-olds attending educational establishment (%)	56.25	9.72	1.30	79.61	2056												
Property tax revenue (Millions of 1998 COP) <sup>1</sup>	100.17	146.72	0	3072.55	17338												
Business tax revenue (Millions of 1998 COP) <sup>1</sup>	67.96	228.7	0	5057.36	17338												
PANEL B: Municipality-level Variables (proximity to borders with Venezuela and Ecuador)																	
Border with Venezuela (dummy)	0.03	0.18	0	1	1099												
One-from-border with Venezuela (dummy)	0.04	0.19	0	1	1099												
Distance to border with Venezuela (Km)	360.07	232.36	0.24	938.79	1099												
Border with Ecuador (dummy)	0.009	0.09	0	1	1099												
One-from-border with Ecuador (dummy)	0.02	0.14	0	1	1099												
PANEL C: Municipality-level Variables (other characteristics)																	
Area (Km <sup>2</sup> )	947.35	3090.58	15	65674	1099	3516.23	8405.11	753.80	2116.18	0.00							
Altitude (Metres above sea level)	1148.07	906.15	2	3087	1099	628.70	739.08	1187.20	905.81	0.00							
Distance to nearest market (Km)	123.46	97.61	0	926.47	1099	182.27	119.40	119.03	94.36	0.00							
Unmet Basic Needs index in 1993	54.17	19.78	9.15	100	1099	62.60	16.99	53.54	19.83	0.00							
Share of rural population in 1993	0.64	0.23	0	1	1099	0.56	0.25	0.64	0.23	0.00							
Royalties in 1998 (million COP) <sup>1</sup>	91.62	584.04	0	10340.44	1099	214.58	638.64	82.36	579.00	0.06							
Transfers in 1998 (million COP) <sup>1</sup>	1276.14	705.96	0	7806.84	1099	1127.95	499.50	1287.31	718.06	0.06							
New municipality (dummy)	0.07	0.26	0	1	1099	0.14	0.35	0.06	0.25	0.01							
Broken-up municipality (dummy)	0.08	0.28	0	1	1099	0.14	0.35	0.08	0.27	0.05							
Notary office in 1996 (dummy)	0.42	0.49	0	1	1099	0.40	0.49	0.42	0.49	0.79							
Agricultural bank office in 1996 (dummy)	0.91	0.29	0	1	1099	0.84	0.37	0.92	0.28	0.03							
Tax collection office in 1996 (dummy)	0.44	0.50	0	1	1099	0.39	0.49	0.44	0.50	0.37							
Health center or hospital in 1996 (dummy)	0.74	0.44	0	1	1099	0.79	0.41	0.74	0.44	0.30							
FARC demilitarized zone and neighbors (dummy)	0.02	0.14	0	1	1099	0.01	0.11	0.02	0.14	0.65							

Notes: <sup>1</sup>per 10,000 inhabitants. Columns 6 and 7 show means and standard deviations of fixed characteristics for municipalities located at the border with Venezuela and their contiguous non-border neighbors. Columns 8 and 9 provide this information for all other municipalities. Column 10 reports p-values from the two-sided test of the null hypothesis that the mean is the same for both groups.

**Table 2:** The Chávez administration and insurgent activity near the border with Venezuela

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	FARC Events	FARC Events	FARC Events	FARC Events	ELN Events	Murder Rate	Business Tax	Property Tax	5-24 yo in school
D(Chávez) <sub>t</sub> x D(Border Venezuela) <sub>i</sub>	0.240** [0.116]	0.198* [0.115]	0.318*** [0.0950]		0.0115 [0.105]	19.58* [11.23]	-25.61* [14.12]	-33.13*** [9.128]	-5.97** [2.905]
D(Chávez) <sub>t</sub> x D(One-from-border Venezuela) <sub>i</sub>	0.227 [0.150]	0.134 [0.150]	0.117 [0.132]		-0.0479 [0.115]	13.32* [7.779]	-2.640 [14.83]	-20.40*** [5.952]	-2.636* [1.467]
D(Chávez) <sub>t</sub> x D(Distance Venezuela≤10 Km) <sub>i</sub>				0.398** [0.190]					
D(Chávez) <sub>t</sub> x D(10 Km<Distance Venezuela≤20 Km) <sub>i</sub>				0.201* [0.118]					
D(Chávez) <sub>t</sub> x D(20 Km<Distance Venezuela≤30 Km) <sub>i</sub>				0.186* [0.0951]					
D(Chávez) <sub>t</sub> x D(30 Km<Distance Venezuela≤100 Km) <sub>i</sub>				0.0252 [0.0663]					
Observations	17,338	17,338	17,338	17,338	17,338	17,338	17,338	17,338	2,056
Number of municipalities	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,028
Year FE	YES	YES	NO	NO	NO	NO	NO	NO	NO
Controls	NO	YES	YES	YES	YES	YES	YES	YES	YES
Region-Year FE	NO	NO	YES	YES	YES	YES	YES	YES	YES

Notes: Dependent variable in the header: FARC (ELN) Events in columns 1-5 is the standardized sum of 19 indicators of activity by FARC (ELN) divided by 1993 population (per 10,000 inh.); Murder rate (column 6) per 100,000 inh.; Business and Property Tax revenue (columns 7-8) are in millions of 1998 Colombian pesos per 10,000 inh.; in column 9, the dependent variable is the percentage of population aged 5-24 attending an educational institution. Sample period is 1993-2008, except for column 9 which only uses data from 1993 and 2005 (population census). All regressions include municipality fixed effects. Additional controls (columns 2-9) are a full set of year interactions with fixed municipality characteristics (see panel C of Table 1 and text for details). Standard errors clustered by municipality and department-year in brackets. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 3: The Chávez administration and heterogeneity across FARC activities near the border with Venezuela**

VARIABLES	(1) Murder of civilians	(2) Explosive terrorist acts	(3) Other terrorist acts	(4) Assaults to private property	(5) Kidnapping of civilians	(6) Terrestrial piracy acts	(7) Illegal checkpoints	(8) Ambushes	(9) Town sieges	(10) Armed contact
PANEL A: All Chávez years (1999-2008)										
$D(\text{Chávez})_t \times D(\text{Border Venezuela})_i$	0.0834 [0.0639]	0.263** [0.108]	0.0761 [0.0572]	0.128* [0.0747]	0.131* [0.0725]	0.296*** [0.110]	0.142** [0.0691]	0.0591 [0.0375]	0.309** [0.146]	0.228*** [0.0852]
$D(\text{Chávez})_t \times D(\text{One-from-border Venezuela})_i$	0.000649 [0.115]	-0.0148 [0.0998]	0.0548 [0.0798]	0.135 [0.0855]	0.102 [0.0734]	0.142 [0.113]	0.0792 [0.0967]	0.108* [0.0629]	0.0892 [0.134]	0.0866 [0.124]
PANEL B: Early (1999-2003) and late (2004-2008) Chávez years										
$D(1999-2003)_t \times D(\text{Border Venezuela})_i$	0.163** [0.0721]	0.148* [0.0828]	0.0927 [0.0694]	0.111 [0.0824]	0.104 [0.0978]	0.394** [0.155]	0.103 [0.0891]	0.132*** [0.0494]	0.569** [0.272]	0.107 [0.0654]
$D(2004-2008)_t \times D(\text{Border Venezuela})_i$	0.00415 [0.0814]	0.378** [0.182]	0.0596 [0.0622]	0.145 [0.110]	0.158* [0.0856]	0.198 [0.126]	0.182*** [0.0685]	-0.0137 [0.0671]	0.0494 [0.0922]	0.349*** [0.135]
$D(1999-2003)_t \times D(\text{One-from-border Venezuela})_i$	-0.0440 [0.0908]	-0.0784*** [0.0290]	0.0695 [0.107]	0.0593 [0.0856]	-0.0257 [0.0779]	0.0463 [0.105]	-0.0478 [0.0751]	0.0466 [0.0514]	0.133 [0.169]	-0.0874 [0.0631]
$D(2004-2008)_t \times D(\text{One-from-border Venezuela})_i$	0.0453 [0.159]	0.0488 [0.187]	0.0400 [0.0842]	0.211 [0.147]	0.231** [0.108]	0.238 [0.189]	0.206 [0.142]	0.170* [0.0990]	0.0456 [0.132]	0.261 [0.218]
Observations	17,338	17,338	17,338	17,338	17,338	17,338	17,338	17,338	17,338	17,338
Number of municipalities	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099

Notes: The dependent variable is the standardized sum of the events in the header carried out by FARC, divided by 1983 population. All regressions include municipality and region-year fixed effects. They also include a full set of year interactions with fixed municipality characteristics (see panel C of Table and text for details). Standard errors clustered by municipality and department-year in brackets. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



Table 4: Robustness checks

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Guerrilla Events	FARC Events	FARC Events	FARC Events	FARC Events	FARC Events	FARC Events (count)	FARC Events	FARC Events	FARC Events	FARC Events
$D(\text{Chávez})_t \times D(\text{Border Venezuela})_i$	0.396*** [0.140]	0.266*** [0.0897]	0.357*** [0.0978]	0.280** [0.111]	0.298*** [0.0941]	0.205* [0.121]	0.412*** [0.112]	0.319*** [0.0923]	0.325*** [0.107]	0.302*** [0.0904]	0.326*** [0.0924]
$D(\text{Chávez})_t \times D(\text{One-from-border Venezuela})_i$	0.0607 [0.0950]	0.0498 [0.128]	0.149 [0.134]	0.111 [0.116]	0.123 [0.130]	0.00459 [0.0820]	0.0671 [0.165]	0.0828 [0.117]	-0.00346 [0.104]	0.0633 [0.117]	0.160 [0.126]
Observations	11,736	17,338	17,338	3,343	17,338	17,338	14,483	17,338	17,338	14,041	17,183
Number of municipalities	978	1,099	1,099	213	1,099	1,099	915	1,099	1,099	1,099	1,099
Final year of sample period	2004	2008	2008	2008	2008	2008	2008	2008	2008	2008	2008
Conflict data source	DV	CEDE	CEDE	CEDE	CEDE	CEDE	CEDE	CEDE	CEDE	CEDE	CEDE
$D(\text{Coca crops})_{i,2000} \times \text{Year FE}$	No	Yes	No	No	No	No	No	No	No	No	No
$(\text{Distance to nearest border})_i \times \text{Year FE}$	No	No	Yes	No	No	No	No	No	No	No	No
Only municipalities near any border	No	No	No	Yes	No	No	No	No	No	No	No
$(\text{FARC Events})_{i,1998} \times \text{Year FE}$	No	No	No	No	Yes	No	No	No	No	No	No
Border/One-from-border quadratic trend	No	No	No	No	No	Yes	No	No	No	No	No
Estimation method	OLS	OLS	OLS	OLS	OLS	OLS	NB	OLS	OLS	OLS	OLS
$D(\text{Border}/\text{One-from-border})_i \times (\text{Venezuela GDP})_t$	No	No	No	No	No	No	No	Yes	No	No	No
$D(\text{Border}/\text{One-from-border})_i \times (\text{Oil price})_t$	No	No	No	No	No	No	No	No	Yes	No	No
$(\text{Department GDP})_{i,t}$	No	No	No	No	No	No	No	No	No	Yes	No
Local politics controls	No	No	No	No	No	No	No	No	No	No	Yes

Notes: The dependent variable in column 1 is the standardized sum of unilateral attacks, massacres and political kidnappings by guerrilla groups, from Dube and Vargas (2013), divided by 1993 population. In all others (except column 7) it is the standardized sum of 19 indicators of FARC activity divided by 1993 population. In column 7, "FARC Events" is not divided by population nor standardized. All regressions (except column 7) include municipality fixed effects, region-year fixed effects and a full set of year interactions with fixed municipality characteristics. Column 7 includes municipality and year fixed effects. Columns 2, 3 and 5 include as additional controls yearly interactions with a dummy for presence of coca crops in 2000, the minimum distance to the nearest border (km) and the value of the dependent variable in 1998, respectively. The sample in column 4 only includes municipalities located at any of Colombia's borders (Venezuela, Brazil, Peru, Ecuador, Panama, Atlantic and Pacific coasts) and their immediate non-border neighbors. Column 6 includes a quadratic time trend specific to border and one-from-border municipalities. In column 7, I use the negative binomial model. Columns 8 and 9 include as additional controls the interactions of the border and one-from-border dummies with Venezuela's GDP growth rate and the price of oil, respectively. Column 10 includes log real GDP of the department where the municipality is located. Column 11 includes as additional controls the vote share for the winning candidate and for the most important left-wing candidate in the last presidential election. Also included are separate dummies for Liberal and Conservative mayors. Standard errors clustered by municipality and department-year (bootstrapped in column 7) in brackets. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 5:** The Chávez administration and counterinsurgent activity near the border with Venezuela

VARIABLES	(1) AUC Events	(2) FARC Events	(3) FARC Events	(4) Armed Forces Events	(5) FARC Events	(6) FARC Events	(7) FARC Events
D(Chávez) <sub>t</sub> x D(Border Venezuela) <sub>i</sub>	-0.0825 [0.141]	0.328*** [0.0983]	0.304*** [0.0956]	0.109 [0.0879]	0.267*** [0.0817]	0.303*** [0.100]	0.207* [0.119]
D(Chávez) <sub>t</sub> x D(One-from-border Venezuela) <sub>i</sub>	0.150 [0.126]	0.105 [0.132]	0.106 [0.133]	-0.0616 [0.0986]	0.156 [0.0952]	0.192* [0.104]	0.0261 [0.107]
(AUC Events) <sub>i,t</sub>		0.0944 [0.0799]					
(Armed Forces Events) <sub>i,t</sub>					0.520*** [0.0648]		
Observations	17,319	17,319	17,338	17,328	17,328	17,338	17,338
Number of municipalities	1,099	1,099	1,099	1,099	1,099	1,099	1,099
D(Any AUC Events) <sub>i</sub> x Year FE	No	No	Yes	No	No	No	No
D(Border/One-from-border) <sub>i</sub> x (FARC losses) <sub>t</sub>	No	No	No	No	No	Yes	No
D(Border/One-from-border) <sub>i</sub> x (US aid) <sub>t</sub>	No	No	No	No	No	No	Yes

Standard errors clustered by municipality and department-year in brackets. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions include municipality and region-year fixed effects. They also include a full set of year interactions with fixed municipality characteristics. The dependent variable in column 4 is the standardized sum of 9 indicators of activity for the Colombian Armed Forces divided by 1993 population. In the other columns, the dependent variable is the standardized sum of 19 indicators of activity for the corresponding group (FARC or AUC) divided by 1993 population. Column 4 includes as additional controls yearly interactions with a dummy for positive values of “AUC Events” at any point in the sample period. Columns 6 and 7 include interactions of the Border and One-from-border dummies with the aggregate yearly number of FARC losses (demobilizations + captures) and the amount of aid from the US government (in millions of 2011 dollars), respectively.