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STATE CAPACITY EFFECTS OF ALLIANCES BETWEEN POLITICIANS AND
MILITIAS IN CIVIL WARS: EVIDENCE FROM COLOMBIA

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*To Ricardo Pabón, María del Rosario Correa, Melissa Pabón and
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Abstract

In this study I discuss how the type of control exerted by militia groups during armed conflicts have different effects on state capacity building. Drawing on recent literature trying to explain the behavior of irregular armed groups amidst conflict, I focus on how political alliances between politicians and pro-state militias have an impact on local capacity building. I study the case of ‘parapolitics’ in Colombia, and find that political alliances have negative effects on state capacity when militias have short time horizons, and that this negative effect is even stronger in municipalities with lower initial local capacity.

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State Capacity Effects of Alliances between Politicians and Militias in Civil War: Evidence from Colombia

Rafael Arturo Pabón Correa

1. Introduction

During war, non-state armed groups often find it useful to exert control over territories that could provide them with resources, information, and sanctuary. However, the type of control exerted by these groups varies (Arjona 2017), as also do its outcomes. In this work I explore the effects of political alliances between non-state armed groups – more specifically, pro-state militias -- and political elites on local state capacity. I hypothesize that these relationships have a negative lasting effect on state-capacity building at the local level. I contend that this effect might be due to the direct and often pervasive influence of militia groups on the institutions of local governance, an effect that persists after the disappearance of the groups themselves.

Though domestic conflicts or civil wars have been extensively studied, their consequences on state capacity are contentious. Some authors like Collier (1999), Besley and Persson (2008), Thies (2010), or Besley and Reynal-Querol (2014), have argued that domestic conflict has negative effects on development. Others like Wantchekon (2004), Gurses and Mason (2008), and McDougal (2009), have shown evidence for positive effects. And authors like Bove, Elia and Smith (2017), and Arias and De La Calle (2018), show that even the same conflict can yield both positive and negative effects.

In this sense, it seems clear that, depending on the context, domestic conflict can have many different effects, so it is important to analyze the circumstances underlying conflict. In this study I analyze when militia groups make alliances with political elites and do not intend to overthrow the government. Though far from conclusive, I expect this analysis to shed some light on a specific aspect that can affect the consequences of civil wars.

This research draws on Arjona's (2017) theory of social order in civil war, though I move the focus from the factors that determine the type of control a non-state armed group will establish when approaching a new territory, to the consequences that these different types of non-state control might have on local state capacity development. I show that the same two

factors that determined the type of control exerted in the first place have consequences on future development, specifically: the time the militia group expects to stay in uncontested control of a given municipality, or its ‘time horizons’; and the level of state capacity or institutional development that existed before the arrival of the armed group. I argue that these factors affect future local state capacity development because they change the behavior of irregular actors while they are influencing the local government. These different types of influences change the path of development of municipalities, with effects that persist after the disappearance of the armed group and their direct influence on the local government.

To test my arguments, I focused on the Colombian civil war, more specifically, on the episode known in the country as ‘parapolitics’, in which several national politicians allied with paramilitary groups to win votes and gain legislative seats in congress during the legislative elections of 2002 and 2006. As it has been extensively documented by national media and civil society organizations (Verdad Abierta 2008, 2010, 2013; Gutierrez 2007; Cardona 2010); paramilitaries in Colombia allied with politicians to obtain access to national resources in the form of transfers, royalties, public contracts and better demobilization deals, in exchange for votes. This case fits well my research question, as there is significant variation in the approach of paramilitary groups toward the municipalities they tried to control.

Building from Sanchez (2012) and Fundación Paz y Reconciliación (2014a, 2014b), I have elaborated an updated list of ‘parapoliticians’ (politicians that allied with paramilitaries) that reached the Senate or the House of Representatives in 2002 and 2006. I use the percentage of votes received by parapoliticians in each municipality of the country in those elections as a way to measure the level of control exerted by paramilitaries in a given territory.

This way of measuring paramilitary control resembles the one implemented by Acemoglu, Robinson and Santos (2013), who used the percentage of votes cast for what they call ‘third parties’¹ as an indicator of paramilitary control. However, I argue that my approach has the potential to be more complete, as not all votes for third parties corresponded to politicians allied with paramilitaries; and by the same token, not all politicians who allied with

¹ “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”. (Acemoglu, Robinson and Santos 2013, 7)

paramilitaries were exclusively members of third parties –there are many instances where politicians of traditional parties colluded too.

After mapping the political control of paramilitaries in the country, I construct a categorical variable to compare the change in public goods provision between 2005 and 2018 in the municipalities of the country under paramilitary control against those municipalities that were para-free. I use public goods provision as a proxy measure of state capacity, based on the concept of infrastructural capacity laid out by Mann (1993).

In all, I find that in municipalities that were under paramilitary control for one electoral period (presumably due to paramilitaries' short time horizons), local state capacity was built at a slower rate than in municipalities that were never controlled. Also, I find that municipalities that had below average levels of state capacity before paramilitary control, fared poorly later in time than municipalities with similar starting levels of local capacity but nevertheless without paramilitary control. In contrast, municipalities that were controlled during two periods (presumably with longer time horizons) do not present a significantly different effect on state capacity building. Finally, in some complementary results I find evidence suggesting that demobilization processes can have detrimental effects on state capacity development in municipalities that are controlled by militia groups at the moment in which demobilization takes place.

This study is structured in five sections. The first part presents the relevant literature to lay out my hypotheses. I focus mainly on recent research on civil war and non-state armed groups' behavior during domestic conflict. In section 2, I situate my hypotheses within the context of Colombian 'parapolitics', by providing a brief descriptive historical summary. The third section presents the data analyzed and its operationalization. In the fourth section, I present the methodological approach to test my arguments and discuss the results. And, finally, section 5 concludes the study.

2. Hypothesis discussion and literature review

During conflict, territorial control is of the utmost importance for warring factions. However, as Kalyvas (2006) puts it, what characterizes irregular war is a 'fragmentation' of geographical

space in which rival borders are blurred. Though some zones might be categorized as controlled by one faction or another, most of the time control is fragmented and incomplete.

To face these challenges, irregular wars demand from warring factions a distinct control behavior in comparison to conventional war. In irregular wars, the importance of population support is essential. As Trinquier (1964) puts it, in traditional wars “military operations go on without regard for the hapless civilian population” (as cited in Kalyvas 2006, 92), while in irregular wars very often “the idea that popular support is essential for victory has been stressed by rebel theorists, military historians, and scholars” (Arjona 2017, 4).

Military control is expensive and factions very often face constraints in their resources, so a rationally oriented group will try to use the more efficient strategy in order to gain support from the people. The difference between a durable and an unsustainable liberated area might depend entirely on how well armed strategies are chosen. In Kalyvas’ (2006) influential theory of irregular wars, the more important consideration for armed groups, at the moment of choosing their strategy of control enforcement, is the competition they may face in a given territory. Armed groups need to prevent any defection or aid to rival groups that might endanger their position and fortify that of their enemies. They will act in different ways depending on whether they have full control of a town, they are disputing the territory or they do not have any grasp on the area.

To this combination of factors that account for the behavior of non-state armed groups during wartime, one can also add the interest on maximizing the utility of controlling a territory, since “while the quest for territorial control is widely recognized as a key factor shaping armed groups’ behavior, a second, related goal, tends to be overlooked: maximizing the byproducts of that control” (Arjona 2017, 154).

Other factors proposed by different authors to account for variation in non-state armed groups’ behavior during war include revenge and previous political grievances (Balcells 2017), initial conditions at the moment of organizing the group –the type of individuals that joined the ranks of the organization- (Weinstein 2007), among others. What is important to extract from this approach is that, in irregular wars, even towns held by the same armed group can experience diametrically opposite experiences of rebel rule. This variation on control is

not sustained exclusively by the power of weapons and bullets, and the perennial threat of violence or death. As Arjona (2017, 2) reminds us “much more than violence happens during war. Armed actors do not only kill, but also create institutions, endorse ideologies, form alliances with local actors, provide public goods, recruit, and, in so doing, transform the societies in which they operate”. Precisely, this idea is the main foundation for my main hypotheses on this work:

H1: Local control by militia groups that hold alliances with political elites will have negative effects on local state capacity building.

Though many things have been written about the behavior of armed groups during war, less so has been said about the consequences of these different behaviors for future state capacity development. Militia groups’ institutions, the norms and rules they may impose over populations, might ‘stick’ to the formal institutions of governance of territories if their equilibrium is self-enforceable. This idea is based on the classic argument proposed by North and Weingast (1989), in which only institutions that are self-enforcing endure over time.

Some authors have pointed out that collusion between non-state armed forces and political elites is not always negative. For example Staniland (2012, 254) points out that “the consolidation of Indonesia’s state came through the meshing of insurgent groups and preexisting governance structures, as did the consolidation of the North Vietnamese state”. Even for the Colombian case, Rodríguez-Franco (2015) has found evidence that in some areas of the country, the civil war bolstered state taxation capacity. However, my research I find that collusion between non-state armed forces and political elites has negative effects on local state capacity.

The alliance between political elites and militia groups to gain leverage on national and local politics reduced incentives to invest on state capacity and public goods provision, as effective electoral results could be obtained in a cheaper fashion through the use of coercion and the supply of inexpensive particularistic goods provided by the non-state armed group. Even if state taxation would have increased, this would not be necessarily related with an increase on state capacity to implement public policy, or, what is the same, infrastructural capacity (Mann 1993).

As I have mentioned before, there exists variation in control exerted even by the same militia groups depending on external factors. It is very likely that this variation will have also different consequences on local state capacity development for populations, as different types of militia control will predictably rely on different institutions. Kaplan's (2013) research on Colombia's municipality of Cimitarra is very illustrating in this regard. While some of the villages of the municipality experienced a quite violent control by paramilitary groups, the villages that were more organized faced a more 'peaceful' control by the same groups. This leads to my second hypothesis:

H2: The negative effect of political control exerted by militia groups will be stronger in municipalities that had less state capacity before the arrival of the irregular organizations.

There are many authors that have indicated the large difference that pre-existing institutional capacity (formal or informal) implies for non-state armed groups' approach toward populations they intend to control. Arjona, Kasfir, and Mampilly (2015), Kaplan (2013), Berg and Carranza (2018), Press (2010), all show how institutional capacity can foster collective action in the face of external threats, making coercion costly for groups that intend to impose their rule in a certain place.

In the face of high local capacity, militia groups might choose to leave the existing institutional structure of a given place relatively untouched, minimizing their level of control and the imposition of their own institutional set of rules over populations –what Arjona (2017) calls an *aliocracy*. Nonetheless, when existing institutional capacity is below average, control by these groups will be far more intrusive, replacing the weak preexisting order with a new one that fits better their needs.

The empirical implication of this is that places with below average local state capacity, where political leaders establish alliances with militia groups, will show the poorest performance on state capacity building in the future. This is because local institutions will be more permeated by non-state armed groups' behavior after their occupation.

One more ingredient that has to be taken into account is the time horizons of the militia groups. As Olson (1993, 572) puts it “whenever a dictator has a sufficiently short time

horizon, it is in his interest to confiscate the property of his subjects, to abrogate any contracts he has signed in borrowing money from them, and generally to ignore the long-run economic consequences of his choice". Rulers will be more extractive and pervasive toward the populations they control when they do not expect to extract future benefits of the investment they and their subjects make in the present. And militia groups are not quite different from the roving and stationary bandits of Olson's classic theory.

Precisely, this is one of the main components of Arjonas' (2017) theory: "I argue that rebels with short term horizons will give rise to disorder in the territory. This is most likely when armed groups are undisciplined and in situations in which they face competition with state or non-state armed forces" (p.42). For the author, disorder is a conflictive situation where uncertainty is very high; there are no evident rules or norms that regulate the behavior of combatants and civilians. This leads to my third hypothesis:

H3: The local capacity effects of the alliances between political elites and militia groups will be more negative in territories controlled by paramilitaries with short time horizons.

There is a paradoxical problem with this argument, though, if there are no rules or norms in disorder, and disorder emerges from short time horizons, then there should not be any 'sticky' effect caused by the control of the militia groups. Where rules are lacking and uncertainty reigns, institutions are absent.

However, one of the assumptions in previous works that I 'relax' in this research is that short time horizons might mean a complete lack of institutions, regardless of the circumstances or and armed group's nature. Pro-state militia groups have incentives to establish alliances with local politicians to strengthen control, even when uncertainty is high. This means that even when temporal horizons are relatively short; these groups will try to establish informal institutions that allow them to extract resources in collusion with local institutions of governance. This collusion will necessarily have consequences in future development. So I assume that in circumstances of uncertainty paramilitaries will try to put in place institutions that allow them to be as extractive as possible in the less amount of time possible while maintaining their agreement with their political allies.

A final caveat that must be mentioned is that to prove the causal relations and, overall, the underlying causal mechanisms to my hypothesis, more precise qualitative data would be necessary. With the data at hand, I merely intend to show that there is some positive probability for the existence of different effects on future local capacity arising from long lived and short lived paramilitary control in alliance with political elites, an effect that remains even after the disappearance of the paramilitary groups. Staniland's own words better summarize the importance of further research on this topic:

Future research needs to theorize variation in state and insurgent political interests, study the co-evolution of state and non-state political authority, incorporate other actors in the construction of order, and explore how governments deal with armed groups in contexts as diverse as inner-city policing, electoral campaigns, and international politics. Rather than a category unto itself, civil war should be situated within a broader set of processes that combine politics and violence. (2012, 244)

Departing from Arjona's (2017) influential theory, I claim here that militia groups might not always want to establish what she calls *rebelocracies*² in municipalities with low quality institutions. In places where political elites are favorable to the goals of the non-state armed group and with groups whose main objective is not to overthrow the government or change the political system, a narrow control characterized by alliances between local politicians and the paramilitaries might be more useful, than establishing a broader control. Indeed, Acemoglu, Robinson and Santos (2013), find suggestive evidence to support the assertion that paramilitaries in Colombia provided votes to their allies in the national sphere and, in exchange, the central state turned a blind eye on their interests and operations.

3. History of 'Parapolitics'

The first paramilitaries appeared in Colombia around the beginning of the 1980s, their roots tracing back to two different economic groups with some common goals: the narco-trafficking cartels, located mostly in the departments of Antioquia and Valle del Cauca; and the landowners of the region known as the Magdalena Medio. Both groups created armed

² "Rebelocracy is defined as a social order in which armed groups intervene beyond security and taxation" (Arjona 2017, 28).

units for self-defense against the communist guerrillas, though their methods and financial means varied greatly.

Toward the end of the 80s the rising elite of drug barons appropriated huge amounts of land, among other reasons to change their social status and be perceived as wealthy landowners (Chernick 1998). This began the merging between the armed groups of mercenaries created by the drug barons and the groups of self-defense of the traditional landowners. The methods and financial capabilities of the drug money turned the self-defense groups from being principally defensive groups, toward offensive forces.

This period saw the beginning of years of expansion and the emergence of a loose political agenda, during which the paramilitaries (as they would eventually be called) began to attack not only armed members of the insurgent groups, but also politicians and civilians that they thought were too close to these leftist organizations. Eventually –around the year 1997-, most of the paramilitary groups would unite under just one banner: the United Self-Defense Forces of Colombia (Autodefensas Unidas de Colombia or AUC in Spanish)³.

Amidst the highest point of their power, the leaders of the AUC gathered with different Colombian politicians on July 21, 2001, in the village of Santa Fe de Ralito, part of the municipality of Tierralta in the department of Córdoba. It was not the first meeting between political elites and this group, nonetheless, the words of the Ralito’s pact describe to a great extent their objective. There, they adjudicated to themselves the “irrevocable task of rebuilding our homeland, of signing a new social contract” (Semana 2007).

This secret pact marked the beginning of a new chapter in the history of the paramilitary groups of Colombia, as they turned from being just an irregular armed force into a political project. Before their final demobilization, Vicente Castaño, one of the main leaders of the AUC said in an interview: “I believe we can affirm that we have more than 35% of friends in the Congress” (Semana 2005).

To better understand the dimensions of the phenomenon and its implications, it is useful to put it into perspective with other similar experiences in Colombia. López and

³ For a further discussion about the history of paramilitarism in Colombia see: Salazar (2008), Baron and Gutierrez (2006), Ruiz (2012).

Sevillano (2008) explain that, when Pablo Escobar was elected for the House of Representatives in 1982, his votes were equivalent to around 1% of those casted for the legislative elections in that period; later, in 1994, the Cali's Cartel was able to gain around 12% of the vote for the legislative elections. In contrast, the paramilitary groups obtained 35% of all the votes casted in 2006 for the Senate and 25% for the House of Representatives. This means that parapolitics was the most successful attempt of capturing the state by any illegal group in Colombia, beating some of the more powerful drug cartels in world history.

However, it would be inaccurate to say that these results were the consequence of a purely militaristic strategy by the Self-Defenses, as such results could not had been accomplished without meticulous and systematic planning, along with the collusion of political and economic elites. In fact, paramilitaries and politicians held many meetings along the whole country during an extensive period to secure their commitments, establish the electoral turnout thresholds which they were interested to obtain and the ways in which they would win them. López and Sevillano (2008) provide a succinct summary of the names of these pacts and the years in which they were signed: Coordination Meeting - 2000, Chivolo's Pact - 2000, Ralito's Pact - 2001, Pivijay's Pact - 2001, Uraba's Pact - 2001, Pacts of Middle Magdalena - 2001, 2007, Pacts of the Coffee Axis and Caldas – 2006.

After the unification and coordination of the Self Defenses under one banner in 1998, it came the political project. As the paramilitaries grew in force and organization, they were able to control territories effectively. "The war acquires a new face: territory occupation with blood and fire, massive linkage of the drug traffickers in the paramilitary enterprise and a strategy of capturing the local power and influencing the national power" (Valencia 2007, 15). Importantly, as authors like Lopez, and Avila (2010), or Acemoglu, Robinson and Santos (2013) have indicated, the AUC never wanted to make radical reforms to the political system of the country, neither wanted to overthrow the national government. The fact is that the origins of the paramilitaries "would subsequently lead to the matrix of interwoven interests and ambitions shared by regionally based politicians and paramilitaries known in Colombia as para-politics" (Ramirez 2015, 46). This is important for the advancement of my arguments in this work, as paramilitary's goals mostly aligned with those of local and national political elites.

Against Arjona's (2017) expectation that, if possible, non-state armed groups will always prefer to set up their own institutions in areas under their control, I argue that there are circumstances wherein it could be more favorable for them to just collude with political elites. 'Parapolitics' coincided with a period of intense decentralization put in motion by the new Constitution of Colombia, signed in 1991. Around 1994 the stipulations of the Constitution began to become a reality with the creation of the National Royalties Fund (Fondo Nacional de Regalías in Spanish)⁴.

Eaton (2010) has suggested that decentralization created incentives for armed groups in Colombia to establish a tighter control over municipalities. In the case of paramilitaries, these "set their sights on penetrating departmental offices, not just municipal governments" (548), as opposed to guerrillas who most often exerted some minor influence on local government. In fact, the influence of the Self-Defenses Forces extended even to the national government. In this sense, it is possible to argue that, given the amount of resources available, it was easier for politicians and paramilitaries to just become allies with the final goal of winning elections and taking control of these resources.

Another important aspect for the hypotheses I present in this research is that the equilibrium created by the institutions put in place by militia groups must be self-enforcing (using the terminology of North and Weingast (1989)) so their effect might last many years even after the disappearance of the former groups. In this sense, it is important to examine the *modus operandi* of the alliance between paramilitaries and politicians.

As Hernández-Mora (2008) says, the paramilitaries "achieved alliances with national and local politicians in exchange for guaranteeing them high quantities of votes by pressing the population into voting for them and, even, with the murder and exile of their rivals". This strategy of threats and violence gave as a result many local and departmental elections with just one candidate, producing safe victories for the AUC and their allies.

In any case, their advantage depended on the threat of force, rather than on their actual use. As many authors like Kalyvas (2006), Lyall (2009), Fabbe, Hazlett and Sinmazdemir (2017), or Arjona (2017), have shown, violence is not necessarily a good way to ensure

⁴ For a further review on the history of this system in Colombia see Bohorquez (2013).

control of a given territory. “Selective incentives such as public services, wages, or security may encourage civilian support for the insurgency, but the extent to which rebels can deliver these incentives is heavily constrained by their capabilities” (Wood 2010, 604). It is possible that the potential use of violence made many of the clientelistic practices of the country cheaper, so militia groups and their political allies could provide particularistic goods at a lower price than the traditional networks of electoral clientelism.

This is clearly reflected in the fact that precisely the downfall of the two traditional Colombian parties overlaps with the rise of the Self-Defenses forces. Traditional clientelism could not compete against those that had monopolized the use of violence in the municipalities where the national state had shrunk. In fact, these traditional clientelists and the new ‘armed’ ones were not always different actors: “Mostly, it was the politicians who sought the ‘paras’” (La Silla Vacía, 2010). The equilibrium created by paramilitaries’ actions is self-enforcing in the sense that it was very favorable for politicians and even after the demobilization of these groups it was still useful for politicians to maintain their clientelistic schemes to rig elections. This last part is the most important component of the effect I am trying to analyze in this research: even after the demobilization of paramilitaries, the way of ruling established as a consequence of their alliance with local and national politicians ‘stuck’ to the municipalities in which they were present, so many years after the end of ‘parapolitics’ (8 to 10 years), this places provide less public goods than their counterparts that were presumably never tainted by this phenomenon.

Finally, what should result evident by now is that this ‘armed clientelism’ is especially pervasive because of the virtually complete absence of agency on the part of the voter. “Coercive strategies are particularly offensive because they take away voters’ choices to opt out of clientelism” (Mares and Young 2019, 17). This reality constitutes, in fact, one of the main reasons for me to expect negative effects of ‘parapolitics’ in Colombia, as the agency that is withdrawn from the voter reduces significantly the incentives for politicians to invest in any form of public goods or in improving state capacity.

4. Data and operationalization

My main dependent variable is the Colombian household deficit, which is composed of various measures of public goods taken from the national censuses of 1993, 2005 and 2018. My main independent variable in this research is the level of ‘parapolitics’ incidence, which I hope contributes to the study of this phenomenon in Colombia. The census of 2018 is a source of information that still has been barely used, due to its very recent release, so in this sense I hope this work offers some insightful information about recent data sources that have not been yet fully explored. In the next sub-sections I discuss the key variables in more detail.

As control variables I use some geographical and structural variables that could be related to the level of local capacity of a given municipality. These variables are: distance to Bogota (national capital), distance to the departmental capital, municipality’s altitude, rurality index of the municipality, a dummy variable for municipality’s region (Caribe, Pacific, Amazon, Orinoquia and Andina which is the base category against which each the others are compared), as well as population and number of households. I also include the Armed Conflict Incidence Index to test for the difference between the effects of level of violence and parapolitics. It is important to underline that all independent variables used in this work are centered to make interpretation of results easier, this means that an increment in a continuous variable unit is equal to an increment in one standard deviation.

4.1.Independent Variable – Level of parapolitics incidence

For the construction of the variable on the level of parapolitics incidence at the municipal level, I looked at the percentages of votes received by congressmen elected in 2002 and 2006 that were later charged or convicted because of their relationships with paramilitaries. I focus on these elections because they concentrated more media reports and information about judicial processes against parapoliticians.

I have elaborated a list with the names of all the ‘parapoliticians’ building from previous work from Sanchez (2012) and Fundación Paz y Reconciliación (2014a, 2014b). As the processes for ‘parapolitics’ are, at the time of this writing, still underway, it was necessary to look up the name of each senator and representative in the web to add politicians. For reviewing the links of politicians with paramilitaries, I simply put the name of the senator or representative accompanied by the word ‘parapolitics’ in the digital search engines of some of

the main national newspapers of the country: *El Tiempo*, *El Espectador* and *Semana*; as well as some regional ones: *El Herald*, *El País*, and *El Colombiano*. I classify as ‘parapoliticians’ all those senators and representatives, that had a formal judicial process or have it underway.

If one congressman was prosecuted and then absolved, the news of the case were reviewed, if the reason for absolution was expiration of terms instead of pure exoneration, then the congressman was still put in the ‘parapoliticians’ list. I do this because there have been recent reports uncovering some payments made to Supreme Court judges with the purpose of delaying processes related with ‘parapolitics’, so they would expire (Gomez Forero 2017, Clavel 2017, Bluradio 2020).

With this in mind, I assume that the ‘level’ of control of paramilitaries in a municipality is simply the amount of votes received by the list of ‘parapoliticians’, divided by the amount of votes casted in the elections. Because I have two lists for each election, one for senators and one for representatives, I use the list with the higher percentage of the two as the level of ‘parapolitics’ incidence for a municipality. It is important to highlight that both elections were simultaneous.

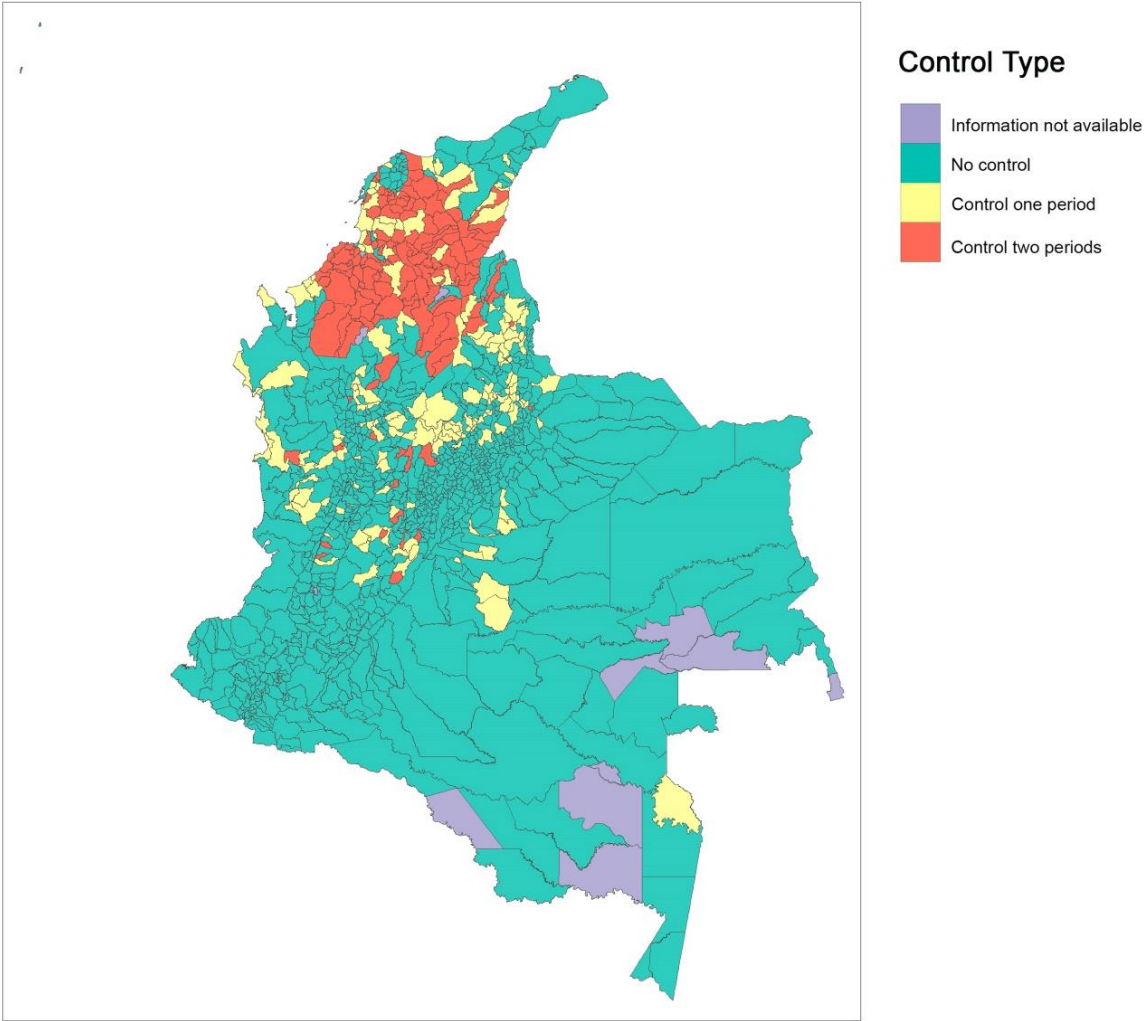
To make the empirical analysis easier to interpret, I use a process of K-means clustering, to divide all the municipalities in clusters of groups, from which only the one with the higher number of votes for congresspersons related to the scandal is classified as politically controlled by the paramilitaries. In figure 1 it is possible to observe the results of the classification mapped into the municipalities of the country.

I decided to divide the data in three clusters using the ‘elbow method’. As Kodinariya and Makwana (2013) explain, this method increases the K number of clusters in a set of data minimizing in each step the total within sum of square until the point in which, to reduce this sum further, it would be necessary to increase a lot the number of clusters. It is a rather simple and classic method, though I think it very well serves the purposes of this work.

The process of K-means assigns each observation randomly to a predetermined number of groups (in this case, three), and then, it calculates the mean of each group and reassigns observations to that from which they are closer. This action is repeated many iterations until the observations on any group have the maximum likelihood between

themselves, and the maximum difference between those observations outside their own group (Likas, Vlassis, and Verbeek 2003).

Figure 1 - Map of ‘parapolitics’ in Colombia 2002 - 2010



Map of Colombian municipalities politically controlled by paramilitaries in the legislative elections of 2002 and 2006. Source: Own elaboration.

I use this methodology to establish an objective threshold for classifying municipalities as politically controlled by paramilitaries without resorting to arbitrary thresholds. The downside of this method is, however, that the threshold established for being classified as under paramilitary control could be considered rather low. One important point to add to this is that the results presented in this research are replicable using the percentage of votes as

continuous variables and, in fact, the last model I present uses continuous variables instead of categorical.

My main independent variable is, therefore, a dummy variable based on the percentage of votes received by politicians supported by paramilitaries, being 1 free of paramilitary political control (below 55% in 2002, and around 50% in 2006), and 2 under paramilitary political control for at least one electoral period (above the aforementioned thresholds). Also I build a third categorical variable combining the classification of the municipalities in 2002 and 2006 to see if there is any difference between the localities that were controlled during just one electoral period and those that were controlled during two electoral periods. In table 1 I present a comparison between municipalities that were under paramilitary control and those that were not. Just by looking at their means, we can see that municipalities that were not under paramilitary control present a mean percentage of votes for ‘parapoliticians’ of 18% and 20% in 2002 and 2006 respectively, whereas the figures for controlled municipalities are much higher, 72% and 60%. In table 2 we can see the averages for municipalities controlled during one electoral period, two electoral periods or none.

It could be argued that a classification based on local elections would be more accurate in representing the political control of irregular groups. Though this could be true, there exist two main reasons why I’m not relying on local election results. The first one is that, given the characteristics of the phenomenon of ‘parapolitics’ in Colombia, the legislative elections are a good illustration of the interests of these groups and the places where they mobilized and exerted most of their control. Congressmen gave huge leverage to the Self-defenses on the national political arena, along with important bargaining power in terms of the allocation of national budgets (Eaton 2006). Also, there is a higher chance that these –in most cases- minor politicians would not had been detected by the national system of justice of the country, so an indicator based on them could be less accurate.

Table 1 - Proportion of votes for ‘parapoliticians’ according to year of control

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Controlled in 2002	198	0.726	0.134	0.534	0.606	0.854	1.000
Not controlled in 2002	886	0.18	0.15	0.002	0.05	0.29	0.53
Controlled in 2006	244	0.60	0.09	0.47	0.53	0.67	0.91
Not controlled in 2006	862	0.20	0.14	0.00	0.08	0.32	0.47

Descriptive statistics for group 1 (without paramilitary control) and group 2 (under paramilitary control) in the legislative elections of 2002 and 2006. Source: Own elaboration.

Table 2 - Proportion of votes for ‘parapoliticians’ according to type of municipality

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Controlled two periods - vote in 2002	139	0.77	0.13	0.55	0.66	0.88	1.00
Controlled two periods - vote in 2006	139	0.62	0.09	0.48	0.55	0.69	0.91
Controlled one period - vote in 2002	164	0.49	0.16	0.03	0.42	0.57	0.84
Controlled one period - vote in 2006	161	0.36	0.24	0.01	0.12	0.57	0.84
Never controlled - vote in 2002	803	0.19	0.13	0.00	0.08	0.30	0.47
Never controlled - vote in 2006	784	0.18	0.14	0.002	0.05	0.28	0.53
Country level vote in 2002	1,084	0.28	0.26	0.002	0.07	0.43	1.00
Country level vote in 2006	1,106	0.29	0.21	0.00	0.10	0.45	0.91

Descriptive statistics for group 1 (without paramilitary control), group 2 (under paramilitary control for at least one period) and group 3 (under paramilitary control during the two periods) in the legislative elections of 2002 and 2006. Source: Own elaboration.

4.2. Dependent variable – Public goods as state capacity

To test my hypotheses I use as main dependent variables the share of unsatisfied basic needs (UBN), and the housing deficit for every municipality in the years 1993, 2005 and 2018 (DANE 1993, 2005, 2018). I use this data because is the only measure of public goods in the country aggregated at the municipal level with complete national coverage. Also, I use composite indexes as my main dependent variables because this is the only data available. Though it would be a better practice to use disaggregated variables, there is simply no publicly available data in this regard and I was not able to get it from the National Administrative Department of Statistics of Colombia, even though communication with them was established.

The housing deficit is an index that has two main components: the quantitative deficit and the qualitative deficit. The quantitative deficit is a compound indicator, which contains information about: the amount of inappropriate type of houses, houses with bad quality of walls, houses in which resides more than one household (cohabitation) and urban houses where there are 5 or more people by bedroom. The qualitative deficit is a compound indicator

that takes into account: quality of the floor, rural and urban houses where three to four person sleep in the same bedroom, houses without a designated place for the kitchen and houses without one or more public services (water, sewer, electricity and garbage collection for the urban area). Those places that were already counted in the measure of quantitative deficit cannot be part of the qualitative deficit⁵. The household is the unit of interest, not the individual or the house.

Finally, I also use the measure of UBN, whose main unit is the individual⁶. This measure includes five indicators: inadequate houses, houses with critical overcrowding, houses with inadequate services, houses with high economic dependence, and houses with school age children that do not assist to school -- these last two are the main difference between this measure and the housing deficit. However, even though they are very similar, I use the two indexes as a sort of accuracy test; as I cannot look into their disaggregated components, if there is some difference between their results, it is possible that the unshared indicators bear responsibility.

These measures tell us about the capacity of the state to provide housing and public services. I argue that these are good indicators of public goods provision and of the infrastructural capacity of the state. Though a house does not meet the conditions to be qualified as a public good, the right to a decent housing is consecrated by the Colombian constitution:

All Colombians have the right to a decent housing. The state will establish the necessary conditions to do this right effective and will promote plans of social interest housing, adequate systems of financing on the long term and associative forms of execution of these housing programs (Constitución Política de Colombia 1991, Art. 51).

If the infrastructural capacity of the state is “the capacity of a central state, despotic or not, of penetrating its territory and logistically implementing decisions” (Mann 1993, 59), then

⁵ It is because of this that I use the housing deficit as a dependent variable and not each of its components disaggregated. If one place has a high quantitative deficit, then its qualitative deficit will be quite low, given the fact that all houses with quantitative deficit have a qualitative deficit but they are not counted twice. The Amazon region is very illustrative of this point.

⁶ The characteristics of the house are applied to each individual that inhabits it.

one could identify an increase in the quantity and quality of houses in Colombia as an increase in state capacity, cause this would mean that the state is fulfilling its functions in a more efficient way.

About the provision of public services (water, electricity, sewer, garbage collection), Besley and Persson (2009) use ‘public goods’ and ‘public services’ as interchangeable terms. Similarly, Acemoglu (2005) relates state capacity to the supply of ‘productive public goods’, a term that encapsulates public services. Also, in the clientelism literature public services are frequently treated as a reflection of the capacity of the state, a good example of this is Geddes (1994).

In this research I use the provision of public goods at the local level as an indicator of the capacity of the central state as a whole. Both components go hand in hand and, as Ziblatt (2008) suggests: “an exclusive focus on the national level that does not examine the local level, overlooks a major locus of political action where, especially in federal systems, public goods are often actually created” (275). Even if Colombia is not itself a country with a federal system it is established in its legal system that municipalities are the ones in charge of the proper provision of the essential public services (Congreso de Colombia, 1994). This means that the capacity of the Colombian central state of implementing public policies that help provide these goods is strongly related to the capacity of its local governments to fulfill their functions. Finally, it is important to clarify that it is possible that municipalities controlled by paramilitary groups would have received other type of public goods that are not present in the measures that I am using. Still, it is necessary to make a compromise in this regard, as it would be difficult to take into account all the possible forms of public goods that could be present in a municipality.

4.3. Control variables

As stated before, besides my main independent variables I also use some control variables as a mean of taking into account some of the variation in the economic development of Colombian municipalities related to other processes beyond ‘parapolitics’. Here I discuss briefly each one of them, and the expected direction of their effect.

The first one of them is population and number of households. Accounting for population is a very common practice in almost every regression model that compares processes between different states or its components at the regional or local level, as a mean of making their stats proportionate. In this case I expect the effect of population to be negative, as it is harder to provide public goods to a higher numbers of persons. The number of households, on the other hand, is a figure that refers, basically, to the number of families in a society. The effect of these two variables on the dependent variables is inversely proportional, as a higher number of households means that the population is divided in smaller family structures (therefore with less cohabitation and overcrowding), but higher populations will mean that the family structures will be bigger.

Next, I account for variation related to the lineal distance to Bogotá and to the departmental capital of a municipality. The reason for using both of these variables is fairly the same. Colombia is a centralized state, in which the national capital, Bogotá, concentrates most of the public powers and state capacity of the country, possesses better infrastructure and attracts more foreign investment, this means that any municipality that is closer to the center will benefit from its 'radius' of development. As Robinson (2016) puts it: "there exists a visible division between the center of the country (...) and the periphery (...) The periphery is geographically unique and has higher rates of poverty" (16). In the same fashion, those municipalities that are closer to their departmental capitals will be more developed than those places that are further away. Both of these variables, as well as population and number of households, are normalized using their natural logarithm.

Another important geographical variable to take into account for the Colombian case is the meters above sea level of a municipality. This is associated with different climatic characteristics that have an important influence in their economic activities (Rángel and Aguilar 1995), as well as in their colonization history. Higher altitudes in Latin America have been frequently associated with higher development; especially salient in this regard is the work of Acemoglu and Robinson (2001). In the same sense, how rural is a municipality can tell a lot about the economic activities of a given place. Taking this into account I use a 'rurality index', which is simply the rural population of the municipality divided between its total population. The more rural a town is, the more disperse its population will be, also, it will

be harder to bring public services and goods, and the slower will be the pace of economic development.

Though Colombia is a country with high internal variation between its municipalities in terms of economic and social development, culture and politics, this variation is significantly reduced between geographic regions. Is because of this that is necessary to take into account this variable, as the geographic region of a municipality can reflect common paths of development between other municipalities that are alike. Also, there exists certain spatial correlation between being controlled or not by paramilitary groups, as self-defenses were especially predominant in the Caribbean region, controlling this factor is useful to prevent confounding of these two factors, so the effects I capture can be truly related to paramilitary presence and not just to a regional effect.

Finally, I use the Armed Conflict Incidence Index. This is a measure calculated by the Colombian government for the years from 2002 to 2013. It takes into account measures collected by different Colombian institutions as the Police, the Armed Forces or the Defense Ministry, among others. These variables are: armed actions, homicides, kidnapping, anti-personnel mines, forced displacement and coca crops (Departamento Nacional de Planeación 2016).

5. Results

In this section I present the main results of the statistical models I have used to test my hypotheses. First, I use a difference in differences model of the form:

$$Y_{it} = \beta_0 + \beta_1 Period_i + \beta_2 'Para'1_i + \beta_3 'Para'2_i + \beta_4 (Period_i * 'Para'1_i) + \beta_5 (Period_i * 'Para'2_i) + \beta_6 \chi_i + \varepsilon$$

Where Y stands for the percentage proportion of deficit or UBN for a municipality i in the year t , which can be 2005 or 2018. I will use this model in two different ways. Firstly I test the period that goes from 1993 to 2005, secondly I test the period from 2005 to 2018. In the first period tested, I use the dummy variable for paramilitary political control, even though at this

time the municipalities were not under the political control of these armed groups⁷. The idea is to see if there was a pattern of state capacity in these municipalities before the paramilitaries took control, I expect to find no previous pattern of development from 1993 to 2005 in municipalities that will be controlled by paramilitaries later, as this will prove that their negative development in the period from 2005 to 2018 was caused by the ‘parapolitics’ experience.

Table 3 - Difference in difference model to test for pre-existing patterns in state capacity building from 1993 to 2005

	<i>Dependent variable:</i>	
	Housing Deficit (1)	UBN (2)
Period change (1993-2005)	-13.818*** (0.784)	-4.364*** (0.674)
‘Para’ one period	-0.003 (1.291)	0.039 (1.084)
‘Para’ two periods	-5.114*** (1.710)	1.972 (1.436)
Period change * ‘Para’ one period	-0.274 (1.758)	0.518 (1.479)
Period change * ‘Para’ two periods	4.425** (1.938)	1.036 (1.629)
Constant	66.660*** (0.628)	47.388*** (0.545)
Observations	2,122	2,105
R ²	0.603	0.619
Adjusted R ²	0.600	0.616
Residual Std. Error	14.212 (df = 2106)	11.934 (df = 2089)
F Statistic	213.538*** (df = 15; 2106)	225.849*** (df = 15; 2089)

Note: * p < 0.1 ** p < 0.05 *** p < 0.01
Differences in reduction of housing deficit, as well as unsatisfied basic needs, between municipalities that will be under paramilitary political control and the rest of the country in the period from 1993 to 2005. Source: Own elaboration.

In the results of the first test, shown in table 3, we observe that the dummy variable for municipalities under paramilitary control for one or two electoral periods is not statistically significant when interacted with the dummy variable of the period from 1993-2005 for the UBN, this means that, likely, there was not a previous pattern of development. For the

⁷ For the municipalities that experienced ‘parapolitics’ in 2002, the time for the control to have an effect is of only three years. In this sense, this model also proves that there was not any significant effect in this short period and that the path of controlled municipalities starts to diverge, apparently, after 2005.

housing deficit, the interaction with the dummy variable for municipalities controlled one electoral period is not statistically significant; nevertheless, there is a significant result for the municipalities under paramilitary control during two electoral periods. This means that they exhibited a different path of development even before paramilitaries' arrival, with a growth in deficit of 5.1% between 1993 and 2005. This is adverse to my analysis and I cannot reject that there was not a negative pattern of development. Nevertheless, the UBN index and the housing deficit of one period controlled municipalities, at least, confirm my expectations.

Now I proceed to use my model to test for H1 and H3. This means that I expect to find a lower rate of state capacity building in the period from 2005 to 2018 for all municipalities controlled by paramilitaries, regardless of time (H1). Also, I expect the effect to be stronger in those municipalities that were controlled by paramilitary groups during one period (H3). I present these results in table 4.

Table 4 - Difference in difference model to test for the effect of 'parapolitics' in state capacity building from 2005 to 2018

	<i>Dependent variable:</i>	
	Housing Deficit (1)	UBN (2)
Period change (2005-2018)	6.839 ^{***} (0.834)	-13.072 ^{***} (0.743)
'Para' one period	-0.517 (1.217)	1.145 (1.057)
'Para' two periods	-2.159 (1.556)	4.264 ^{***} (1.346)
Period change * 'Para' one period	1.295 (1.676)	-1.637 (1.452)
Period change * 'Para' two periods	2.328 (1.802)	-3.969 ^{**} (1.559)
Constant	50.353 ^{***} (0.631)	22.751 ^{***} (0.934)
Observations	2,202	2,185
R ²	0.625	0.673
Adjusted R ²	0.622	0.670
Residual Std. Error	13.791 (df = 2184)	11.921 (df = 2167)
F Statistic	214.355 ^{***} (df = 17; 2184)	261.884 ^{***} (df = 17; 2167)

Note: * p < 0.1 ** p < 0.05 *** p < 0.01

Differences in reduction of housing deficit, as well as unsatisfied basic needs, between municipalities that were under paramilitary political control and the rest of the country in the period from 2005 to 2018. Only the main variables of interest are reported. Source: Own elaboration.

For the housing deficit, the results are not statistically significant in both cases. For the UBN the effect is statistically significant in municipalities that were controlled during two periods, but quite strikingly, this last result points to a favorable effect of paramilitary control on municipality's state capacity development. The municipalities controlled by paramilitaries for two electoral periods experienced an added 3.96% decrease in their UBN index. The correct form of reading these results is subtracting the interaction coefficient ('para' control * period change) from the coefficient for the period change, which represents the effect for the base intercept (municipalities without control). If we do this operation, the final result is that municipalities under paramilitary control for two periods experienced a decrease in UBN of around 17.03% (more than the average 13.07% for the rest of the country).

These results indicate that paramilitary controlled municipalities did not experience any difference in their local capacity development compared to those that were not controlled, or even that they fared better, which would go against my hypotheses. However, there is another variable that has to be added to the mix: the starting levels of local capacity in the series.

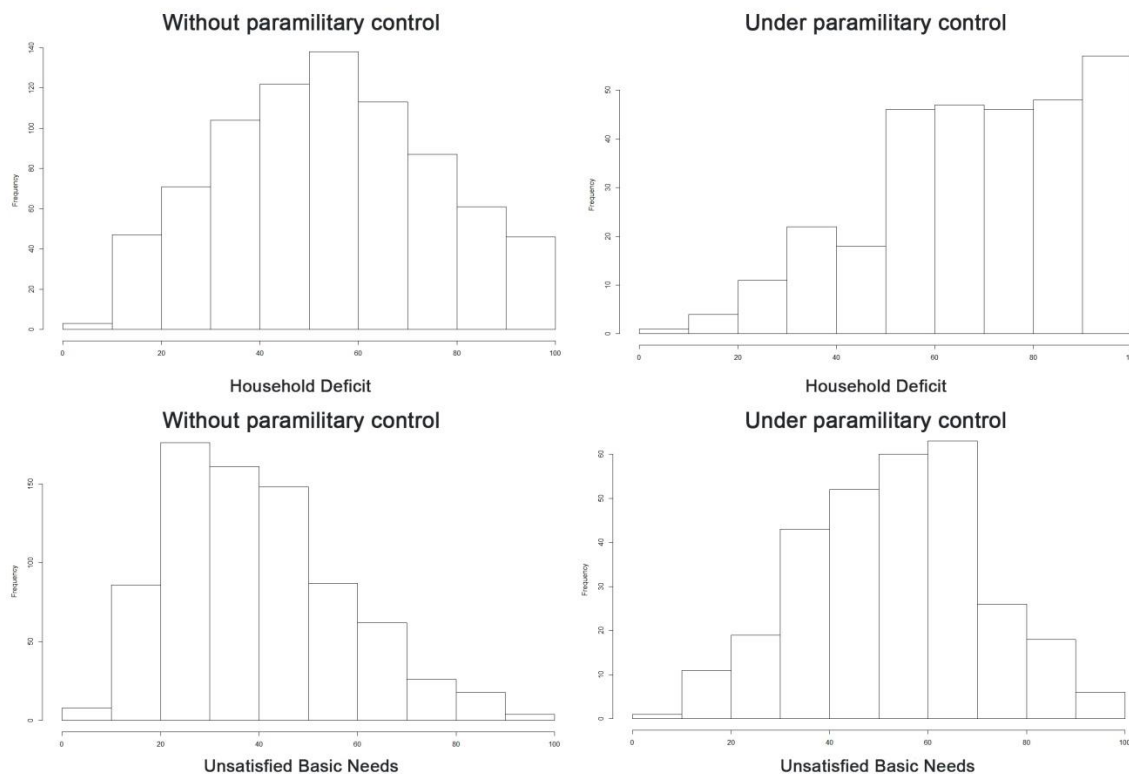
The contradictory positive effect of 'parapolitics' must be qualified with the fact that municipalities that were under paramilitary control had especially low values of state capacity even before the arrival of the armed groups. This can be corroborated by looking at figure 2, where I present histograms for the housing deficit and unsatisfied basic needs indexes in 2005 for places under paramilitary control (one and two periods combined) and those without control. It is possible that what I am observing as an effect of paramilitary control is the behavior of municipalities with low levels of state capacity in general.

Both histograms show different skewedness, meaning that paramilitaries were present more frequently in poorer municipalities. This is troublesome, because paramilitary control could obviously be endogenous to poverty and low state capacity more generally⁸. Secondly, my second hypothesis expects places controlled by paramilitary groups, with lower than average state capacity levels before their arrival, to perform worst in the future. Even if at first

⁸ Basically, what I am saying here is that it is easier to reduce higher rates of poverty than lower rates. Holland and Schneider (2017) discuss a somewhat similar idea about the easier stages of poverty reduction and the point where continued developing becomes less attractive for interest groups in a country.

glance it may seem that paramilitary control did not leave enduring effects, it is necessary to take this variable into account.

Figure 2 - Histograms of qualitative deficit and unsatisfied basic needs in 2005.



Comparison of the histograms of frequencies for the housing deficit and unsatisfied basic needs on 2005 in municipalities that were not controlled by paramilitary groups, against those that were controlled one period or two periods (combined). Source: Own elaboration.

To confront this issue, I will use the same models employed before, but now I use my dependent variable as an independent variable, and my new dependent variable will be the change between periods, this means I add the starting percentages of qualitative deficit and unsatisfied basic needs as explanatory variables, and I interact this term with the paramilitary classification variable. With this I test for H2⁹. As I have only one period now, the model I use is not a difference in differences, but a linear regression of the form¹⁰:

⁹ The effect of political control exerted by non-state armed groups will be stronger on municipalities that had less state capacity before the arrival of the irregular organizations.

¹⁰ Remember that public goods provision is a proxy for state capacity in this research, so I name it like that in the equation.

$$Y_i = \beta_0 + \beta_1'Para'1Periods_i + \beta_2'Para'2Periods_i + \beta_3StCapac2005_i + \beta_4(P1P_i * SC2005_i) + \beta_5(P2P_i * SC2005_i) + \beta_4\chi_i + \varepsilon$$

Where Y is equal to the change from 1993 to 2005 in the 'safe check' test, and to the change from 2005 to 2018 in the main test. Starting capacity would be the levels in 1993 in the first case.

Table 5 - Model with lagged variables to test for pre-existing patterns in state capacity building from 1993 to 2005

	<i>Dependent variable:</i>	
	Δ Housing Deficit 93-05 (1)	Δ UBN 93-05 (2)
'Para' one period	-1.342 (0.964)	-0.903 (0.796)
'Para' two periods	-4.140** (1.661)	-1.926 (1.402)
Household deficit 1993	-3.772*** (0.520)	
UBN 1993		-4.552*** (0.467)
'Para' one period * Household Deficit 1993	0.340 (0.985)	
'Para' two periods * Household Deficit 1993	-0.562 (1.532)	
'Para' one period * UBN 1993		1.283 (0.861)
'Para' two periods * UBN 1993		-1.215 (1.170)
Constant	-16.544*** (0.537)	-10.200*** (0.433)
Observations	1,026	1,013
R ²	0.200	0.240
Adjusted R ²	0.187	0.227
Residual Std. Error	10.237 (df = 1008)	8.447 (df = 995)
F Statistic	14.843*** (df = 17; 1008)	18.446*** (df = 17; 995)

Note: * p < 0.1 ** p < 0.05 *** p < 0.01
Coefficient reports for the differences in reduction of housing deficit and unsatisfied basic needs for the period from 1993 to 2005. In appendix full results are reported. Source: Own elaboration.

First, I apply this model to my 'safe check' between the period from 1993 to 2005, to prove that there was not any differentiated pattern between municipalities before the political

control of paramilitary groups. For this, we expect to see no significant effect on the paramilitary control term or in its interaction with the starting levels of state capacity in 1993. In table 5 we can see that these conditions are met for all terms except for the housing deficit change in municipalities under a two-period paramilitary control. This implies that there existed a pattern in state capacity building before the arrival of paramilitaries; however, these places were doing better than the rest of the country, with an added decrease of 4.14%. So, if in the future I find that this pattern reverses, my hypotheses about paramilitary political control would fare better.

Table 6 - Model with lagged variables to test for the effect of ‘parapolitics’ in state capacity building from 2005 to 2018

	<i>Dependent variable:</i>	
	Δ Housing Deficit 05-18 (1)	Δ UBN 05-18 (2)
‘Para’ one period	1.621* (0.832)	1.416* (0.750)
‘Para’ two periods	1.821 (1.348)	-0.791 (1.264)
Household deficit 2005	-9.892*** (0.461)	
UBN 2005		-8.240*** (0.434)
‘Para’ one period * Household deficit 2005	1.352 (0.849)	
‘Para’ two periods * Household deficit 2005	0.670 (1.082)	
‘Para’ one period * UBN 2005		3.102*** (0.745)
‘Para’ two periods * UBN 2005		4.280*** (1.013)
Constant	0.518 (0.482)	-21.770*** (0.426)
Observations	1,092	1,075
R ²	0.369	0.451
Adjusted R ²	0.358	0.442
Residual Std. Error	9.142 (df = 1073)	8.187 (df = 1056)
F Statistic	34.794*** (df = 18; 1073)	48.177*** (df = 18; 1056)

Note: * p < 0.1 ** p < 0.05 *** p < 0.01

Coefficient reports for the differences in reduction of housing deficit and unsatisfied basic needs for the period from 2005 to 2018. In appendix full results are reported. Source: Own elaboration.

Finally, it is interesting to note that, as I suggested before, the higher the levels of qualitative deficit or unsatisfied basic needs at the beginning of the series, the higher the rate of reduction on these variables from 1993 to 2005. With this in mind, I proceed to test for the period from 2005 to 2018. Results are presented in table 6.

Now the results are quite different from those of the first model that did not take into consideration the initial levels of local capacity of the municipalities. When this variable is introduced, we observe no positive effect of paramilitary political control in any of the measures of public goods provision used in this work, so I can rule out the possibility that this two-period paramilitary control had a positive effect on state capacity building. As expected, the levels of state capacity in the year 2005 explain a great deal of the decreasing trend of the dependent variables.

In the model that uses the rate of change of the housing deficit as a dependent variable, the effect of being politically controlled by paramilitaries is negative and statistically significant only in municipalities that were controlled during one electoral period and the interaction with the starting levels of state capacity makes no difference. In the model with control variables that uses the rate of change of unsatisfied basic needs as a dependent variable, the effect of being politically controlled by paramilitaries is statistically significant for municipalities that were controlled for one electoral period and for the interaction terms between municipalities that were controlled for one or two electoral periods and the percentage of UBN in 2005. The correct form of reading the result of the interaction term is to subtract the coefficient of the interaction from the coefficient of the effect of the starting levels of UBN in 2005.

These results go in the direction of my hypotheses. First, this partially corroborates H1, that political control by militia groups, characterized by political alliances with local elites, is detrimental for future development, even after the disappearance of the former groups. Less controversial is the fact that political control by militia groups seems always especially detrimental when the time horizons of the non-state armed group are short (H2); this is presumably captured by the fact that the negative effect is present in municipalities controlled for just one period when using both measures of public goods provision. Finally, only the results using UBN seem to corroborate the idea that the places that had worst levels of state

capacity before the arrival of the militia groups will fare worst in the long run (H3). Another interesting result is that control for two periods makes no significant difference *per se* when using either the housing deficit or UBN as dependent variables. Maybe this could imply that in these municipalities being controlled by paramilitaries that expect to remain there for a long time is similar to being controlled directly by the state (perhaps a corrupt and inefficient government anyway).

One more final test can be done. If I follow the implications of the results of the previous model, it would be appropriate to ask if the level of control for 2002 and 2006 has different effects over municipalities on the long run. In 2002, paramilitary groups in Colombia were in the peak of their power, it is logical to suppose that they had long-time horizons for the municipalities they controlled around that time. In 2006, conversely, paramilitary groups were in the verge of a demobilization process, so their influence at this time would have been very pervasive. As Arjona (2017) points out, armed groups can be more destructive during this kind of negotiations, to signal strength to the central government, and extract better deals.

With this in mind, I use exactly the same model presented before, but this time I use as my main independent variable the percentage of votes obtained by ‘para-politicians’ in each municipality in the legislative elections for 2002 and 2006 instead of my categorical classification of one period and two periods. Results are shown in Table 7.

As the result in table 7 shows, for the housing deficit, a high percentage of votes in 2002 has negative consequences for municipalities. Paradoxically, when using UBN the percentage of votes in 2006 has negative consequences for development. This is a case where clearly having the disaggregated components of both indexes would be useful to understand where the difference lies, though the results could also be driven by the differences in the units of measure of both indexes (households and individuals respectively).

In any case, the UBN measure seems to show more consistent results and, in this case, higher votes in 2006 seem to be more detrimental. This result supports H3, that short time horizons will have worst consequences in future development. Also, the fact that the interaction terms are significant (and stronger) endorse H2, that the negative effects of

political control by militia groups will be stronger in municipalities that already had below average levels of state capacity.

Table 7 - Model to test the different effects of ‘parapolitics’ by legislative election (2002 or 2006)

	<i>Dependent variable:</i>	
	Δ Housing Deficit 05-18	Δ UBN 05-18
	(1)	(2)
Percentage of votes 2002	3.660** (1.752)	0.189 (1.487)
Percentage of votes 2006	1.064 (1.882)	4.366*** (1.590)
Household deficit 2005	-10.007*** (0.646)	
UBN 2005		-11.066*** (0.549)
Votes 2002 * Household deficit 2005	1.479 (1.642)	
Votes 2006 * Household deficit 2005	0.215 (2.010)	
Votes 2002 * UBN 2005		2.942** (1.371)
Votes 2006 * UBN 2005		9.157*** (1.673)
Constant	-0.321 (0.708)	-23.024*** (0.596)
Observations	1,069	1,054
R ²	0.362	0.502
Adjusted R ²	0.351	0.493
Residual Std. Error	9.157 (df = 1050)	7.681 (df = 1035)
F Statistic	33.092*** (df = 18; 1050)	57.882*** (df = 18; 1035)

Note: * p < 0.1 ** p < 0.05 *** p < 0.01

Coefficient reports for the differences in reduction of housing deficit and unsatisfied basic needs for the period from 2005 to 2018, using percentage of votes for ‘parapoliticians’ in 2002 and 2006 as the main independent variable. In appendix full tables are reported. Source: Own elaboration.

What is important to take home from this last model is that peace negotiations or demobilization processes amidst the end of conflict can create incentives for armed groups to exert a highly inefficient and pervasive control over municipalities, maybe to extract the higher amount of resources possible of these places in case weapons are deposited, maybe to signal strength to the government to close better deals, maybe both reasons. When horizons are shortened, the behavior of armed groups can become more damaging.

6. Conclusion

In this thesis I have presented some arguments to expect enduring negative effects of control by militia groups even after they disappear. Inspired by theories that focus on the different behaviors an armed group can exhibit when controlling a territory, and the factors that determine these types of control, I present some empirical evidence about the possible consequences these differences in control can have on future development.

It seems that the type of control militia groups exert when they have longer time horizons is less detrimental than the one they exert when their time horizons are shorter. One important aspect of this conclusion is that the differences might not be present only in the extreme opposite cases, very short horizons or very long. I have argued that it is possible that even in circumstances of uncertainty (short horizons) some institutions may arise whose effects could be felt even after the disappearance of armed groups. For the Colombian case I have examined in this research, pro-state militia groups found useful to make alliances with politicians even in places where uncertainty might have been high, to put in place mechanisms of governance with them.

Also, I have found some evidence that seems to indicate that municipalities with poor state capacity are not just more in risk of being controlled by militia groups, but, also, they seem to be more affected by the legacies of these irregular organizations.

Another interesting finding is that peace negotiations, or demobilization processes, seem to shorten the time horizons of non-state armed groups, making their behavior more pervasive. If this possibility is to be taken seriously, it would point at the importance of preventing the expansion of these groups especially during these negotiations, given the fact that the type of control they can exert in this moment might leave lasting negative effects that could hinder the peace efforts.

Due to the limitations of the data available, the results of this research are far from conclusive, but nonetheless they show some suggestive evidence about the effects of control by militia groups when they collude with political elites. This evidence hints at the importance of institutions in shaping future development.

For countries that are trying to recover from domestic conflicts and want to prevent future war recurrence, taking into account the history of municipalities during the conflict to figure out the type of control they experimented could prove very helpful in designing the best public policies to help foster development and public capabilities.

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8. Appendix.

Here I present the final tables of the final model used in this work with full reports for each variable tested and not just for the main independent variables. In table A1 I present the full reports for the final model applied to the period from 1993 to 2005:

Table A1. Model to test for pre-existing patterns in state capacity building from 1993 to 2005, full reports.

	<i>Dependent variable:</i>	
	Δ Housing Deficit 1993-2005	Δ UBN 1993-2005
	(1)	(2)
'Para' one period	-1.342 (0.964)	-0.903 (0.796)
'Para' two periods	-4.140** (1.661)	-1.926 (1.402)
Housing deficit 1993	-3.772*** (0.520)	
UBN 1993		-4.552*** (0.467)
Population (log)	7.873*** (1.399)	-3.155** (1.235)
Households (log)	-6.300*** (1.250)	3.896*** (1.110)
Meters above sea level	-1.595*** (0.435)	-0.526 (0.371)
Distance to Bogotá (log)	1.215*** (0.420)	1.793*** (0.356)
Distance to departmental capital (log)	0.550 (0.383)	0.101 (0.320)
Rurality index	3.563*** (0.523)	2.595*** (0.436)
Caribbean region	8.024*** (1.706)	6.602*** (1.343)
Pacific region	-0.606 (1.049)	1.040 (0.865)
Orinoquía region	-7.128*** (1.578)	-1.348 (1.335)
Amazonian region	-2.776 (2.181)	-12.189*** (1.851)
Population growth 1993-2005 (log)	0.351 (0.733)	1.047* (0.627)
Households growth 1993-2005 (log)	-0.243	-0.902

	(0.993)	(0.850)
‘Para’ one period * Housing deficit 1993	0.340	
	(0.985)	
‘Para’ two periods * Housing deficit 1993	-0.562	
	(1.532)	
‘Para’ one period * UBN 1993		1.283
		(0.861)
‘Para’ two periods * UBN 1993		-1.215
		(1.170)
Constant	-16.544 ^{***}	-10.200 ^{***}
	(0.537)	(0.433)
Observations	1,026	1,013
R ²	0.200	0.240
Adjusted R ²	0.187	0.227
Residual Std. Error	10.237	8.447
	(df = 1008)	(df = 995)
F Statistic	14.843 ^{***}	18.446 ^{***}
	(df = 17; 1008)	(df = 17; 995)

Note: * p < 0.1 ** p < 0.05 *** p < 0.01

Coefficient reports for the differences in reduction of housing deficit and unsatisfied basic needs for the period from 1993 to 2005. Full results. Source: Own elaboration.

Is interesting to note the highly positive coefficient of the Caribbean region. This means a considerably slower pace of reduction of public needs or, what is the same, for development of state capacity. This region would later be one of the central axis of the ‘parapolitics’ phenomenon in Colombia. In table A2 I present the results for the final model applied to the period from 2005 to 2018, these are the main results of this study:

Table A2. Model to test for the effect of ‘parapolitics’ in state capacity building from 2005 to 2018.

	<i>Dependent variable:</i>	
	Δ Housing deficit 2005-2018	Δ UBN 2005-2018
	(1)	(2)
‘Para’ one period	1.621 [*]	1.416 [*]
	(0.832)	(0.750)
‘Para’ two periods	1.821	-0.791
	(1.348)	(1.264)
Housing deficit 2005	-9.892 ^{***}	
	(0.461)	
UBN 2005		-8.240 ^{***}
		(0.434)
Population (log)	8.564 ^{***}	15.716 ^{***}
	(1.910)	(2.260)

Household (log)	-8.070 ^{***} (1.873)	-14.476 ^{***} (2.228)
Meters above sea level	-3.238 ^{***} (0.384)	-2.598 ^{***} (0.349)
Distance to Bogotá (log)	1.776 ^{***} (0.375)	0.443 (0.349)
Distance to departmental capital (log)	0.358 (0.325)	0.608 ^{**} (0.294)
Rurality index	5.630 ^{***} (0.417)	-0.687 [*] (0.377)
Caribbean region	5.431 ^{***} (1.415)	-4.867 ^{***} (1.227)
Pacific region	3.208 ^{***} (0.895)	-0.341 (0.806)
Orinoquía region	-2.890 ^{**} (1.442)	-0.435 (1.321)
Amazonian region	1.430 (1.726)	0.675 (1.620)
Conflict Incidence Index	1.170 ^{***} (0.326)	0.893 ^{***} (0.290)
Population growth 2005-2018 (log)	0.219 (0.379)	1.114 ^{***} (0.342)
Household growth 2005-2018 (log)	-1.082 [*] (0.561)	-0.661 (0.504)
'Para' one period * Housing deficit 2005	1.352 (0.849)	
'Para' two periods * Housing deficit 2005	0.670 (1.082)	
'Para' one period * UBN 2005		3.102 ^{***} (0.745)
'Para' two periods * UBN 2005		4.280 ^{***} (1.013)
Constant	0.518 (0.482)	-21.770 ^{***} (0.426)
Observations	1,092	1,075
R ²	0.369	0.451
Adjusted R ²	0.358	0.442
Residual Std. Error	9.142 (df = 1073)	8.187 (df = 1056)
F Statistic	34.794 ^{***} (df = 18; 1073)	48.177 ^{***} (df = 18; 1056)

Note:

* p < 0.1 ** p < 0.05 *** p < 0.01

Coefficient reports for the differences in reduction of housing deficit and unsatisfied basic needs for the period from 2005 to 2018. Full results. Source: Own elaboration.

One important implication of these results is derived of the different effects that violence (conflict incidence index) and 'parapolitics' have. Conflict incidence index is a composite

number constructed by the Colombian government, in this study I use the average level of violence experimented by a municipality from 2002 to 2010 (the index goes up to 2013).

Though both terms slow the reduction of public needs and, therefore, the growth of state capacity, at the same time both are statistically significant when using UBN. This means that it is possible to find in the period analyzed municipalities with low levels of ‘parapolitics’ incidence and high levels of violence, or vice versa. Finally, in table A3 I present the results of the test using the percentage of votes for ‘parapoliticians’ in 2002 and 2006 as continuous variable:

Table A3. Model to test the different effects of ‘parapolitics’ by legislative election (2002 or 2006) using percentage of votes for ‘parapoliticians’

	<i>Dependent variable:</i>	
	Δ Housing deficit 2005-2018 (1)	Δ UBN 2005-2018 (2)
Votes percentage 2002	3.660** (1.752)	0.189 (1.487)
Votes percentage 2006	1.064 (1.882)	4.366*** (1.590)
Housing deficit 2005	-10.007*** (0.646)	
UBN 2005		-11.066*** (0.549)
Population (log)	7.363*** (2.033)	14.421*** (2.183)
Households (log)	-7.029*** (1.993)	-12.870*** (2.147)
Meters above sea level	-3.182** (0.400)	-2.353*** (0.340)
Distance to Bogotá (log)	1.737*** (0.387)	0.839** (0.340)
Distance to departmental capital (log)	0.198 (0.331)	0.272 (0.281)
Caribbean region	4.806*** (1.388)	-6.927*** (1.123)
Pacific region	3.725*** (0.939)	0.557 (0.795)
Orinoquía region	-2.572* (1.480)	0.383 (1.267)
Amazonian region	0.620 (1.833)	-0.330 (1.609)

Conflict Incidence Index	1.265 ^{***} (0.331)	0.853 ^{***} (0.274)
Rurality index	5.669 ^{***} (0.418)	-0.595 [*] (0.355)
Population growth 2005-2018 (log)	0.144 (0.385)	0.961 ^{***} (0.325)
Households growth 2005-2018 (log)	-0.952 [*] (0.575)	-0.858 [*] (0.482)
Votes 2002 * Housing deficit 2005	1.479 (1.642)	
Votes 2006 * Housing deficit 2005	0.215 (2.010)	
Votes 2002 * UBN 2005		2.942 ^{**} (1.371)
Votes 2006 * UBN 2005		9.157 ^{***} (1.673)
Constant	-0.321 (0.708)	-23.024 ^{***} (0.596)
Observations	1,069	1,054
R ²	0.362	0.502
Adjusted R ²	0.351	0.493
Residual Std. Error	9.157 (df = 1050)	7.681 (df = 1035)
F Statistic	33.092 ^{***} (df = 18; 1050)	57.882 ^{***} (df = 18; 1035)

Note:

* p < 0.1 ** p < 0.05 *** p < 0.01

Coefficient reports for the differences in reduction of housing deficit and unsatisfied basic needs for the period from 2005 to 2018, using percentage of votes for ‘parapoliticians’ in 2002 and 2006 as the main independent variable. Source: Own elaboration.

As in table A2, in this case we also find that the conflict incidence index and the votes for ‘parapoliticians’ are both statistically significant. This gives more strength to the idea that violence and political alliances have different effects in future development. Also, as it was noted in the main text of this work, it is difficult to explain why for the housing deficit only the percentage of votes in 2002 is statistically significant, given the fact that votes for 2006 should be more related to municipalities controlled during just one period.

One of the main hypotheses of this study is that the time armed groups estimate they might rule a given municipality is related to the type of control they might exert, and this at the same time is related to the future development of these places. Though not used in the main part of this research, here I present a model for testing directly the differences in development

between municipalities controlled one period (short horizons) and those controlled two periods (long horizons). The form for this model is:

$$Y_i = \beta_0 + \beta_1'Para'2Period_i + \beta_2StateCapacity2005_i + \beta_3(P2P_i * SC2005_i) + \beta_4\chi_i + \varepsilon$$

Table A4. Model to test differences between municipalities controlled one period and those controlled two periods.

	<i>Dependent variable:</i>	
	Δ Housing deficit 2005-2018	Δ UBN 2005-2018
	(1)	(2)
'Para' two periods	-0.248 (1.445)	-0.875 (1.330)
Housing deficit 2005	-8.071*** (0.926)	
UBN 2005		-5.329*** (0.858)
Population (log)	1.092 (4.394)	0.656 (4.209)
Household (log)	1.602 (4.112)	2.414 (3.945)
Meters above sea level	-2.949*** (0.850)	-2.063** (0.801)
Distance to Bogotá (log)	3.295*** (0.969)	2.616*** (0.892)
Distance to departmental capital (log)	0.013 (0.610)	-0.581 (0.562)
Rurality index	4.346*** (0.691)	0.350 (0.664)
Caribbean region	4.802* (2.586)	-4.398* (2.365)
Pacific region	2.220 (2.506)	7.299*** (2.303)
Orinoquía region	4.543 (3.565)	3.244 (3.378)
Amazonian region	12.962 (9.684)	30.386*** (8.959)
Conflict Incidence Index	0.556 (0.589)	1.112** (0.520)
Population growth 2005-2018 (log)	-0.381 (1.086)	-0.295 (0.994)
Households growth 2005-2018 (log)	-3.277** (1.498)	-1.921 (1.355)
'Para' two periods * Housing deficit 2005	-1.233	

	(1.248)	
‘Para’ two periods * UBN 2005		1.532
		(1.200)
Constant	1.334	-21.944***
	(1.344)	(1.227)
Observations	300	299
R ²	0.322	0.291
Adjusted R ²	0.283	0.251
Residual Std. Error	9.209 (df = 283)	8.477 (df = 282)
F Statistic	8.394*** (df = 16; 283)	7.247*** (df = 16; 282)

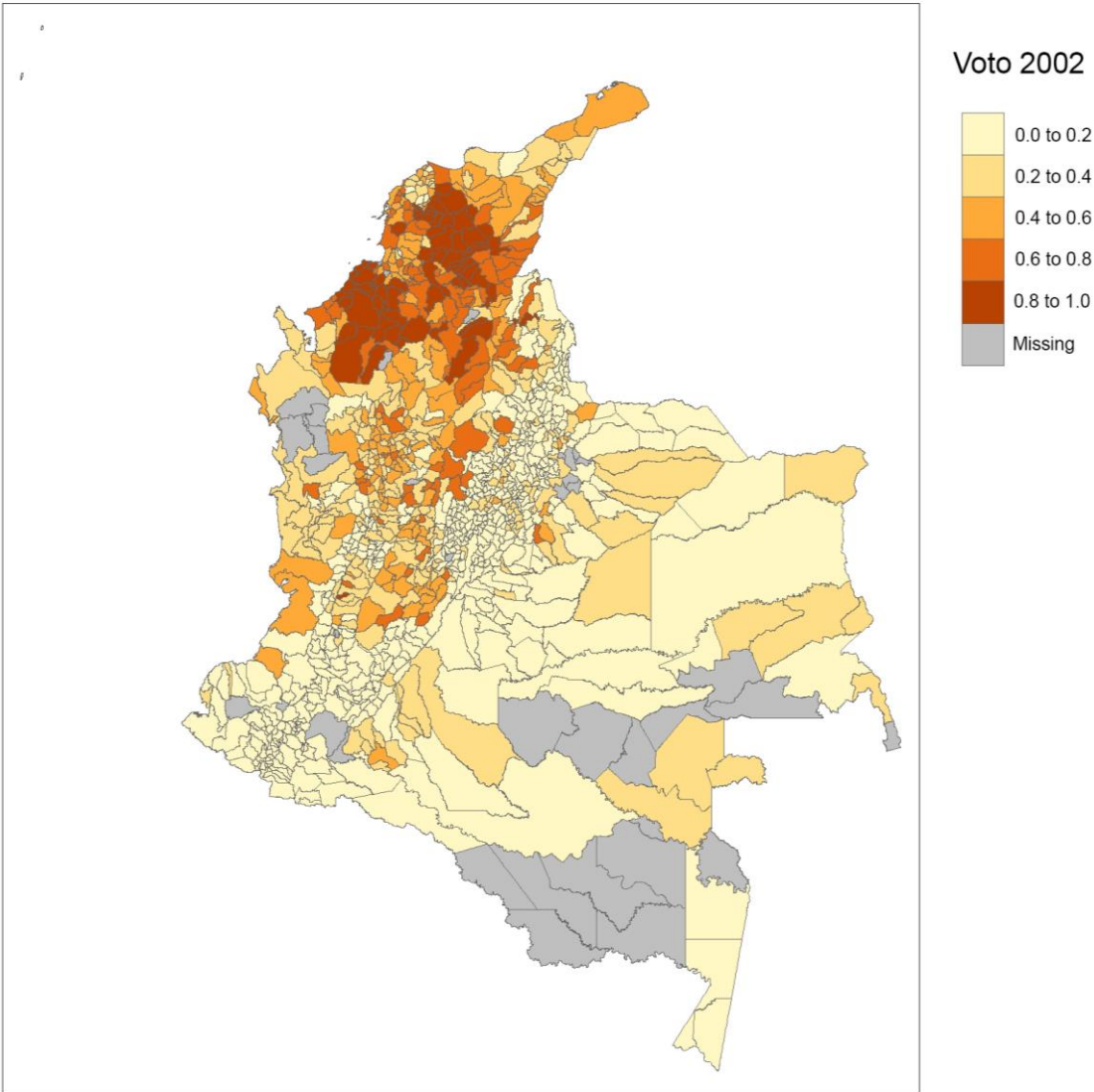
Note: * p < 0.1 ** p < 0.05 *** p < 0.01

Coefficient reports for the differences in reduction of qualitative deficit and unsatisfied basic needs for the period from 2005 to 2018, between municipalities controlled one period (base) and two periods. Source: Own elaboration.

None of my main independent variables is statistically significant either for the housing deficit or the unsatisfied basic needs. This only serves to corroborate my hypotheses that alliances between non-state armed groups and politicians are pervasive for future development, but it does not indicate that differences in temporal horizons are significant for the intensity of the effect.

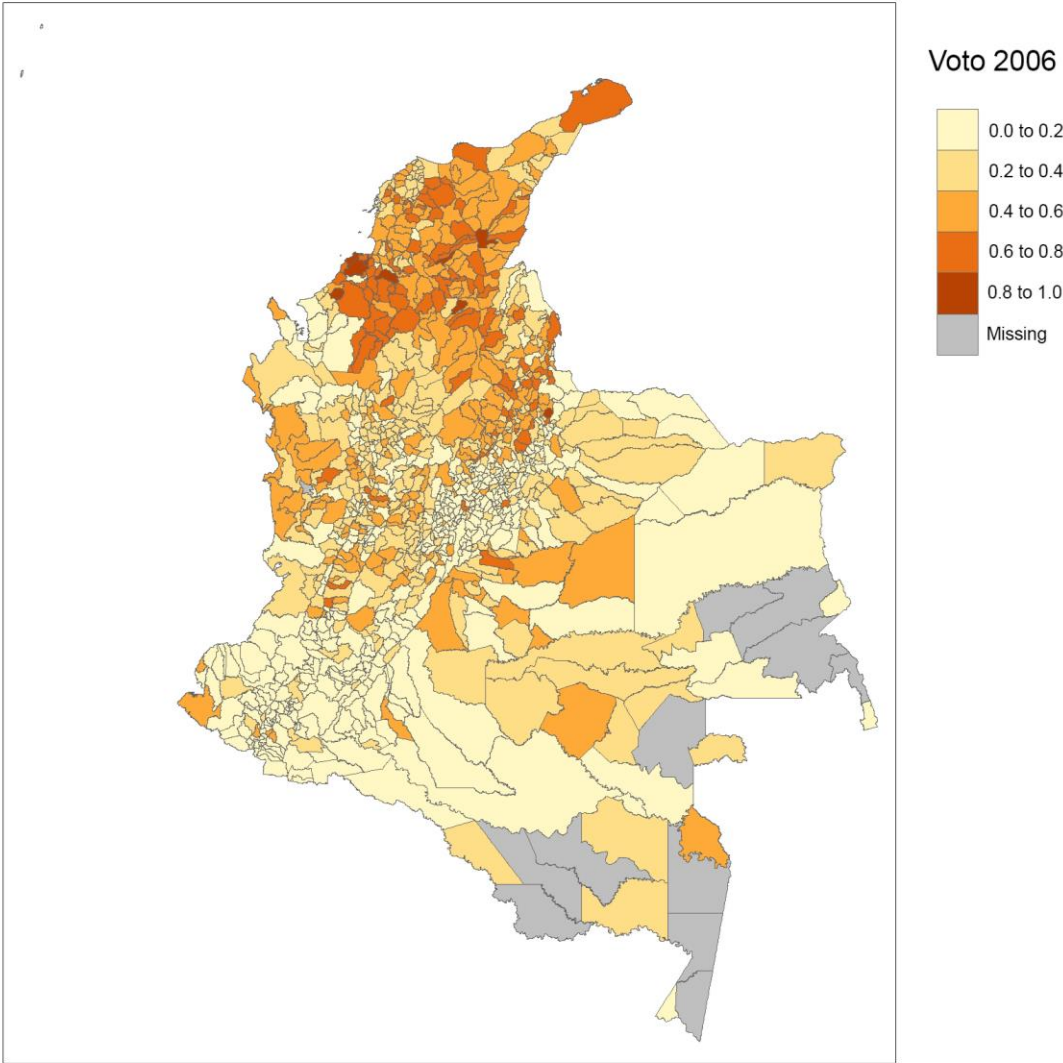
To help understand better the distribution of votes for ‘parapoliticians’ in Colombia I present in figures A1 and A2 the mapping of the percentage of votes in the legislative elections of 2002 and 2006.

Figure A1. Distribution of the percentage of votes for ‘parapoliticians’ in Colombia 2002



Percentages of votes related to ‘parapolitics’ in Colombian municipalities in the legislative elections of 2002.
Source: Own elaboration.

Figure A2. Distribution of the percentage of votes for ‘parapoliticians’ in Colombia 2006



Percentages of votes related to ‘parapolitics’ in Colombian municipalities in the legislative elections of 2006.
Source: Own elaboration.