



**This Land is My Land:
Understanding the Relationship between Armed Conflict
and Land in Urabá, Colombia**

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Abstract

This article explores the relationship between armed conflict and changes in land tenure in Urabá, a northwestern region in Colombia, considered to have been one of the epicenters of the armed conflict during the 1980s and 1990s. In this study, we use a multi-method approach. First, using qualitative tools, we build an ample understanding of the territorial disputes, actors and mechanisms used to transfer land in Urabá during the last 50 years. Qualitative findings suggest a clear spatial and temporal distribution of the different territorial disputes, where actors systematically applied different mechanisms of land transfer that in turn may have affected land tenure structure. Second, we use a unique dataset of rural plot-level ownership from 2011, based on cadastral information gathered by the regional government, to quantitatively test the relationship of the different territorial disputes described by our qualitative findings and land tenure structure in Urabá. The main empirical findings suggest that territories under dispute between illegal actors and those under predominant paramilitary control had both larger plots and less land transfers. In contrast, territories with low levels of conflict have a small landholder scheme. These results can offer important technical support for the ongoing process of transitional justice in Colombia, which is based primarily on land restitution.

Keywords: civil conflict, land tenure, impact of conflict, land inequality.

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Introduction

Most internal armed conflicts have taken place in agrarian developing economies, where land is one of the most valuable rural assets (Wily, 2009). In this context, even if these conflicts are borne out of grievances, rebel groups may eventually turn greedy, and the appropriation of assets and resources may become common practice (Collier & Hoeffler, 2004; Korf, 2005). In fact, land appropriation may become an important source of power and territorial domination for armed actors (Beyers, 2013; Leckie, 2009), increasing inequality and inefficiency in land market transactions (Wily, 2009). Surprisingly, whereas unequal land tenure schemes have received ample academic interest as initial motivations and intensifying factors in armed conflict (Esteban & Ray, 2011; Grossman, 1994; Luca & Sekeris, 2010), very little is known about the mechanisms and quantitative impact that armed conflict may have over land tenure structures.

In this paper, we explore the effect of armed conflict on land tenure structure, using the case of Urabá, Colombia, a northwestern region located at the border with Panama. This region was particularly affected by the intensification of the armed conflict during the 1990s.² As a result, thousands of hectares of land were either abandoned or illegally appropriated by different groups. Using different mechanisms, some actors sought to formalize their dominion over appropriated land and gain property rights over it by taking advantage of their influence over local institutions. Such behavior was presumably used as a mechanism to maintain economic and political power during times of potential changes in a post-conflict setting (Reyes, 2009).

We propose a multi-method empirical strategy to approach the relationship between land and conflict. Using qualitative methods, we expand an integral understanding of the different territorial disputes in Urabá, emphasizing their distribution in a very narrow space. By identifying geographical patterns and actors, we are able to uncover the different mechanisms by which land was presumably transferred. These qualitative findings allow us to test how territorial disputes are related to the current land tenure structure in Urabá. To do this, we use a unique plot census provided by

² In Colombia, by the end of 2008, around 2.8 million small-scale farmers had been forced to migrate. More than half of the displaced population, 55.4%, had access to land before this forced migration. In many cases, it will be impossible to recover these properties, since only 31.2% of these peasants have formal property titles, 12.8% still control their property in some manner, and 25.8% hope to recover their property when they return (Ibáñez & Muñoz-Mora, 2010).

the Cadastral Office of the Regional Government of Antioquia for 2011. This census gathers information on the ownership and physical characteristics of each rural plot in Urabá. So, we combine the geographical patterns of the territorial disputes described in the qualitative findings, with different land tenure outcome in order to establish the relationship between land and conflict. That is, we exploit the spatial variation of the different territorial disputes to establish the relationship between different types of armed conflict and land tenure scheme. Moreover, we take advantage of the low scale of our information to control for many unobservable and potential spatial correlations.

Our main hypothesis argues that changes in the objectives and incentives of each actor in each period of territorial control, led to the use of different land transfer mechanisms which systematically changed the land tenure structure in Urabá. Because of its value, actors in armed conflicts seek to acquire and transfer land through different mechanisms and the variety of mechanisms is broad. Actors in civil wars have been shown to use indirect and direct, selective and discriminate, violence against civilians (Balcells, 2010; 2011; Kalyvas, 2006). Truly, land transfer mechanisms are frequently supported by violence, but this repertoire is not limited to transferring land via displacement, massacres, and the like. Even illegal actors may find it more efficient to make use of land markets and of formal institutions. Criminal but nonviolent mechanisms –such as the forgery of ownership documentation– further broaden the spectrum of potential means.

Notwithstanding the fact that choice of land transfer mechanism rests partially on the nature of each actor, other factors such as geographical conditions may also influence this choice. Armed confrontation has the potential of altering an actor's preferred mechanism, as the value of land changes and the options to transfer it become limited. This situation leads to several expectations regarding the use of land transfer mechanisms and structure of land tenure in conflict areas. First, the choice of mechanism is conditional on each actor's objectives and incentives. In terms of objectives, while ideological and political goals necessitate control over both the physical territory and the population, economic and criminal ones exhibit a reduced need for social control (Kalyvas, 2006). Meanwhile, incentives are mainly shaped by the number and relative strength of other actors. Increased state capacity through military presence and well-defined property rights reduces the incentives for violent appropriation, and actors may seek more subtle ways to acquire and transfer land.

Our qualitative findings suggest that Urabá has experienced five different periods of violence between 1970 and 2011. The geographical conditions led to a defined territorial distribution where most of the confrontations took place, which allowed us to build a detailed map of the territorial configuration of Urabá. In those territories, illegal actors used five different mechanisms of land transfer: **(i)** invasions, **(ii)** repopulation, **(iii)** material dispossession, **(iv)** forced sale, and **(v)** forgery and identity theft. We argue then that the presence of territorial disputes may have had an effect on land tenure structure, through these mechanisms. Our econometric results confirm the existence of such a relationship. The territories that have been under dispute by different actors give way to higher levels of land inequality, fewer plots per owner, and a higher rate of formality in property rights. In contrast, areas located historically in guerrilla-controlled territories show less land inequality, more plots per owner, and increased informality in property rights.

This study contributes to the deeper theoretical understanding of the relationship between land and armed conflict within the disciplines of economics and political science. We also contribute to the empirical and simultaneous usage of qualitative and quantitative strategies within the social sciences. Lastly, these results can provide important technical support for the ongoing process of transitional justice based on land restitution in Colombia, especially since the enactment of the Law of Victims and Land Restitution in 2011.

The structure of the paper is as follows. Section two discusses the history of the different territorial disputes that have plagued Urabá, combining results from our qualitative fieldwork and secondary sources. Section three introduces the qualitative and quantitative empirical strategies used. The results are discussed in section four and five respectively, while section six concludes.

Territorial Dispute in Urabá, Colombia

In this section, we use a *temporal breaking strategy* to reconstruct the recent history of armed conflict and territorial dispute in Urabá. We have identified five distinct periods based on the changing presence and strength of actors in the region, as well as the interests and incentives that motivated them in each period (Langley, 1999). Here, we focus on territorial disputes rather than the armed conflict itself. Two elements influenced this decision: *(i)* armed conflict and violence have been closely related to

territorial control; and, (ii) low levels of armed conflict and violence are not equated with the absence of social conflict, territorial control, and changes in land structure.

Before 1950, Urabá was known as the agricultural frontier (see Figure 1). The region's dense tropical forest and flooded soil needed significant investment to become economically productive and these characteristics kept it isolated from the socio-political dynamic of other regions in the country (Parsons, 1967)³. However, as the Colombian economy grew, the climate and location of Urabá made it both a prime area for agricultural and agro-industrial development, as well as for the proliferation of the criminal economy. Thus, it is unsurprising that the Colombian state, entrepreneurs, armed groups, and criminal organizations converged here. As a local community leader put it: 'Urabá is a laboratory for Colombian reality: everything that happens in the rest of the country happens here first'.

Figure 1 about here

Initial Stages (1970-1991)

The first armed group in Urabá was a small left-wing guerrilla called the Popular Liberation Army –EPL, Spanish acronym–. Thereafter in 1975, the Revolutionary Armed Forces of Colombia –FARC, Spanish acronym – appeared in the region. Given the availability of land, both groups promoted massive land invasions in an effort to expand their social, and territorial control, as well as win the 'hearts and minds' of many of the region's inhabitants. This process started in the mid-1970s, extending into the late 1980s; both groups used their growing popularity to expand their control during this period.⁴

Demobilization and Change (1991-1994)

By the late 1980s, paramilitarism was making headway in the region as a form of 'self-protection' from guerrilla groups, as the state was not capable of providing security or bringing an end to the conflict.⁵ At the same time, the new political context in

³ For a detailed history of Urabá before 1950, see Parsons (1967).

⁴ The EPL maintained control in northern Urabá, while FARC controlled the south and the region's periphery.

⁵ In 1990, 45 small-scale farmers and sympathizers of the EPL were killed by paramilitaries in what was known as the Puerto Bello Massacre. This is one of many examples of paramilitary 'self-protection'.

Colombia provided EPL leaders with incentives to demobilize and create a political party. The party enjoyed moderate success in local Urabá elections following its creation, but party members and ex-combatants of the EPL were still targeted by the FARC (Steele, 2011). Meanwhile, the Peasant Self-Defense Forces of Córdoba and Urabá –ACCU– were created in 1989 as both a counterinsurgent cell against guerrilla groups and a security apparatus for drug lords. Simultaneously, the creation of government-sponsored citizen security and policing groups known as Vigilance and Private Security Cooperatives (CONVIVIR), who were allied with paramilitaries, brought an additional actor to the scene (Kalyvas & Arjona, 2005). Within a few years, the ACCU controlled the territories formerly controlled by the EPL. Moreover, the dynamics of land appropriation and transfer had been changing due to an increase in drug-trafficking and the need for private security throughout Urabá, as well as the growth in agro-industrial business.

Expansion of Paramilitarism (1994-2001)

After 1994, the conflict between the ACCU and the FARC was characterized by the use of several strategies: direct military confrontation; selective and indiscriminate violence against those suspected of aiding the enemy; displacement and repopulation of vacated areas; and alliances with other actors, such as the state and industrialists. In 1997, the ACCU allied with several paramilitary groups from different regions and united with them into one large umbrella organization: the United Self-Defense Forces of Colombia (AUC). This provided them with the strength necessary to push the FARC further into Urabá's periphery, while they controlled the center along with the region's economic production centers. The FARC fought back and the violent actions of both sides resulted in a major humanitarian crisis, with thousands dead and displaced from their land.

Land structure changed drastically in this setting. Small-scale farmers living in strategic rural areas were violently removed or forcibly bought off, often being threatened by both sides. Urban populations were not better off: for example, civilians in the municipality of Apartadó were displaced on a massive scale, mostly due to their political preferences (Steele, 2011). Entrepreneurs and small-scale businessmen who owned ranches and plantations in Urabá were forced to close down or sell. Alternatively, they paid the FARC, the AUC or both, for protection. Speculators took advantage of the situation and bought cheap land with the expectation of selling after-

wards, while others expanded their own land-holdings. Drug lords extended their reach, often using the newly vacated land for their operations. Finally, paramilitaries undertook a massive process of land-grabbing (Grajales, 2011; 2013). During this period, the transfer of land for criminal reasons and private economic gain was the principle motivation behind territorial disputes and armed conflict.

Hegemony and Demobilization (2001-2006)

By 2001, the AUC had obtained control over Urabá: paramilitary hegemony extended throughout the region as the FARC retired further into the periphery. Members of the AUC imparted justice, solved citizens' disputes, and provided security, creating an alternate social order. But just as their hegemonic influence had spread throughout the territory, in 2002, AUC leaders entered into negotiations with the government, leading to their demobilization and reintegration into society. By 2006, the last of the nation-wide paramilitary structures had disarmed and demobilized. Soldiers of the AUC were granted amnesty, while leaders and those in commanding positions were offered reduced incarceration sentences. Out of the almost 32,000 members of the AUC, 32% were based in Antioquia (Valencia Agudelo, 2007).

Nevertheless, the demobilization of the AUC did not mean a stop to the violence (between 2002 and 2006, the AUC are estimated to have killed 600 people in the region [Tenthoff, 2008]), nor did it imply the regularization, legalization, and formalization of land transfer. While they still could, paramilitaries took advantage of their increased control to dispossess, annex, resettle, buy, merge, and exploit land with relative ease. They used this land to develop agro-industrial projects and for cocaine production and trafficking. Prior to demobilization, AUC leaders started buying land and investing in agro-industrial enterprises as a way of keeping their assets safe from the state. They vied to make this process appear legal by buying off local state officials, forging documents, and formalizing their acquisitions. This led to the illegal penetration of otherwise legal activities, especially palm oil production.

Criminality and Land Restitution (2006-2011)

The demobilization of the AUC paramilitary apparatus left a void: security services were still required to ensure the continued production and transport of illicit drugs. These new illegal structures, collectively known as criminal bands (BACRIM, according to the Spanish acronym), partnered with the FARC in the drug trade, provid-

ing safe passage for shipments. In addition to drug-related activities, other forms of criminality peaked in this period. Paramilitary control had provided security and ‘pacified’ the region, but with their demobilization, and despite increased state presence, BACRIM continued to expand.⁶ In 2011, Congress approved Law 1448, known as the Law of Victims and Land Restitution, requiring the state to compensate victims of the conflict through policies like land restitution, though the complicated mixture of land transfer mechanisms used in Urabá has made this a difficult policy to implement. Despite the demobilization of one of the main armed actors and increased government efforts to protect and reconstitute property rights, vested interests in the continued control of the land are still significant in the region.

Empirical Strategy

We employ an ‘exploratory sequential’ multi-method design (Creswell & Clark, 2011), which uses qualitative findings as the main input for the quantitative approach.⁷ By combining both approaches, we bring together the differing strengths of qualitative methods (e.g. in-depth analysis of cases, and causal mechanism identification), with those of quantitative methods (e.g. large sample sizes, statistical inference, and identification of general trends).

Qualitative Approach: Understanding Territorial Disputes and land in Urabá

In order to characterize the mechanisms of land transfer within the geography of Urabá, we conducted extensive fieldwork between March and August of 2011. In order to build a purposeful and well-informed qualitative sample (Coyné, 1997), we identified five categories of actors: civil society, non-governmental organizations (NGOs), private sector and business owners, governmental offices, and armed actors. Then, based on the experience and assistance of the regional Peace Commissioner’s Office, other scholars, and local contacts, we chose key members within each group.⁸ Table I describes our qualitative sample.

⁶ The BACRIM were often composed of demobilized paramilitary members.

⁷ For further details on multi-method approaches see Creswell et al. (2011).

⁸ These contacts helped us contact these groups.

Table I about here

Given the actors' different time availability, mobility, and relevance in the region, we used three different qualitative instruments for data collection: **(i)** informal interviews, **(ii)** life histories, and **(iii)** focus groups.⁹ In all cases, actors were asked to build a division of the different territorial disputes using a detailed map of the region without any political division. When both security and mobility allowed it, we carried out interviews and meetings at neutral places (e.g. hotels or cafés). In cases where the presence of army members or any hierarchical actor was necessary (e.g. interviews of ex-combatants), we asked to have a private room. Two members of the research team conducted each interview: one held an active role, interacting with the interviewee and leading the discussion, while the other held a passive role and kept a detailed field diary. In some cases with permission of the interviewee, we were able to record the interviews. Both recordings and field diaries were transcribed and coded using the software *Atlas.ti 7*.¹⁰ In order to reduce bias during the coding process, we randomly assigned the analysis of each instrument. Additionally, once we agreed on the main emerging categories, we randomly cross-checked the categorization of some instruments to avoid coding errors. Finally, to minimize potential researcher bias, we held meetings and forums with academic experts and actors immersed in the reality of the region to share and double-check our findings.

Quantitative Approach: the relationship of Territorial Disputes and land in Urabá

We use a 2011 plot census for Urabá, based on cadastral information provided by the regional Government of Antioquia. This census gathers information on the owner, the physical characteristics of the land, and the registration of any formal title or deed at local notaries. We aggregated data at the level of the *vereda*, which is a small rural population center and constitutes the lowest level of administrative division in Colombia.¹¹ According to the latest census of *veredas* carried out by the Government of

⁹ Details concerning forms and questionnaires are available upon request.

¹⁰ For security reasons, some actors did not allow us to record the interviews. In these cases, a hand-written interview log served as the data-collection device.

¹¹ The administrative division of territorial units in Colombia has four levels: departments, municipalities, *corregimientos*, and *veredas*.

Antioquia in 2010, Urabá has 713 *veredas*, of which 653 (91.6%) can be found in our cadastral dataset.¹²

We built three different indicators for land tenure structure. First, we aggregated information at the owner level, summing up the number of plots and hectares (ha) belonging to the same individual in a given *vereda*. With this data, we built two indicators for a given *vereda*: (i) the number of hectares per owner, and (ii) the number of plots per owner. On average, landowners have 52.13 ha of land distributed in 1.3 plots. Nonetheless, the high standard deviations suggest an important heterogeneity in owners (see Table 3). Second, following Ibáñez & Muñoz-Mora (2010), we built an index of informality in land property rights, defined as the area of informal properties (in ha) over the private cadastral area (in ha), as an indicator of the state of land property rights in every *vereda*. On average, 34% of the plots do not have a formal title in Urabá.

Third, we built two Gini indices for land at the *vereda* level. First, we considered each plot without taking into account the owners; we call this the Gini coefficient of landholdings. Second, we summed up all the properties belonging to the same owner in a given *vereda* and then estimated the index, which we call the Gini coefficient of land ownership. Figures II and III show the spatial distribution of the land Gini index. In general, we found that higher concentrations of land ownership are located in the northern areas of Urabá, close to the sea.

Figures II and III about here

Finally, as our main variable of interest, we coded and built a set of dummy variables indicating whether or not a given *vereda* belongs to a territory in dispute described in the qualitative section above.. We also use information on displacement provided at the *vereda* level by the regional government for 1999 to 2006. We found that 56% of the *veredas* had at least one person displaced, while 65% received displaced persons from other locations. Table II shows the main descriptive statistics.

¹² Reasons why some *veredas* were not found are: (i) misspelling in either datasets, (ii) different names in both sources. nNone of those reasons leads to a systematic selection that could create a selection bias. Further information about this process is available upon request.

Table II about here

Econometric Specification

In order to analyse the relationship between land tenure structure and territorial control in Urabá, we estimate the following equation:

$$y_{mij} = \alpha + \sum_{t=1}^4 \beta_t * 1(\text{territory dispute}_t)_{mij} + \mathbf{x}'_{mij} \boldsymbol{\delta} + \mathbf{z}'_{mi} \boldsymbol{\theta} + \varepsilon_{mij} \quad (1)$$

The sub-index m refers to the municipality, i to the *corregimiento* and j to the *vereda*. y_{mij} is the land tenure outcome. We consider five different outcomes : (i) Gini coefficient of land ownership, (ii) Gini coefficient of landholdings, (iii) number of hectares per owner, (iv) number of plots per owner, and (v) land tenure informality index. As our main variable of interest, we introduce a set of four dummy variables, $1(\text{territory dispute}_t)_{mij}$, which indicate the main territories in dispute described by our qualitative findings. \mathbf{x}_{mij} is a vector of geographical and displacement controls at the *vereda* level, which includes: (i) distance to the sea (in kilometers), (ii) distance to the main road (in kilometers), (iii) number of displaced people received (1995-2011), and (iv) number of displaced people send (1995-2011).

The term \mathbf{z}'_{mi} includes a set of fixed effects at the municipal and *corregimiento* levels to control for different potentially unobservable characteristics that could possibly bias our estimates. Given that most local political decisions are taken at municipality level, we argue that these fixed effects control for fixed municipality and *corregimiento* conditions that could be correlated with the different territorial disputes, making some *veredas* more prone to territorial disputes than others. Thereby, our main source of spatial variation is within the *corregimiento* level.¹³ Given the low level of disaggregation and proximity,¹⁴ our data may be spatially correlated.¹⁵ Therefore, we estimate the error term, ε_{mij} , in two different ways. First, as a benchmark,

¹³ Urabá has 54 *corregimientos*, which on average have 11.2 *veredas* (sd=13.43).

¹⁴ The average distance between *veredas* is 1.05 km (sd=0.48).

¹⁵ Moran's I rejected the null hypothesis of spatial correlation for all our land tenure outcomes: (i) Gini coefficient of land ownership (Moran's I=0.090, p-value=0.000); (ii) Gini coefficient of landholdings (Moran's I=0.086, p-value=0.000); (iii) number of hectares per owner (Moran's I=0.041, p-value=0.000); (iv) number of plots per owner (Moran's I=0.028, p-value=0.000); and (v) land tenure informality index (Moran's I=0.079, p-value=0.000).

we estimate robust standard errors corrected for clustering at the municipal level; second, following Conley (1999), we allow for spatial dependence of an unknown form, correcting our standard deviation for spatial correlation.¹⁶ Both standard deviations are reported in the results tables, the former in brackets and the latter in parentheses.

The Regionalization of Conflict in Urabá

Combining the different phases of conflict in Urabá, with the results of the geographical characterization from our qualitative analysis, we are able to identify the main changes in the logic of territorial and land control, and their geographical distribution.¹⁷ During the early stages of conflict, politics, ideology, and social control dominated the logic of territorial expansion in the region. Geographically, we can identify three areas according to the dynamics of actor presence and territorial control: (i) areas of continued and mostly undisputed FARC dominion, (ii) areas of EPL or paramilitary control (ACCU and AUC), and (iii) areas of confrontation and dispute between actors. This third area was the main theater of armed confrontation between guerrillas and paramilitaries and, as such, exhibits the most massacres, displacement, and land transfers. Figure IV shows the spatial distribution of these areas.

Figure IV about here

¹⁶ We establish the maximum distance between closest neighbors (i.e. 5.13 km) as the cutoff point in order to estimate the ‘windows’ required for the procedure proposed by Conley (1999). We also re-estimate following other specifications and find similar results.

¹⁷ Individual maps for each period are available upon request.

Using this spatial distribution we built our main variable of interest for our quantitative analysis. We found that 35.9% of the *veredas* are located in zones with defined territorial control, 58% in zones of territorial disputes between illegal armed actors, and 12% in zones historically under control of the FARC.¹⁸

Mechanisms of Land Transfer in Urabá

In this section, we use qualitative evidence to illustrate mechanisms through which land was transferred in Urabá. In particular, we are interested in understanding how land transfer mechanisms have interacted with each other over time, and how they are affected by changes in the armed conflict in Urabá. We have identified eight land transfer mechanisms (see Table III). We argue that they are closely related and, at times, occur in sequence, shaping the changes in the structure of land tenure in Urabá. Finally, we propose a timeline of their relative use and importance in the region's history (see Figure 5).

Initial Mechanisms: The Starting Point

As other regions of the agricultural frontier in Colombia, the predominant mechanisms of gaining access to land in Urabá was a process generally known as 'colonization'.¹⁹ Colonists were attracted to this land even though access to it was difficult, due to two main factors. First, the general lack of state presence meant that they could farm the land at a lower cost, while having access to an abundance of natural resources. Second, during the 1940s and 1950s, refugees from the civil war known as *La Violencia*, fled to Urabá to protect themselves from victimization.²⁰ A common characteristic of these colonizers was the absence of formal property rights.

Parallel to this process, the Colombian central government promoted policies of assignation of public land as a strategy to prompt economic growth (Ibáñez & Muñoz-Mora, 2010; Machado, 2009). In Urabá, *public land titles* were mainly allocated to landlords, capitalists, and entrepreneurs looking to establish export crops,

¹⁸ These dummies are not exhaustive. That is, there are *veredas* that we could not allocate to any of the territorial disputes. Hence, these variables are not linear independent.

¹⁹ A rigorous study about the colonization process in Colombia can be found in LeGrand (1988). Parsons (1968) specifically studies the case of Antioquia.

²⁰ During the period called *La Violencia*, the two main political parties in Colombia (i.e. liberals and conservatives) confronted each other, however, the location of Urabá made a significant increase of violence there difficult (Roldán, 2002).

such as bananas, plantains, cacao, among others (LeGrand, 1988; Parsons, 1968).²¹ In the mid 20th Century, a vast number of small and medium informal landowners resulted from colonization, but formal landlords operating large agro-industries formed the land tenure structure in Urabá.

Invasion

Invasion refers to the premeditated, illegal, and typically massive occupation or squatting of private land for strategic military and political purposes by non-state armed groups. In Urabá, the main driving forces behind this mechanism were the military and ideological strategies of the EPL and FARC. Waves of invasions started in the late 1970s, continued through the early 1980s, and reached their peak in 1985-1986. They had two main goals. First, they sought to implement informal land reform in the area by invading stagnant, abandoned or otherwise unproductive private property that was well located (close to roads and urban centers), redistributing it to sympathizers. Second, it allowed these armed groups to hold increased territorial and social control. For small-scale farmers who sympathized with either group, it was an opportunity to own land and make a better living.²²

Repopulation

Repopulation happens when land plots that were once inhabited, though with undefined property rights, are occupied after their previous inhabitants have abandoned them. Whereas invasion implies massive movement into abandoned lands, repopulation implies the direct or indirect, but always forceful, removal of previous inhabitants or owners at some previous point (that is, individuals and groups with or without formal property rights) and their replacement with sympathizing groups.²³

Most interviewees, especially military personnel and demobilized guerrilla members, recognized the strategic intentionality behind repopulation. The new inhabitants on repopulated lands were either sympathizers or family members, some of

²¹ Although not often the case, small-scale farmers were sometimes also able to obtain public land. Yet, high transaction or hidden costs hindered this process (LeGrand, 1988; Machado, 2009).

²² One of the most emblematic cases of land invasion in Urabá happened in 1983-1986 at the hands of EPL militants and sympathizers. After squatters took over half of the 4,000 ha plantation owned by COLDESA, a Colombian-Dutch company, privately-hired armies tried to take back the land. The EPL offered military support to the squatters and after 1986 divided the land among a cohort of their supporters and sympathizers (mostly made up of workers and farmers).

²³ This process is different from population resettlement, or the practice of uprooting civilians and forcibly relocating them into special settlements (Zhukov, 2014).

whom were victims of previous dispossession. As opposed to instances of invasion, the intentions of these armed groups were not to define the property rights of these new tenants, but to exercise control and power over a territory where supporters could live safely, regardless of the legal status of the land. Thus, this mechanism acted as an alternative form of armed group-led land reform biased towards their supporters and causing the displacement of others. However, repopulation is used sparingly in more recent times.

Material Dispossession

Material dispossession is an illegal violent process through which people, whether they have defined property rights or not, are displaced from and dispossessed of their land by armed groups. In Urabá, we observe two logics of displacement (García de la Torre & Aramburo-Siegert, 2011). First, as ‘collateral’ damage, when the objective of armed actors is territorial control for some type of gain (political or economic) and their strategies include terrorizing citizens. As a reaction, the population flees and seeks refuge elsewhere. In the second logic, dispossession is the objective of conflict, fixed on defeating the social bases of the enemy and appropriating their territory through collective threats and aggression. Additionally, as mentioned before, dispossession sometimes preceded repopulation. These differences highlight the fact that there are multiple forms of violence that happen and are summarized under the blanket term ‘displacement’.

As the incentives for land transfer shifted from being military-political to economic and the state presence in the region lagged, material dispossession gained prominence. Guerrillas, paramilitaries, and, more recently, BACRIM, as well as some members of the Colombian army in support of paramilitaries, have participated in these acts. As one community leader in the region pointed out: ‘it was not so much due to the weakness of the state, but its collusion.’ Armed groups have used the appropriated land for various purposes, such as drug production and transport, ranching, logging, mining, and agro-industrial production (mainly palm oil).²⁴

²⁴ The case of the massive dispossession in the villages of Jiguamiandó and Curvaradó, close to the municipalities of Turbo and Mutatá in central Urabá, showcases this mechanism. In 1997, a group of paramilitaries displaced around 4,000 people from an Afro-Colombian collective territory. It is one of the largest, if not the largest, single events of land displacement documented to date in Colombia. In 2001, private companies, in the context of a strategy utilized by the Colombian government to promote development in what is a very impoverished region, bought the land and dedicated it to the exploitation of palm oil. The properties involved in the case are currently in a process of land restitution.

Forced Sale

This mechanism refers to the act of coercing an owner, whether formal or informal, to sell his/her land via a contract or bill of sale, using various forms of unilateral violence or threats. Although the owner receives a sum of money for the land, the price unfairly reflects its real market value. In contrast to material dispossession, this mechanism often produces a legal document that makes the transaction appear official, facilitating its use in the land market, and making it re-sellable later. A major issue lies in the visibility of the process to the community and the appearance of legality. To complicate things further, the land could thereafter go through a formal process to be titled –thus, land restitution to the original owners is made even more difficult.²⁵

Forgery and Identity Theft

The last mechanism we have identified relates to fraudulent transfers of land by which a formal land title is acquired through an administrative process that appears to be legal, without paying for it, and not using violence in an observable way. This is enabled due to the collusion of armed groups, government officials (from INCODER, for example), and private individuals. One interviewed government official suggested that while armed groups use violence or threats to transfer land, individuals and businessmen take advantage of state weakness by committing fraud and falsifying documents to acquire land. However, the connection with the conflict is still latent. More recently, armed actors have resorted to this mechanism and the state has reacted by becoming more involved in the land question in Urabá.

This mechanism has manifested in several ways in the region. In 2011 the central government intervened after evidence surfaced of a ‘parallel’ or ‘ghost’ INCODER office at work, allocating land titles, changing or transferring land titles, and falsifying official documents. A victim’s organization leader in the region alluded to a case of 786 false titles issued through local state offices that affected a local community. Relatedly, individuals falsify documents in the land transfer process through notaries and public registry offices, such as powers of attorney, contracts, and bills of sale. Finally,

²⁵ A prime example is the case of five haciendas near the municipality of Turbo: *Las Margaritas*, *El Consejo*, *Puertorriqueño*, *Nueva Ilusión*, and *Los Claveles*. In July 1996, the original owner received a mere 11 million COP (or about US\$16,600, current) for almost 200 ha of fertile land. In 2000, these haciendas were united with a larger one (for a total of 410 ha) and titled under the name of the wife and daughter of late AUC leader Carlos Castaño.

identity theft happens when a person takes on someone else's identity and undertakes a land transfer process at a notary or public registry in their name.

Table III about here

Relations and Persistence in Time

In this section, we have described and discussed eight land transfer mechanisms identified through qualitative field research in Urabá. A stylized narrative of the changes in the way in which land has been transferred in the region starts with 20th century colonization of land by refugees, small-scale farmers, and agro-industrial companies. Afterwards, guerrilla groups began sponsoring the invasion of land by their supporters, redistributing land and creating alternative social orders in the region. With the appearance of paramilitary groups in the 1980s and 1990s as well as changes in the nature of the conflict (towards rent-seeking and criminality), new mechanisms emerged. Violent material dispossession and repopulation dominated the late 1990s and early 2000s, while forced sale and forgery and identity theft have become increasingly relevant as criminal economies thrive. Running through this narrative are both the market exchange of properties and the titling of land by the state. Similarly, we have shown that violence has been equally transversal. Figure V summarizes these temporal changes.

Figure V about here

These mechanisms are deeply interrelated. The qualitative evidence we gathered allows us to argue that each mechanism functions as a link in a longer chain of land transfer. Land can move from legality to illegality and back, considering the lack of formality in property rights, the weakness and lack of presence of the state in the region, as well as the ongoing armed conflict and issues related to organized crime and drug-trafficking.²⁶

²⁶ One case that highlights how several mechanisms can interact is the case of the property known as *La Joba*. In 1986, Cristobalina Martínez bought a 70 ha farm in the rural area of the municipality of Necoclí, in northern Urabá. Later, in 1993 paramilitaries displaced the Martínez family. More than a decade later, on May 10, 2007, INCODER emitted Resolution #0413, which included the property in

Land Tenure and Territorial Disputes in Urabá: A Quantitative Approach

Our quantitative results show an important and statistically significant correlation among the different type of territorial dispute and the structure of land tenure in Urabá. Our results are robust to the introduction of additional controls, as well as the implementation of an alternative specification in the dependent variable. We present two specifications for each land tenure outcome: first, we estimate equation (1) without additional controls at the *vereda* level, x_{mij} , and without *corregimiento* fixed effects; after that, we fully estimate equation (1), which we use for inference.

Table IV shows the results for the two land Gini indices. We find a significant relationship between levels of inequality and land tenure in territories under dispute between the FARC and AUC. On average, *veredas* located in those territories have levels of land ownership inequality up to 0.41 standard deviations higher than an average *vereda*. Similar results were found for the Gini coefficient for landholdings (0.50 standard deviations; see Column IV). Territories with defined FARC control are strongly significant once corrected for spatial correlation. These territories also exhibit lower levels of land inequality (0.26 standard deviations less in the land ownership Gini index).

Table IV about here

Table V shows the results for the two indicators of land ownership. We do not find strong results for the number of hectares per owner. However, in line with our previous results, we find that disputed southern territories have owners with more land (0.37 standard deviations higher than the average). We also find a pattern in the number of plots per owner. Whereas disputed territories in the north are related with less plots per owner (0.23 standard deviations less), in disputed territories located in

the registry of abandoned rural land plots due to displacement, supposedly guaranteeing that no further transfers would be made with it. However, in December of that year, INCODER awarded the ‘vacant’ lot named *La Joba* to Luis Alberto Echeverri through Resolution #3605. However, in the INCODER archives the resolution registered under that number alludes to another case altogether; according to an interviewed INCODER official the May 2007 resolution is fake. However, it has an appearance of legality, to the point that the regional Office of Public Instruments legalized it and has it registered in their archives. In a last episode in this saga, in 2009 Mr. Echeverri transferred the property to some relatives, who then proceeded to sell it to a third party. The case is still contested and unresolved.

the south we find more plots per owner (a 0.26 standard deviation increase). Moreover, territories under historical FARC control are correlated with fewer plots per owner (0.23 standard deviations less). Other controls are only significant after correcting for spatial correlation in the residuals.

Table V about here

Finally, Table 6 shows the results for the land tenure informality index. Interesting results emerge from this analysis. *Veredas* located in territories under FARC control exhibit higher levels of informality in land property rights (0.95 standard deviations). In contrast, territories under dispute show lower levels of informality (0.72 standard deviations).

Table VI about here

Taken together, these results support our argument that conflict and territorial control affected the distribution of land in Urabá. We can identify two patterns in the current structure of land tenure in the region. *Veredas* located in territories marked by territorial disputes between the FARC and AUC (and previously EPL) have higher levels of land inequality, owners with fewer plots, and less informality. Those located in areas of defined FARC control show less land inequality, more plots per owner, and increased informality in property rights.

Conclusions

In this paper, we have shown that armed conflict and territorial disputes are related to an inefficient land tenure structure in the region of Urabá in Antioquia, Colombia. We do this by using a multi-method approach: qualitatively assessing the nature and logic of land transfer in the region, and quantitatively estimating the relationship of armed conflict and territorial control on the structure of land ownership at the micro level (*vereda* level). Our central argument is that changes in the objectives of and incen-

tives for territorial control are key in understanding the changes in land transfer mechanisms and the structure of land tenure in contexts of violent civil conflict. In the qualitative approach, other important variables that can affect land transfer and tenure are the informality in land rights, state weakness (e.g. corruption, lack of law enforcement, impunity), military-political incentives of different armed groups, and economic incentives (greed) of any type of actor.

We identified five historical periods between 1970 and 2011 that coincide with important shifts in the logic and dynamic of land transfer and armed conflict. Within this historical context, we have identified eight land transfer mechanisms at play: colonization, allocation of public land titles, land market, invasion, repopulation, material dispossession, forced sale, and forgery and identity theft. These mechanisms coincide with different periods of time, sometimes overlapping, and depend on the incentives of the armed conflict and the actors involved. Furthermore, a plot of land could potentially go through any or all of these mechanisms at various periods in a chain-like sequence.

In the quantitative approach, we explored a unique dataset of rural plot ownership from 2011, based on cadastral information gathered by the regional Government of Antioquia. Using a fixed effects model of land tenure structure we have approached the relationship between land tenure and armed conflict in Urabá. Our quantitative results show an important and statistically significant correlation between the different types of territorial dispute and the structure of land tenure; due to a lack of pre-conflict data, we could not make a causal argument. We identified two patterns in the current structure of land tenure in the region. *Veredas* located in territories marked by territorial disputes between the FARC and AUC (and previously EPL) have higher levels of land inequality, fewer plots per owner, and a higher rate of formality. This is especially important when looking at the territorial dispute between FARC–AUC in the south of Urabá. From this we conclude that these areas saw more conflict, more paramilitary influence, and through various mechanisms, land presumably became more concentrated. Since maintenance of the traditional *status quo* (protecting large landholders) was one of the paramilitaries' objectives, we see that they were partly successful. In contrast, those *veredas* located in historically FARC-controlled territory show less land inequality, more plots per owner, and increased informality in property rights, boasting a small landholder scheme. These territories had lower levels of con-

flict due to consistent and dominant control by one group where this group was partly able to make one of their goals possible: informal land reform for small-scale farmers.

References

- Balcells, L. (2010). Rivalry and Revenge: Violence against Civilians in Conventional Civil Wars1. *International Studies Quarterly*, 54(2), 291–313. doi:10.1111/j.1468-2478.2010.00588.x
- Balcells, L. (2011). Continuation of Politics by Two Means: Direct and Indirect Violence in Civil War. *Journal of Conflict Resolution*, 55(3), 397–422. doi:10.1177/0022002711400865
- Beyers, C. (2013). Urban Land Restitution and the Struggle for Social Citizenship in South Africa, 44(4), 965–989. doi:10.1111/dech.12041
- Collier, D., & Elman, C. (2008). Qualitative and Multi-Method Research: Organizations, Publication, and Reflections on Integration. In J. M. Box-Steffensmeier, H. E. Brady, & D. Collier, *The Oxford Handbook of Political Methodology* (pp. 779–795). Oxford: polisci.berkeley.edu.
- Collier, P., & Hoeffler, A. (2004). Greed and Grievance in Civil War. *Oxford Economic Papers*, 56(4), 563–595. doi:10.1093/oep/gpf064
- Conley, T. G. (1999). GMM estimation with cross sectional dependence. *Journal of Econometrics*, 92(1), 1–45. doi:10.1016/S0304-4076(98)00084-0
- Coyne, I. T. (1997). Sampling in qualitative research. Purposeful and theoretical sampling; merging or clear boundaries? *Journal of Advanced Nursing*, 26(3), 623–630.
- Creswell, J. W., & Clark, V. L. P. (2011). *Designing and Conducting Mixed Methods Research*. SAGE.
- Esteban, J. M., & Ray, D. (2011). Linking Conflict to Inequality and Polarization. *American Economic Review*, 101(4), 1345–74. doi:10.1257/aer.101.4.1345
- García de la Torre, C. I., & Aramburo-Siegert, C. I. (2011). *Geografías de la Guerra, el Poder y la Resistencia*. Medellín: Cinep-Odecofi y Instituto de Estudios Regionales, Iner.
- Grajales, J. (2011). The rifle and the title: paramilitary violence, land grab and land control in Colombia. *The Journal of Peasant Studies*, 38(4), 771–792. doi:10.1080/03066150.2011.607701
- Grajales, J. (2013). State Involvement, Land Grabbing and Counter-Insurgency in Colombia. *Development and Change*, 44(2), 211–232. doi:10.1111/dech.12019
- Grossman, H. I. (1994). Production, Appropriation, and Land Reform. *American Economic Review*, 84(3), 705–712.
- Ibáñez, A. M., & Muñoz-Mora, J. C. (2010). The Persistence of Land Concentration in Colombia. What Happened Between 2000 and 2009. In M. Bergsmo, C. Rodríguez-Garavito, P. Kalmanovitz, & M. P. Saffon, *Distributive Justice in Transitions* (pp. 279–323). Oslo: Torkel Opsahl Academic Epublisher.
- Kalyvas, S. N. (2006). *The Logic of Violence in Civil War*. Cambridge University Press.
- Kalyvas, S. N., & Arjona, A. (2005). Paramilitarismo: una perspectiva teórica. In A. Rangel, *El poder Paramilitar* (pp. 25–45). Bogotá: El poder paramilitar.
- Korf, B. (2005). Rethinking the Greed--Grievance Nexus: Property Rights and the Political Economy of War in Sri Lanka. *Journal of Peace Research*, 42(2), 201–

- Langley, A. (1999). Strategies for Theorizing from Process Data. *Academy of Management Review*, 24(4), 691–710. doi:10.5465/AMR.1999.2553248
- Leckie, S. (Ed.). (2009). *Housing, Land, and Property Rights in Post-Conflict United Nations and Other Peace Operations*. Cambridge University Press.
- LeGrand, C. (1988). *Colonización y protesta campesina 1850-1950*. Editorial Universidad Nacional de Colombia. Bogotá.
- Luca, G., & Sekeris, P. G. (2010). Land inequality and conflict intensity. *Public Choice*, 150(1-2), 119–135. doi:10.1007/s11127-010-9692-8
- Machado, A. (2009). *Ensayos para la historia de la política de tierras en Colombia*. Universidad Nacional de Colombia. Bogotá.
- Parsons, J. J. (1967). *Antioquia's Corridor to the Sea*. Berkeley and Los Angeles: University of California Press.
- Parsons, J. J. (1968). *Antioqueño colonization in Western Colombia*. University of California Press.
- Reyes, A. (2009). *Guerreros y campesinos: el despojo de la tierra en Colombia*. Bogotá: Editoria Norma.
- Roldán, M. (2002). *Blood and Fire*. Duke University Press.
- Skaperdas, S. (2001). The political economy of organized crime: providing protection when the state does not. *Economics of Governance*, 2(3), 173–202. doi:10.1007/PL00011026
- Steele, A. (2011). Electing Displacement: Political Cleansing in Apartadó, Colombia. *Journal of Conflict Resolution*, 55(3), 423–445. doi:10.1177/0022002711400975
- Tenthoff, M. (2008). *El Urabá: donde el Desarrollo Alternativo se confunde con intereses económicos y la reinserción del paramilitarismo*. TNI Informe sobre políticas de drogas (Vol. 27).
- Valencia Agudelo, G. D. (2007). Reconstrucción analítica del proceso de desarme, desmovilización y reinserción con las Autodefensas Unidas de Colombia, 2002-2007. *Perfil De Coyuntura Económica*, 0(10), 147 – 191.
- Wily, L. A. (2009). Tackling Land Tenure in the Emergency to Development Transition in Post-Conflict States: From Restitution to Reform. In S. Pantuliano, *Uncharted Territory: Land, conflict and humanitarian action*. Warwickshire, UK: Practical Actions Publishing.

Biographical Statements

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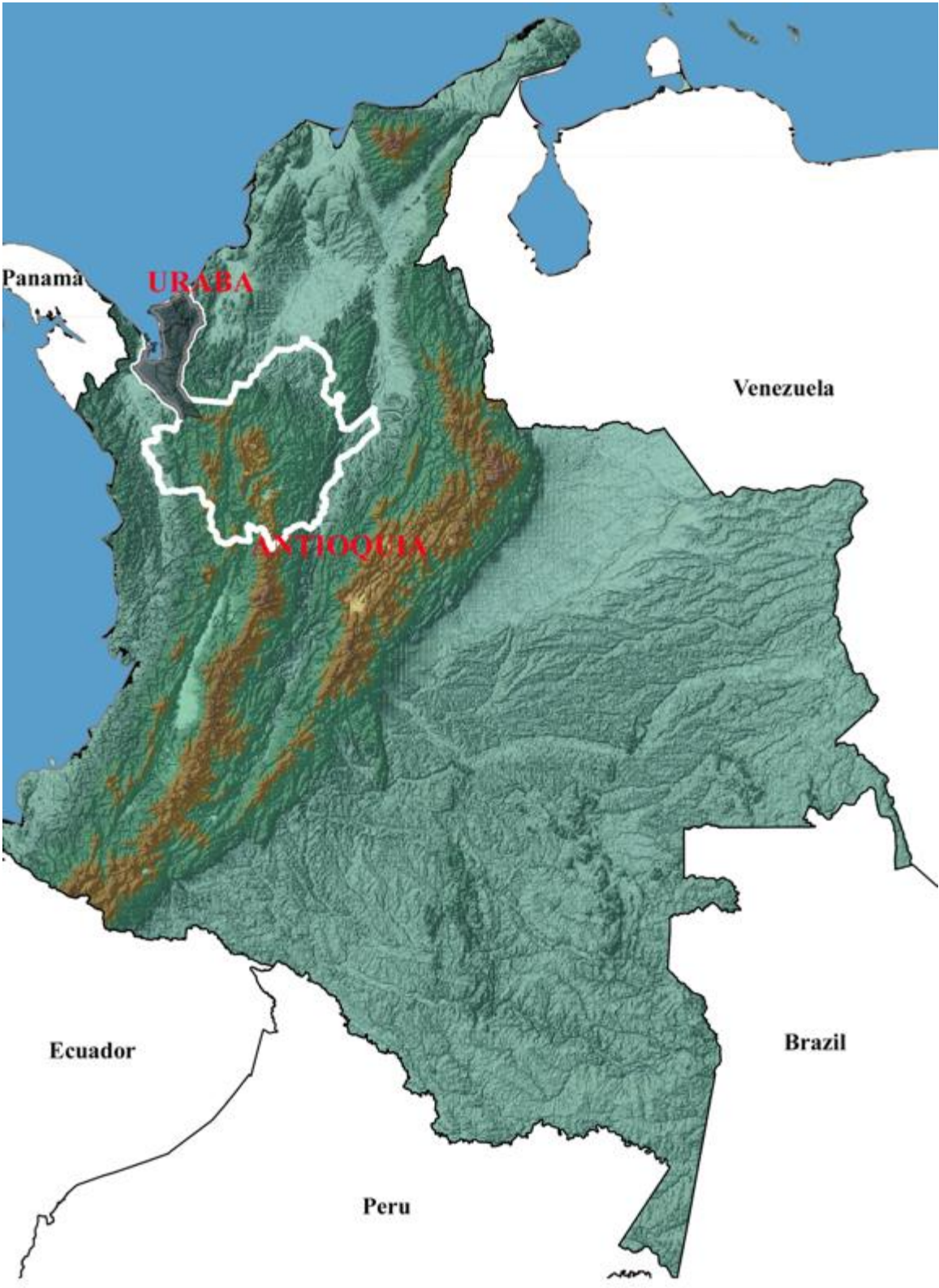
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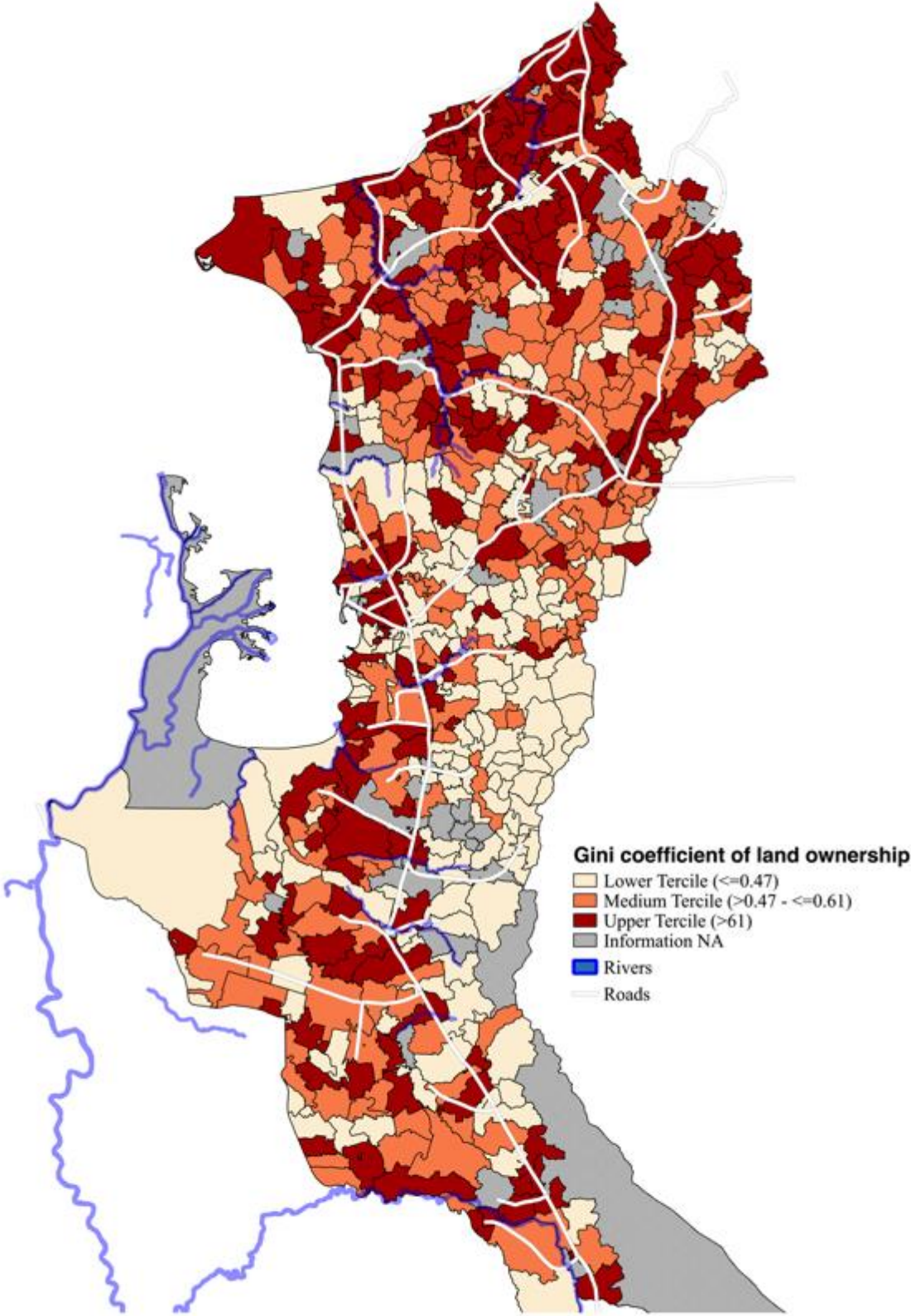
Graphs and Tables

Figure I. Location of Urabá



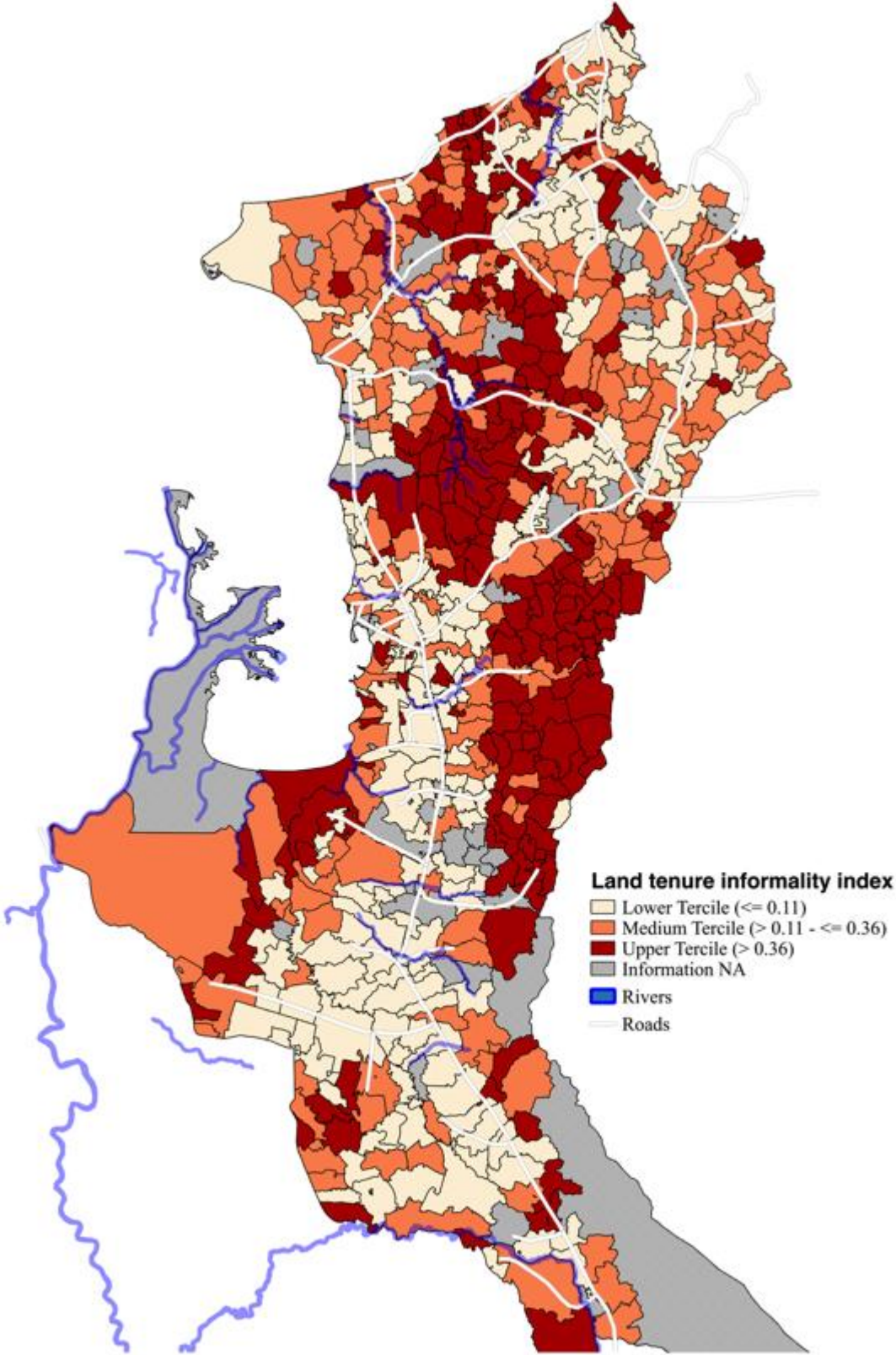
Notes – This map shows the location of Urabá within Colombia. Source: Authors’ own calculation.

Figure II. Gini Coefficient of Land Ownership for Urabá



Notes – The unit of observation is *vereda*. This map shows the spatial distribution of the Gini coefficient of land ownership. This index sums up all the hectares owned by each owner to estimate the coefficient. Data source: Government of Antioquia (2011).

Figure III. Land Tenure Informality Index for Urabá



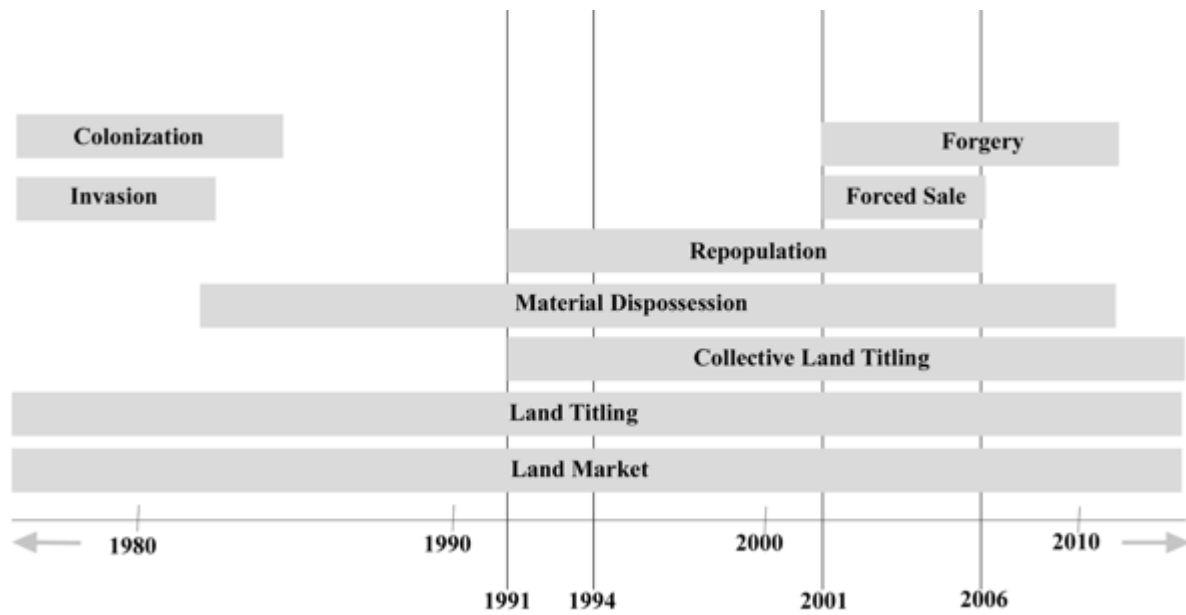
Notes – The unit of observation is *vereda*. This map shows the spatial distribution of the land tenure informality index. This index is the ratio between private land without registered title over total of private land. Data source: Government of Antioquia (2011).

Figure IV. Spatial Distribution of Territorial Disputes in Urabá



Notes – This map shows the spatial distribution of territorial disputes in Urabá during the last 50 years. The distribution was created based on the qualitative interviews. The yellow color stands for territories historically controlled by the FARC; the green stands for those territories under dispute between the paramilitaries (AUC) and guerrillas (FARC); and the orange stands for those territories with defined control by either EPL (1970-1992) or AUC later on. Source: authors’ calculation based on qualitative fieldwork.

Figure V. Timeline for Land Transfer Mechanisms in Urabá



Notes – This diagram shows the timeline for the different land transfer mechanisms. The dotted lines represent turning points in territorial disputes. Source: authors' calculation based on qualitative fieldwork.

Table I. Qualitative Sampling

Type of Instrument	Observations	Type of Actor
Informal Interviews	25	NGOS, private sector, civil society, government offices
Life Histories	5	1 demobilized EPL leader, 3 demobilized FARC leaders, 1 demobilized paramilitary leader
Focus Groups	5	Civilian populations and victims organizations.

This table shows the structure of our qualitative sampling.

Table II. Descriptive Statistics

	Observations	Mean	Std. Deviation	Q25	Q50	Q90	Q99
Gini coefficient of land ownership	610	0.538	0.173	0.432	0.546	0.754	0.887
Gini coefficient of landholdings	610	0.526	0.157	0.426	0.528	0.721	0.887
Number of hectares per owner	610	52.139	67.841	20.74	34.589	100.252	310.053
Number of plots per owner	610	1.302	0.418	1.084	1.182	1.694	3.167
Land tenure informality index	610	0.301	0.271	0.078	0.213	0.723	1
Total area (hectares)	610	1230.417	1825.199	533.097	910.027	2233.504	5792.503
Territory in dispute, FARC-AUC north (yes=1)	610	0.384	0.487	0	0	1	1
Defined territorial control, FARC (yes=1)	610	0.125	0.331	0	0	1	1
Defined territorial control, EPL-AUC (yes=1)	610	0.359	0.48	0	0	1	1
Territory in dispute, FARC-AUC south (yes=1)	610	0.21	0.408	0	0	1	1
Distance to the main road (km)	610	6.125	8.801	1.483	3.615	13.841	47.371
Distance to the sea (km)	610	8.186	9.122	3.098	5.496	18.783	47.371
Number of displaced people received (1995-2011)	610	44.923	110.163	0	12	102	396
Number of displaced people (1995-2011)	610	20.154	51.523	0	2	60	203
Latitude (degrees)	610	-76.568	0.146	-76.675	-76.573	-76.379	-76.24
Longitude (degrees)	610	8.161	0.392	7.886	8.215	8.633	8.789
Distance to the nearest neighbor (km)	610	1.048	0.476	0.731	0.975	1.575	2.376

Notes –This table shows the main descriptive statistics. The unit of observation is *vereda*. Data source: authors' calculation, Government of Antioquia (2011).

Table III. Land Transfer Mechanisms in Urabá

Mechanism	Definition	Logic	Incentives
Colonization	Occupying a territory with no defined property rights or that is abandoned or vacant.	Parcel and clear plots of land for settlement and economic production.	Vacant land, lack of state presence, low costs, civil war.
Public Land Titles	State defines property rights over previously unused or abandoned land.	State process of formalization, giving value to land and managing social tensions.	State recognition, protection, contract enforcement.
Land Market	Transfer of property rights for a mutually-decided price.	Free, rational, and voluntary exchange of property rights for a price. Rationality can be limited by distortions due to violence and information asymmetries.	Productive use of land, price.
Invasion	Massive occupation or squatting of private land.	Consolidation of social bases of support and territorial control of strategic land through redistribution.	State weakness, mobilization capacity of supporters, control.
Repopulation	Occupation of land once inhabited but abandoned due to violence and with undefined property rights.	Territorial control and building of social support.	Uninhabited land, state weakness.
Material Dispossession	Displacement and dispossession of land by unilateral violence.	Violent act. Does not produce a legal right over the land. Land for both legal (palm oil) and criminal (drugs) economic activities.	State weakness, informality in land ownership, military gain.
Forced Sale	Coercing to sell via a contract or bill of sale, using unilateral violence.	Acquisition of a title at a lower price, with appearance of legality. Land intended for legal or criminal economic activity.	State weakness, lack of law enforcement, impunity.
Forgery and Identity Theft	Fraudulent transfers of land through administrative processes that appear to be legal, without paying for the land or using observable violence.	Appearance of legality and no use of violence make it easier to use this land for economic activities.	State weakness, corruption, lack of law enforcement, impunity.

Notes –Table summarizes the list of mechanisms of land transfer found in our qualitative fieldwork.

Table IV. Land and Territorial Disputes: Results for Land Gini Indexes

	Dep. Variable: Gini coefficient of land ownership		Dep. Variable: Gini coefficient of landholdings			
	(I)	(II)	(III)	(IV)		
Territory in dispute, FARC-AUC north (yes=1)	0.036 [0.036] (0.009) ***	0.003 [0.014] (0.007)	-0.01 [0.028] (0.010)	-0.058 [0.005] (0.007)	***	
Territory in dispute, FARC-AUC south (yes=1)	0.04 [0.016] (0.008) ***	0.072 [0.031] -0.016 ***	0.053 [0.021] -0.009 ***	0.08 [0.041] (0.011)	*	***
Defined territorial control, EPL-AUC (yes=1)	0.029 [0.013] (0.006) ***	-0.003 [0.012] (0.006)	0.01 [0.009] (0.007)	-0.018 [0.009] (0.006)	*	
Defined territorial control, FARC (yes=1)	-0.072 [0.033] (0.005) ***	-0.045 [0.048] (0.007) ***	-0.07 [0.031] (0.006) ***	-0.041 [0.034] (0.006)	*	***
Number of displaced people received (1995-2011)		0.009 [0.007] (0.002) ***		0.002 [0.006] (0.002)		***
Number of displaced people (1995-2011)		0.013 [0.012] (0.003) ***		0.018 [0.009] (0.003)	*	***
Distance to the main road (km)		0.001 [0.002] (0.001)		0.001 [0.002] (0.001)		
Distance to the sea (km)		-0.002 [0.002] (0.001) ***		-0.003 [0.002] (0.001)	*	***
Observations	610	610	610	610		
R-Squared	0.177	0.321	0.177	0.323		
Municipal Fixed Effect	Yes	Yes	Yes	Yes		
Corregimiento Fixed Effect	No	Yes	No	Yes		

Notes – The unit of observation is *vereda*. Robust standard errors corrected for clustering at municipal level in brackets. Conley (1999) standard errors are in parenthesis. * Significant at 10%, ** significant at 5%, and *** significant at 1%. In the first two columns, the dependent variable is Land Gini Index, and Land Gini Landownership Index is in the succeeding columns. All regressions included constants. Data source: authors' calculation, Government of Antioquia (2011).

Table V. Land and Territorial Disputes: Results for Ownership

	Dep. Variable: Number of hectares per owner			Dep. Variable: Number of plots per owner			
	(I)		(II)	(III)		(IV)	
Territory in dispute, FARC-AUC north (yes=1)	-23.403	*	-1.814	-0.227	***	-0.097	***
	[11.208]		[2.990]	[0.039]		[0.012]	
	(6.203)	***	(1.164)	(0.039)	***	(0.014)	***
Territory in dispute, FARC-AUC south (yes=1)	33.09	*	25.268	0.342		0.112	
	[14.830]		[13.821]	[0.082]	***	[0.023]	***
	(3.845)	***	(3.505)	(0.030)	***	(0.014)	***
Defined territorial control, EPL-AUC (yes=1)	-25.139		4.369	-0.149		0.073	
	[8.005]	**	[3.748]	[0.052]	**	[0.038]	*
	(8.677)	***	(2.631)	(0.055)	***	(0.018)	***
Defined territorial control, FARC (yes=1)	9.863		1.205	-0.064		-0.116	
	[4.874]	*	[4.506]	[0.036]		[0.023]	***
	(2.991)	***	(4.662)	(0.030)	**	(0.027)	***
Number of displaced people received (1995-2011)			-2.432			-0.011	
			[4.131]			[0.028]	
			(1.104)	**		(0.009)	***
Number of displaced people (1995-2011)			2.899			0.001	
			[6.613]			[0.015]	
			(2.477)			(0.009)	***
Distance to the main road (km)			0.161			0.004	
			[0.985]			[0.004]	
			(0.200)			(0.001)	***
Distance to the sea (km)			0.671			0.001	
			[0.808]			[0.002]	
			(0.217)	***		(0.001)	***
Observations	610		610	610		610	
R-Squared	0.077		0.205	0.168		0.306	
Municipal Fixed Effect	Yes		Yes	Yes		Yes	
Corregimiento Fixed Effect	No		Yes	No		Yes	

Notes – The unit of observation is *vereda*. Robust standard errors corrected for clustering at municipal level in brackets. Conley (1999) standard errors are in parenthesis. * Significant at 10%, ** significant at 5%, and *** significant at 1%. In the first two columns, the dependent variable is Number of Hectares per Owner, and Number of Plots per Owner is in the succeeding columns. All regressions included constants. Data source: authors' calculation, Government of Antioquia (2011).

Table VI. Land and Territorial Disputes: Informality of Land Property Rights,
Dependent Variable: *Land Tenure Formality Index*

	(I)		(II)	
Territory in dispute, FARC-AUC north (yes=1)	0.123 [0.078] (0.018)	***	-0.096 [0.118] (0.016)	***
Territory in dispute, FARC-AUC south (yes=1)	-0.155 [0.034] (0.012)	***	-0.209 [0.062] (0.015)	***
Defined territorial control, EPL-AUC (yes=1)	-0.019 [0.026] (0.017)		-0.101 [0.085] (0.027)	***
Defined territorial control, FARC (yes=1)	0.237 [0.041] (0.014)	***	0.264 [0.054] (0.011)	***
Number of displaced people received (1995-2011)			-0.008 [0.009] (0.004)	**
Number of displaced people (1995-2011)			-0.011 [0.010] (0.002)	***
Distance to the main road (km)			-0.001 [0.003] (0.001)	
Distance to the sea (km)			0.004 [0.001] (0.001)	**
Observations	610		610	
R-Squared	0.248		0.411	
Municipal Fixed Effect	Yes		Yes	
Corregimiento Fixed Effect	No		Yes	

Notes – The unit of observation is *vereda*. Robust standard errors corrected for clustering at municipal level in brackets. Conley (1999) standard errors are in parenthesis. * Significant at 10%, ** significant at 5%, and *** significant at 1%. Dependent variable: Land Tenure Formality Index. All regressions included constants. Data source: authors' calculation, Government of Antioquia (2011).