

Thomas Edward Flores*

Vertical Inequality, Land Reform, and Insurgency in Colombia

Abstract: How can we understand the origins and resilience of Colombia's long-running insurgency? A leading theory emphasizes the feasibility of insurgency, identifying drug trafficking as the main culprit. I propose an alternative theory of civil violence that emphasizes how bargaining over property rights in the face of deep vertical inequality deepens the subordinate group's social identity, heightens its sense of grievance, and facilitates collective violence. An examination of the history of land reform struggles in Colombia echoes this pattern. Struggles over land reforms in the 1920s and 1930s created new patterns of collective action that helped sustain *campesino* groups in the "independent republics" of the 1950s and 1960s and the creation of the FARC in 1964. This analysis suggests that the Colombian state's lack of credibility on issues of land reform demands a significant third-party enforcement of any peace agreement and confidence-building measures between the FARC and the Colombian government.

Keywords: Colombia, vertical inequality, land reform, civil war

*Corresponding author: Thomas Edward Flores, George Mason University, The School of Conflict Analysis and Resolution, 3351 N. Fairfax Drive, MSN 4D3, Arlington, VA 22201, USA, E-mail: tflores2@gmu.edu

We can superimpose a map of the 1950s guerrilla hot spots of the Opón, the plains, and Sumapaz onto a contemporary map of FARC or ELN fronts, or onto a late-nineteenth-century map of public land concessions, and find substantial continuity through the three eras.

(Palacios 2006, 166–167)

1 Introduction

Scholars of civil war tend to describe Colombia as an exceptional case of political violence and the tragic durability of its civil war seemingly merits the claim. Colombia is home to two of the world's oldest insurgent groups – *las Fuerzas Armadas Revolucionarias de Colombia* (FARC) and the *Ejército de Liberación Nacional* (ELN). Insurgencies in Central America may have ended in peace accords, but the Colombian conflict has waged on.¹

¹ The continuity of conflict in Colombia should not disguise variation in its intensity across space and time, as micro-analysis of Colombia shows (Daly 2012; Rodríguez and Daza 2012; Vargas 2012).

Why has insurgency endured in Colombia? Funding from drug trafficking and kidnapping remains a popular answer. In this telling, the FARC and ELN constituted a ragtag army before the cocaine boom offered new revenue opportunities that transformed them into more lethal forces. This explanation strips Colombia of its exceptionality. Instead of an outlier, Colombia represents a paradigmatic example of what Paul Collier and his co-authors call the “feasibility model” of civil war. In it, opportunity – as defined in part by funding, favorable terrain, and state weakness – holds the key to understanding the origins and endurance of insurgency (Collier et al. 2003; Collier, Hoeffler, and Rohner 2009; Fearon and Laitin 2003). Explanations emphasizing the role of inequality in shaping political violence seemingly have less to offer, both in Colombia and in the cross-national accounts cited above. Theories of horizontal inequality (i.e., between communal groups), seem a poor fit for Colombia, whose war is not deemed ethnic (Cederman, Weidmann, and Gleditsch 2011; Stewart 2008).

Drugs and crime undoubtedly have prolonged Colombia’s conflict (Angrist and Kugler 2008; Collier and Sambanis 2005; Sánchez, Solimano, and Formisano 2005; Vargas 2012). Yet the feasibility model fails to explain how insurgents originated and survived for nearly 20 years before the cocaine boom. The FARC first received real financing from drug trafficking in the early 1980s (Weinstein 2007, 290–291). By 1982, Colombia’s civil war had already outlasted El Salvador’s (1979–1992) and Lebanon’s (1975–1990). A prominent answer in the popular media tends to center on vertical (i.e., class) inequality. The *New York Times*, for example, reported that, “The conflict in Colombia had its origins in the unequal distribution of land in rural areas and the economic disadvantages of poor farmers” (Neuman 2012). Such intuitions are steeped in a long-running literature that links land inequality and political violence, one that has produced conflicting results (Cramer 2003). The role of land inequality in Colombia’s violence remains unclear; Daly (2012) finds little evidence that municipalities with higher poverty rates more likely witnessed insurgency between 1964 and 1984, while Rodríguez and Daza (2012) find that concentrated land ownership correlates with *lower* levels of political violence.

I propose an alternative theory of civil violence that both helps explain the origins and early persistence of Colombia’s civil violence and suggests steps needed to build peace in Colombia today. The process connecting vertical inequality and civil conflict is bargaining over economic rights. Shifts in relative prices tend to inspire disputes over economic rights to scarce resources. Where pre-existing property rights institutions do not clearly allocate those rights, opposed claimants bargain with the state and against each other over new rules that will inevitably create winners and losers. Vertical inequality, however, perverts the results of this bargaining by concentrating political power in a small dominant

group, privileging its economic rights. It also facilitates the use of violence by the, deepening in-group solidarity, creating a sense of victimhood, delegitimizing the state, lowering the opportunity costs of rebellion, and creating new forms of collective action.

This framework improves our understanding of the origins of civil conflict in Colombia. No one factor singlehandedly is responsible for Colombia's long insurgency, but exclusionary bargaining over land rights has played a critical role. Land conflicts in the early part of the twentieth century ended in a political bargaining process that deepened vertical inequality and set the stage for insurgency. The rapid expansion of coffee production in the late nineteenth century raised the value of previously uncultivated land, creating new conflicts between poor Colombians settling on public lands (*colonos*) and rich landowners claiming the land as their own (*hacendados*). The national government often intermittently sought to promote settlers' goals through land reform, but *hacendados'* political and coercive power, severely limited reforms' impact on *camepsinos*. This cycle in time helped set the stage for insurgency. Understanding land inequality as the origin of Colombia's civil war identifies different preconditions for its resolution than the feasibility model, which focuses primarily on Collier et al's (2003) advice to "cut the rebel financial jugular." The land reforms agreed to in Havana in May 2013 represent an excellent first step, but without third-party enforcement, an about-face in rich landowners' disposition towards reform, and confidence-building measures, the impact of such reforms may be minimal at best and conflict-producing at worst.

The remainder of this paper proceeds as follows. Section 2 reviews previous thinking on the link between inequality and civil war. Section 3 proposes a new understanding of how bargaining over property rights is a key link connecting vertical inequality and political violence. Section 4 examines how bargaining over land rights led to the creation of the FARC in 1964 and its endurance into the early 1980s. Finally, Section 5 considers the implications of this argument for peace in Colombia and elsewhere.

2 Inequality and civil war in Colombia and beyond

Scholars remain divided on whether deep inequality makes civil war more likely. The feasibility model of Paul Collier and his collaborators minimizes the impact of inequality on the onset of civil war (Collier et al. 2003, 2009). They point out that while grievances against the state are ubiquitous, civil war fortunately remains rare. Collier et al. (2003) explain this empirical fact by emphasizing

factors necessary for rebel organizations to recruit and equip an army. Fearon and Laitin (2003) and Fearon (2004) make a similar argument.

This literature collectively identifies at least two factors that make insurgency more feasible. First, the need for financing advantages groups with easier access to funding (Collier et al. 2009). Supportive client states and diaspora groups, natural resources (e.g., diamonds, coca), and criminal activities thus facilitate insurgency. Michael Ross (2004a, 2006) finds that countries with significant reserves of oil, gas, and diamonds have experienced a sharp increase in their probability of civil war since the early 1970s. Ross (2006) also finds that illicit products, such as gems, timber, and cocaine, increase the duration of civil war, agreeing with Fearon (2004). Second, rebellion requires military viability. The presence of a strong state that could easily crush an insurgency reduces the probability of rebellion. Weak states governing large, geographically inaccessible areas (e.g., mountains, jungles), on the other hand, present ideal circumstances for insurgency, particularly when such areas are populated by ethnic minorities (Fearon 2004).

The feasibility model has received substantial scholarly attention, but by no means represents the consensus on the role of objective grievances in motivating and prolonging civil war. Gurr (1970) cites relative deprivation, or the gap between people's material expectations and actual attainments, as the primary cause of political violence. Events that heighten people's expectations without also raising their attainments endanger political order, as expected by Huntington (1968). Gurr (1970, 118) thus cites political and economic reforms meant to alleviate relative deprivation as, ironically, a potential conflict flashpoint, since the attempt "intensifies their hopes that all the deprivations they have suffered in the past will be alleviated." Grossman (1991) presents a formal model in which insurrection emerges from conflict between a rich coterie surrounding a ruler and a more numerous group of peasants. Hirshleifer (1991) similarly claims that weaker actors tend to devote more resources in conflicts over power. A long line of authors follows Moore (1966) in identifying class inequality as a key grievance underlying democratization and political violence. Acemoglu and Robinson (2006) argue that many forms of political violence originate in conflicts over redistribution of wealth. The focus on inequality also encompasses a new research agenda contending that ethnic conflict is the direct consequence of horizontal inequality, defined by Stewart (2008) as "inequalities in economic, social or political dimensions or cultural status between culturally defined groups" (3). Stewart (2008) contends that horizontal inequalities in the political, economic, social, and cultural spheres drive conflict, particularly as horizontal inequalities rapidly widen and economic and political inequalities reinforce each other.

Scholars proposing a link between inequality and conflict often focus on the special role of land. Gurr (1970, 66) claims that the intensity of relative deprivation increases in the salience of the value, or the “average strength of commitment to the desired value position.” Land seems a classic case of a high-salience material good. Boix (2008), like Acemoglu and Robinson (2006), contends that conflict over inequality underlies civil war, but that the link depends on asset mobility. Unequal societies more likely witness intense political violence when assets are immobile, since dominant elites cannot simply evade redistribution by moving assets out of the country.

A long empirical literature unfortunately offers little consensus on this question. Collier et al. (2009) find little statistical evidence that economic inequality, as measured by the Gini coefficient, influences the probability of civil war, reinforcing their dismissal of grievance as a cause of war. Wimmer, Cederman, and Min (2009), in contrast, find that political exclusion of ethnic groups raises the probability of armed conflict, based on new data measuring the degree of horizontal inequalities at the group level. Cederman et al. (2011) develop this approach further, finding that rich and poor groups more likely participate in armed conflict. Neither has the statistical testing of the role of land inequality in civil war yielded a clear empirical consensus.² Russett (1964) found a strong positive correlation between land inequality and violent conflict in an early statistical study and Riedinger (1987) argue that high rates of landlessness increase the probability of civil war and reduce agricultural productivity. Yet Muller and Seligson (1987) find that the incidence of civil conflict responds most strongly to income, not land, inequality, findings that became the subject of an empirical debate (Wang et al. 1993). Midlarsky (1988) argues that “patterned inequality” in land ownership underlies political violence, a finding subjected to a challenge and rejoinder in Muller et al. (1989). Seligson (1995) used data on land surveys to argue that successive urbanization, out-migration, and land reforms during and immediately after El Salvador’s civil war decreased the threat that landless peasants presented to peace, a claim subsequently contested by Diskin (1996) and Paige (1996). More recent studies, however, have reinforced the importance of land inequality. Boix (2008) and Jensen and Sørensen (2012) find that the unequal distribution of land is strongly correlated with civil conflict.

Why has an empirical consensus on the role of land inequality conflict failed to materialize over the last 30 years? One reason remains the difficulty of conceptualizing and measuring land inequality. Authors have variously concentrated on landlessness as a provider of easily recruited insurgents (Muller and Seligson

² The vigor of the debate can be seen in the frequency with which authors challenged each others’ findings in subsequent journals.

1987; Prosterman and Riedinger 1987; Seligson 1995), family-owned farms as a measure of the existence of an agricultural middle class (Boix 2008; Jensen and Sørensen 2012), and the Gini coefficient of land ownership as a general measure of inequality (Muller and Seligson 1987; Russett 1964). Yet the causes of confusion run more deeply, as Cramer (2003, 403) proposes in his discussion of inequality and conflict:

... the answer might lie more in the social relations within which economic inequality is embedded, the relations that produce outwardly visible signs likely to be captured in household survey data, Gini coefficients and the like. Here the precise score is less relevant than the precise and historically evolving characteristics of those social relations.

Cramer (2003) therefore argues that the role of inequality in creating and perpetuating political violence depends on the socio-political context in which the inequality is embedded. Describing that context remains a daunting goal for the kind of cross-national analysis that has dominated the field.

The feasibility model, however, has tended to dominate academic discourse on Colombia's civil war. The endurance of insurgency in Colombia, in this telling, is a product of opportunities for drug trafficking, Colombia's notoriously difficult geography, and a sclerotic state. More recent analyses of Colombia's political violence focus squarely on the question of drugs and crime. Angrist and Kugler (2008), for example, conclude that, "the Colombian civil conflict is fueled by the financial opportunities that coca provides" (191). Sánchez, Solimano, and Formisano (2005), writing in a volume co-edited by Collier, argue that crime associated with cocaine production has fueled the Colombian civil conflict. Vargas (2012) examines the duration of episodes of conflict at the municipal level between 1988 and 2004 and finds that the presence of illegal rents from coca cultivation prolong violence. Rodríguez and Daza (2012) also analyze municipality-level between 1988 and 2006, surprisingly finding that municipalities with a deeper concentration of land ownership experienced lower levels of violence.

This view rejects any explanation that income or land inequality as the reason behind Colombia's civil war. This may be surprising given Colombia's perennial ranking as one of the most unequal countries in the world; according to the Standardized World Income Inequality Database (SWIID), Colombia possessed the world's third most unequal distribution of income in 2006, as defined by the oft-used Gini coefficient (Solt 2009). Analysis of Colombia's civil war in popular media often emphasizes this extreme inequality as a root cause of civil war. This discrepancy between the conventional and academic wisdoms in part emerges from the latter's temporal focus. Most statistical studies of Colombia's civil war commence their analysis after the cocaine boom of the early 1980s, a

necessary evil given data limitations. Yet such studies cannot explain why insurgency formed and persisted for two decades prior to receiving major revenues from drug trafficking.³ Theories of horizontal inequality similarly remain silent on Colombia, since they concentrate on conflicts between Stewart (2008) calls “culturally defined groups.” Colombia’s civil war does not qualify, despite the devastation it has wrought on the Afro-Colombian community. Wimmer et al. (2009), for example, do not include Colombia as a conflict onset in their analysis of “ethno-nationalist” conflict.

3 A theory of vertical inequality and civil war

I turn now to a new understanding of the origins of civil conflict that clarifies the role of land inequality by responding to Cramer’s call to examine the socio-political relations in which economic inequality is embedded. The key link between economic inequality and civil conflict is bargaining over economic rights.

3.1 Bargaining for economic rights

The model begins with a period of what might be termed “normal” economic activity, during which institutions govern the allocation and enforcement of economic rights. Economic rights are the bundle of rights an economic actor possesses to use various pieces of property, what Coase (1960, 44) refers to as “circumscribed uses” of scarce economic resources. Economic institutions, then, are defined as the sets of rules and procedures by which economic rights are specified, allocated, and enforced. Alchian and Demsetz (1973) emphasize that these institutions define the nature of economic competition, especially by pacifying it. Exogenous socioeconomic changes, however, end this equilibrium by shifting relative prices; such changes likely include changes in technology, consumer demand, or supply of a key resource (Anderson and Hill 2003; Libecap 1989).

Changes in relative prices, whatever their source, often render existing economic institutions obsolete and create demand for changes to institutions from economic actors with incompatible economic interests. These demands for changes chiefly derive from concerns over distribution and private gains. Economic actors place value primarily on the ability of institutions to protect their economic rights. This places them in conflict with others who might prefer an alternative set of changes. Institutional changes made as a result of bargaining

3 See Daly (2012) for an important recent exception.

not only will assign the economic rights in question, but also determine how that assignment will be enforced and how future disputes of a similar kind will be resolved. Libecap (1989) supports such a vision. He argues that demands for efficiency likely instigate institutional change, but economic actors' concerns with resource distribution determine institutional outcomes. The modification of existing property rights institutions, therefore, mainly consists of resolving distributional conflicts among various economic actors. Knight (1992) strengthens this point further still, arguing that distributional consequences drive changes to institutions. Sened (1997) also argues that changes to property rights institutions are political in nature, involving a complex bargaining process between politicians and economic actors. Acemoglu, Johnson, and Robinson (2006) add a dynamic element to this depiction, arguing that the distribution of economic resources resulting from bargaining in one period affects the distribution of resources in future periods. Politicians thus face the demands of some subset of actors, each of whom prefers discriminatory changes to economic institutions.

3.2 Bargaining in the shadow of inequality

How do politicians allocate and enforce private property rights in the face of incompatible claims by self-interested agents? The answer lies in the rules of the competition. One important aspect of that competition lies in formal political rules regulating political competition over economic rights. In democracy, for example, those rules theoretically allow diverse groups in society to lobby the state and encourage legislators, judges, and executives to adjudicate fairly amongst competing interests in society. In non-democratic states, access to the state may be denied on the basis of gender, ethnicity, religion, or region.

Vertical inequality, however, dramatically alters the nature and consequences of bargaining over economic rights. Acemoglu et al. (2006) conceive of two forms of political power. *De jure* power originates in formal political rules, while *de facto* power originates in the extra-legal means groups and individuals possess to affect political decisions. Chief amongst these means is the distribution of economic resources. Prosperous actors likely retain significant bargaining advantages over their less affluent peers. They likely can dedicate more resources to the bargaining process, drawing greater attention to their claims and permitting greater access to the organs of the state. They likely also command greater social respect. More affluent actors more easily solve the collective action problem, by virtue of their smaller number and greater resources. Actors with greater economic resources, then, likely possess distinct advantages in bargaining over economic rights. Small groups of richer actors tend to triumph in disputes over

economic rights with larger and poorer groups of actors, even when democracy relatively equally distributes *de jure* political power. Prosperous citizens can more easily gain the support of politicians and purchase private coercive power. As Acemoglu et al. (2006) anticipate, vertical inequality also has a self-perpetuating quality. A highly unequal distribution of economic resources yields differentials in *de facto* political power which biases the results of future bargaining over economic rights only reinforces such actors' future *de facto* power.

This pattern of a small, prosperous group that sees its claims to economic rights continually favored over a larger, poorer group creates two parallel economies – a dominant group of protected rights and a subordinate group of unprotected rights. This telling finds its origins in North (1981)'s understanding of rulers as “discriminating monopolists” who seek to create a package of discriminated protection of private property rights that maximizes her revenues. Haber, Razo, and Maurer (2003)'s analysis of the Mexican economy during its long civil war also echoes this claim as they argue that politicians can and do differentiate the protection of private property rights among citizens and sectors of the economy.

3.3 Unequal bargaining and civil conflict

Economic discrimination not only exacerbates vertical inequality, but also raises the probability of civil conflict, for at least three reasons. First, the dominant group likely has more access to coercion, which it can use against the subordinate group in an effort to forcibly resolve property rights disputes. The dominant group can leverage its superior economic resources to purchase arms. The disproportionate *de jure* power held by members of the dominant group in especially unequal societies also allows them to co-opt state resources, relying on their connections to politicians to encourage the coercion of subordinate group members. The use of violence by a dominant group serves many functions. It may help to establish “facts on the ground” in a dispute by forcibly displacing opponents in property rights disputes from disputed lands or resources. It also may serve to enforce property rights decisions if a subordinate group disputes the resolution. In disputes over property rights, then, dominant groups will often initiate violence against weaker subordinate groups. That violence may be one-sided, but may also begin a spiral of violence between the dominant and subordinate groups that fight back.

Second, bargaining over economic rights raises and then frustrates the expectations of subordinate group members who believe that their rights will be protected. Doing so delegitimizes the state and heightens social frustration. Huntington (1968), for example, identifies unmet rising expectations as a cause of social conflict. Gurr (1970) contends that violent conflict often results from rising

expectations that remain unmet and cites as especially dangerous situations in which “men who have been persistently deprived of valued goods and conditions of life are led to believe that their government is about to remedy that deprivation, but then find the hopes false” (121). Albertus and Kaplan (2013) argue that land reforms, one form of bargaining over property rights, actually spur political violence when they are pursued in a piecemeal fashion due to strong opposition from elites whose interests are threatened. The political process of bargaining over economic rights mirrors this pattern by submitting a subordinate group’s claim to a political process that provides specific evidence to members of the subordinate group that the state is unlikely to respect their claims to economic rights.

Third, unequal bargaining over economic rights creates and intensifies the collective identity of members of the subordinate group. Social psychologists have long noted that direct competition can facilitate the formation of social identity (Tajfel and Turner 1979). Scholars of realistic conflict theory have long argued that competition over scarce resources forms the basis for social identity formation (Sherif 1966). Duckitt (1994) extended this logic to competition between unequal groups, finding that perceived coercion by the dominant group eventually yields challenge from the subordinate. The logic of social psychology therefore strongly suggests that by pitting two unequal groups in political competition over scarce resources, bargaining over economic rights helps forge collective identities.

Fourth, the reinforcement of a collective identity within the subordinate group not only heightens motivation, but also facilitates collective violence. Wood (2003), for example, finds that *campesinos* in El Salvador’s civil war supported the leftist *Frente Farabundo Martí para la Liberación Nacional* or FMLN, in part because they intrinsically valued participation and defiance of a government they resented. They felt the “pleasure in together changing unjust social structures through intentional action” (235). Together, they occupied *haciendas* and supported the FMLN through deliberate action. Weinstein (2007, 48) argues that strong social endowments, which he defines as “distinctive identities and dense interpersonal networks that can be readily mobilized in support of collective action,” facilitate a particular kind of insurgency that less likely engages in indiscriminate violence against civilians.

4 Bargaining over land rights and the origins of the FARC

Section 3 offers an alternative account of how vertical inequality can lead to war. Economic inequality, as discussed by Cramer (2003), is embedded in political

inequality that biases bargaining over economic rights and exacerbates economic inequality further still. This pattern heightens the risk of civil war. Here, I argue that decades of land conflicts in Colombia fit this pattern, helping create propitious conditions for insurgency.

4.1 Land reforms in the 1930s

Two primary factors characterized land distribution patterns in Colombia in the late 1800s. First, land ownership was often unclear. The Italian geographer Agustn Codazzi estimates that approximately 75% of Colombia's area consisted of *terrenos baldos*, or public lands, during the 1850s (LeGrand 1986). Frequent civil war bankrupted the central government, which turned to the *baldíos* as a means to paying debts (Colombia 1931). The Colombian Congress began in 1838 to issue waves of public debt payable in land, with no limit on the size of the land grants or the number of land grants one citizen could acquire (LeGrand 1986, 11–12). Such land certificates first served as rewards to soldiers in the wars of independence and later as remuneration to victors in Colombia's periodic civil wars (Safford and Palacios 2002, 157). Yet the loss of records from the colonial period, unclear demarcation of colonial land grants, a shortage of trained surveyors, and the weakness of the Colombian government frequently left ownership unclear.

Second, formal land ownership was highly concentrated. The lack of a comprehensive land census complicates any effort to re-construct land distribution during this period. Records do exist for land concessions, however, thanks to a report of the Colombian Ministry of Industries (Colombia 1931) that recorded land concessions between 1823 and 1931. Table 1 records the number of concessions by their size and calculates the percentage of public lands granted for each category, reproducing data from LeGrand (1986). To understand Table 1 better, we can rely on Machado (1988, 93), who classifies farms with fewer than 3 hectares of land as small farms, whereas those between 3 and 12 hectares as family farms. Palacios (1980, 176) sets these limits slightly differently, defining a small farm as having fewer than 10 hectares of land and a medium-sized farm as fewer than 50 hectares. With this basis in mind, Table 1 signals that the Colombian government generally distributed land in large estates. Parcels smaller than 20 hectares, roughly corresponding to small and family-sized farms, comprised only 1.2% of allocations. Holdings between 21 and 100 hectares, which we might characterize as medium-sized, only represented 2.6% of the total area allocated. Parcels larger than 1000 hectares, in contrast, comprised over three-quarters of all land allocated between 1823 and

Table 1: Land adjudications, 1823–1931.

Size (in hectares)	Area (% of total)
0–20	1.2%
21–100	2.6%
101–500	7.1%
501–1000	8.0%
1001–2500	20.3%
2501–5000	18.4%
5000+	37.6%

1931.⁴ LeGrand (1986, 43) does note that the size of allocations decreased over time, as more medium-sized cultivators received land and the maximum allocation decreased.

Peasants also confronted major challenges in receiving legal title to their small holdings. Colombian law demanded several prohibitively expensive steps to obtain title, including hiring a surveyor and lawyer and paying a series of fees (LeGrand 1986; Palacios 1980; Sánchez, López-Uribe, and Fazio 2010). They often opted for what one Colombian historian has called a “precarious independence” by squatting on public lands and engaging in subsistence farming (Kalmanovitz 2003, 106). Until reforms in the 1870s and 1880s, however, their occupation could not form the basis of legal title under Colombian law (LeGrand 1986, 12; Colombia 1931). Neither was the central government particularly successful in enforcing land titles (LeGrand 1986).

Weak economic institutions, however, failed to spur serious economic or legal conflict over land ownership. This lack of conflict reflected the relatively somnolent post-independence economy. This changed after 1870, when coffee thrust Colombia onto the international economic stage, helped along by increasing demand for the product in Europe and especially the United States (Palacios 1980, 14). The coffee boom propelled migration to Colombia’s frontiers, as settlers cleared previously unexplored land in the hopes of growing coffee. In the west, they moved south from Medellín, building new towns such as Manizales, Armenia, and Pereira. In the east, a second wave drove from Bogotá into previous unexplored portions of Cundinamarca and Boyacá, particularly the region known as Sumapaz, stretching across the borders of Cundinamarca and Tolima (Marulanda 1991). The initial stages of exploration usually brought peasant farmers, or *colonos*.

⁴ Sánchez, López-Uribe, and Fazio (2010) come to different conclusions regarding the proportion of land granted to peasants, finding that peasants received 45% of land titled between 1853 and 1930. These calculations, however, assume that the average farm granted to peasants averaged 511 hectares, over ten times as large as what Palacios (1980) would classify as medium-sized.

This colonization drive created tensions with land entrepreneurs from the upper and middle classes, who also sought access to public lands (Palacios 1980, 25). In many cases, these land entrepreneurs represented the very upper stratum of Colombian society. Many were also drawn from more recently prominent families, usually from urban areas, who had attained wealth as merchants, lawyers, or bankers (LeGrand 1986, 33). These entrepreneurs sought to create *latifundios*, or large estates. Prospective *hacendados*, or large estate owners, frequently targeted *colonos'* lands for expropriation. Land entrepreneurs recognized that *colonos* had often chosen the most fertile land with access to markets and transportation. Their improvements to the land, or *mejoras*, augmented its market value and decreased the time and effort to ready the land for production. Intensifying entrepreneurs' desire for already settled tracts of land was the presence of the *colonos* themselves. Peasants' attempts at resettlement decimated the available labor force, raising production *hacendados'* costs.

Property rights institutions largely could not distinguish between publicly owned *baldíos* and privately held lands, creating large areas of undefined borders, absentee owners, and unexploited titles. *Colonos* could expropriate private property purely out of ignorance, since public and private lands intermingled without clear markers. At the heart of the conflict lay the allocation of rights to valuable resources, which would affect the distribution of gains to economic activity. The conflicts also pitted two models of economic development – small-scale, independent production and large commercial estates utilizing cheap labor.

The resolution of land conflicts often devolved to local governments, a reality reinforced by the congenital weakness of the central government and the heavily federalist bent of the Colombian constitution until 1888. Mayors played an integral role in adjudicating disputes over land. Many *hacendados* hailed from urban areas and preferred to remain there, rather than on their holdings. They nevertheless appear to have successfully influenced the appointment of mayors through their connections in Bogotá, departmental capitals, and municipal councils (LeGrand 1986, 74). Judges, too, proved generally sympathetic to *hacendado* claims and, when more inclined to the *colonos*, found their rulings ignored by municipal councils and mayors. Confusion over legal land title combined with *hacendados'* *de facto* power at the local level created an ideal environment for *hacendados* to gain legal recognition of their rights and the concomitant economic benefits. They possessed a variety of legal and administrative instruments to force the allocation of land rights, including obtaining a public land grant legally and then writing deeds that claimed ownership of a far larger tract than granted legally. Their greater power to hire surveyors and lawyers meant *colonos* often lost these disputes. Often, these conflicts shifted from the legal arena to the disputed lands themselves, as both *colonos* and *hacendados* turned to violence to defend their claims.

Coffee fueled a boom in the Colombian economy. Coffee exports during the 1920–1924 period had increased eleven times since the turn of the century (Kalmanovitz 2003, 220). Healthy international prices for coffee further boosted the industry, roughly doubling between 1900 and 1925 (Kalmanovitz 2003, 345). Yet a combination of larger than expected coffee harvests in Brazil and the global depression brought the boom to an end. The transition from boom to bust created deepening conflicts over tenant contracts and land rights. Sharecroppers demanded the right to plant coffee on their holdings, which was largely prohibited by *hacendados*. And *campesinos* again began to move to *baldíos*, clearing land for family farms (LeGrand 1986, 107). They forcefully questioned the legality of *hacendados*' claims to private property appropriated in the first wave of land conflicts in the nineteenth century.

Each side intensified their tactics through violence and new forms of collective action. *Campesinos* created new organizations, particularly unions, peasants' interest groups, and quasi-socialist collectives. The boom period had witnessed the creation of the first Colombian labor unions. Organizations such as the *Partido Socialista Revolucionario* (Revolutionary Socialist Party, or PSR), the *Partido Agrario Nacional* (National Agrarian Party, or PAN), and the *Unión Nacional Izquierdista Revolucionaria* (National Leftist Revolutionary Union, or UNIR, the Spanish word for “to unite”) promoted agricultural causes (LeGrand 1986; Marulanda 1991). The Communist Party of Colombia (PCC) organized to create collectives and squatter organizations in permanent colonies. The most famous of these, the *Colonia Agrícola de Sumapaz*, formed by Erasmo Valencia of PAN, included more than 6000 squatters and encompassed nearly all of the Sumapaz region (LeGrand 1986, 128–129).

The two sides would fight both in the field and in the halls of power for the next several years. The return of the Liberal Party to power in 1930 seemed to set the stage for real reforms. President Alfonso López Pumarejo and his “revolution on the march” sought to champion further reform after his election in 1934. Yet the subsequent legislation frustrated *campesinos*' hope (LeGrand 1986; Marulanda 1991; Safford and Palacios 2002). Law 200 of 1936 created a complicated process for adjudicating conflicting claims. It also re-allowed large land concessions. The law did create checks on *hacendados*' ability to evict squatters, particularly their ability to use the police for this function (Martínez 1939, 126–127). The opaque wording of these provisions largely frustrated this section of the law, however (Marulanda 1991, 195–197). Finally, the law did little to regulate tenant farmer contracts. In effect, the law allowed estate owners several loopholes to evict squatters, retain lands appropriated by force, and expand their holdings in the future – loopholes they would soon exploit. The years after 1936 saw *hacendados*' allies in Bogotá further water down the land reform by obstructing the

deployment of land judges and passing legislation that allowed *hacendados* to retain land slated to return to public ownership (LeGrand 1986).

LeGrand (1986) concludes that the 1936 land reform did little to modify the system of large estates or improve peasants' incomes, though it did convert them to wage laborers instead of share-croppers. Neither did the legislation galvanize agricultural production. Landlords increasingly put their land to pasture because it required fewer workers and more quickly showed the kind of occupation required by Law 200. Fears continued that agricultural production would raise the price of food (LeGrand 1986, 161–162). Evidence suggests, however, that land disputes did diminish overall during the period immediately after passage of Law 200, a result of recovery from depression and the sub-division of *haciendas*.

4.2 Land reform and the origins of the FARC

Land struggles therefore faded to the background during the twelve years that passed from 1936 to 1948, when Liberal politician Jorge Gaitán was assassinated on the streets of Bogotá, sparking the urban mayhem of the *Bogotazo* and then the predominantly rural violence of *La Violencia*. Liberals and Communists, however, did seek to mobilize electoral support in these areas, though they generally turned away from agrarian reform. Neither did *la Violencia* initially revolve around land issues. The traditional narrative instead is that of a struggle between the two traditional political parties for power at the local, regional, and national levels. Each party had forged deep-seated loyalties within Colombian society and Liberal and Conservative guerrilla groups clashed, particularly in the department of Tolima, the eastern plains (*llanos*), western Antioquia, and northwestern Cundinamarca (Palacios 2006, 160). Many Liberal guerrillas would go on to become early members of the FARC; Pedro Antonio Marín Marín, better known by his *nom de guerre* Manuel Marulanda Vélez, or “Tirofijo” (“Sureshot”), hailed from a Liberal peasant family, for example. Yet a more traditional civil war between Liberal and Conservative armies never took place. The 1953 coup d'état by General Gustavo Rojas Pinilla, replacing Conservative President Laureano Gómez with the support of both Conservatives and Liberals, mostly ended the violence between the two parties. Rojas immediately offered an amnesty to guerrilla groups; most Liberal guerrillas would lay down their arms by September of that same year (Palacios 2006, 163–164). By 1958, Conservative and Liberal elites, fearing that further violence would challenge their shared hegemony, had agreed to the National Front, in which the parties would alternate control of the presidency.

The denouement of the Liberal-Conservative violence, however, did little to alleviate a different, more localized form of violence that had as one of its roots

continuing frustration over land inequality. Chernick (2007) describes how a relatively small group of former Liberal and Communist guerrillas refused to lay down their arms. Several reasons explain this decision. Many did so out of a sense of betrayal by Liberal elites who consented to the exclusion of other political movements in the National Front, assassinations of demobilized guerrillas, and military action against groups slow to surrender their arms (Sánchez 1992, 94). Daly (2012) emphasizes that the mobilization of Liberal and Communist guerrilla groups during *la Violencia* created “organizational capital” that would facilitate future violent groups.

Frustrated land reform, however, facilitated the creation of armed *campesino* groups. Land conflicts returned, but their intensity and form had turned more violent. *La Violencia* had provided a pretense for elites of both political parties to use violence to evict *colonos* (Palacios 2006); Roldán (2002), for instance, finds that seizures of land were rife in Antioquia. The PCC, which had a history of organizing in favor of *campesinos* dating back to the 1920s, helped establish armed “self-defense” units in coffee regions, such as Cunday, Villarica, and Icononzo (Palacios 2006). Many of the participants in these movements were veterans of the land conflicts of the 1920s and 1930s, such as Juan de la Cruz Varela, who had joined the PCC in 1950 and led a movement in Sumapaz (Molano 1992, 198). These groups, at least until the early 1950s, rejected the overthrow of the state, instead focusing on armed defense of the rights of settlers and sharecroppers (Palacios 2006, 164). Continuity in the self-defense units’ membership and focus on land rights suggests that the social capital underlying these units partially originated in the land movements in the 1920s and 1930s. Daly (2012) finds that land conflicts between 1870 and 1931 are a strong predictor of organizational capital formed during *la Violencia*; the presence of past agrarian conflict increased the probability of violence in 1948–1958 seven times.

Peasant organizations inevitably clashed with local landowners, the police, and the Colombian Army. In Sumapaz, In Puerto López, Meta, Guadalupe Salcedo created a group that in July 1952, militarily defeated an army unit of 100 soldiers in a pitched battle (Sánchez 1992, 94). Rojas sought to dislodge these nascent organizations with military force once he had gained the surrender of many guerrilla groups with his 1953 amnesty. These actions drew the support of Alfonso López Pumarejo, the former Liberal president (Sánchez 1992, 94). An attack on armed peasants in Sumapaz in Cundinamarca and Villarica in Tolima in 1955, known as the War of Villarica, involved over 10,000 army soldiers in a conventional assault. The attack dispersed peasants into several, usually more remote, areas, including south and east into Meta and west into Tolima. Soon, an area including southwestern Tolima, Quindío, northern Cauca and Huila, and eastern Meta became a bastion for so-called “independent republics,” new peasant enclaves that

sought land ownership and autonomy from the state. These accepted peasants fleeing the violence elsewhere. Places such as Marquetalia, Riochiquito, Guyabero, Viotá, and El Pato would in time also become the first redoubts of the FARC (Brittain 2010; Gilhodès 1970; LeGrand 2003; Palacios 2006).

This violence in the early and mid-1950s was accompanied by efforts by political elites to democratize access to land. Rojas took steps to enact land reforms upon taking power in 1953. This continues a peculiar pattern; the national government passed legislation meant to democratize access to land no fewer than ten times between 1917 and 1930 (LeGrand 1986, 99) and then again in 1953 and 1961. The ambitious 1961 reform created the *Instituto Colombiano de la Reforma Agraria* (INCORA). These reforms undoubtedly yielded positive results; INCORA expanded the legal rights of settlers by titling over 2.8 million hectares of land between 1961 and 1970 and allowed 3.5 million hectares of claims to *baldíos* to expire (Tai 1974). Yet many scholars conclude that technical problems, the opposition of large landowners, and uneven support among political elites limited these reforms' effectiveness (Palacios 2006; Tai 1974). The 1961 land reform actually saw little redistribution of land; in the first ten years after the passage of the 1961 land reform only about 125,000 hectares had been distributed, leading Tai (1974, 533) to conclude that "only a small number of farmers who happen to be in the project areas have benefited, with the bulk of Colombian *campesinos* totally unaffected." Albertus and Kaplan (2013) find that where land reform in Colombia after 1961 encountered major opposition from rich landowners, it only partially proceeded and actually increased guerrilla activity.

The result was continuing concentration in the ownership of land. Zamosc (1986) finds that in 1960 the top 0.2% of farms comprised 30.4% of all farmland, while the bottom 62.5% of farms comprised only 4.5% of all farmland. His data also suggest that the land distribution continued to concentrate after 1960, even after land reforms in 1953 and 1961. The Gini coefficient for income inequality also rose between 1938 and 1964 (Cardenas 2001, 35).⁵ Finally, data from Daly (2012) show that municipalities with higher land values and access to roads also had higher rates of inequality, suggesting that rich landowners remained successful into the early 1960s in dominating access to higher-quality land.⁶

Continuing land inequality and violent conflict with successive Colombian governments hardened peasants' collective identity and created new forms of

⁵ Income inequality obviously does not capture perfectly the dynamics of land inequality, but given the context of continuing land inequality, deteriorating income inequality is suggestive.

⁶ This discussion is based on regression analysis using replication data from Daly (2012). Results are described in the appendix.

social capital, allowing them to survive the coming government onslaught. The state's violence against the peasant republics permanently transformed many refugees' attitudes towards the Colombian state and many now saw the government as an inveterate enemy (LeGrand 2003). Molano (1992, 199) argues that repeated experiences of violent expulsion from their land convinced many formerly peaceful *campesinos* of the need to take up arms – and for those with previous experience during *la Violencia*, of the need to return to them.

The early “independent republics” also exhibited new forms of collective action among peasants at the local and regional levels, in part facilitated by the PCC. Gilhodès (1970, 437) describes a system in which peasants living in El Pato, one of the republics, paid taxes to a central syndicate. A community leader, or *parcelador* distributed plots to peasants and otherwise held executive powers, including resolving land disputes. The *parcelador* formed a council with other community leaders, including representatives of the various neighborhoods in the republic (Gilhodès 1970, 437). In the *llanos*, leaders held multiple conferences, from which they passed new laws (the First and Second Laws of the Llanos) that established the outlines of new governance forms, including rules for the judiciary, taxation, education, and marriage (Sánchez 1992, 97). Molano (1992, 205) argues that by the early 1960s, many of the republics had created systems of taxation in which peasants paid an “obligation” to the republic, paid in cash, crops, or labor.

Events would sorely test these new and intensifying patterns of peasant identity and collective action. The initiation of the National Front in 1958 allowed politicians to concentrate on internal security, particularly with the cooperation of the United States. In 1959, Brigadier General William P. Yarborough visited Colombia to assess the Colombian government's counter-insurgency capacity, recommending the creation of new military and civilian structures, including paramilitary groups (Leech 2011, 14). This cooperation intensified with the initiation of Plan LASO (Latin American Security Operation), which cemented US-Colombian cooperation under the rubric of the Alliance for Progress (Brittain 2010, 12). The Colombian government initiated Operation Marquetalia in an attempt to end the threat posed by one of the key “independent republics,” under the command of Marulanda. The Colombian government dedicated sizable resources to the fight over Marquetalia; Brittain (2010, 12) estimates that the Colombian government sent 16,000 soldiers, or about one-third of its army, and spent \$17 million (roughly \$127 million in today's dollars) on the operation. Multiple sources document the use of napalm by the Colombian army, a sign of the intensity of the operation (Brittain 2010, 12; Leech 2011, 14).⁷

⁷ Napalm is a chemical agent used in incendiary bombing. It can cause severe burns, intense pain, and asphyxiation. The United Nations Convention on Certain Chemical Weapons (CCW), passed in 1980, bans its use against civilian populations.

The results of the operation were mixed. The government had retaken the area around Marquetalia, but failed to annihilate the armed guerrilla force, which successfully escaped with few if any killed or captured. There is also evidence that the self-defense forces within Marquetalia successfully evacuated civilians (Brittain 2010). The severity of Operation Marquetalia also finalized the slow transformation of agrarian groups seeking land reforms into insurgent groups seeking the overthrow of the State. The next year, guerrillas who had survived Operation Marquetalia formed the *Bloqué Sur* (Southern Bloc), a completely mobile force, and in 1966, the FARC was officially born. Palacios (2006, 193) emphasizes that the FARC differed from other embryonic insurgent groups in that it more directly emerged from the agrarian mobilizations of the 1920s, 1930s and during *la Violencia*; the movement was thoroughly a peasant movement. He remarks that the FARC's "collective level of organization, discipline, and cultivation of local support networks far exceeded anything the Colombian military had seen" (ibid, 193). Gilhodès (1970, 445) describes peasant sympathy for the new rebel group and Palacios (2006, 266) describes the FARC's "successfully woven networks of support and sympathy" in the Colombian countryside. Molano (1992, 210) cites the FARC's ability to slow the rate of expropriation of peasant land by large landowners and provide certain public goods as reasons for its ability to survive its difficult early years.

5 Discussion and conclusions

This paper began with an empirical puzzle – how did the FARC survive between its birth in 1964 and its decision to engage in drug trafficking to fund its explosive growth in the 1980s and the 1990s? The feasibility model of civil war minimizes the role of economic inequality in this narrative, emphasizing instead the weakness of the Colombian state and the role of drug trafficking. Theories of land inequality, meanwhile, come to very different conclusions regarding the impact of land distribution and redistribution on civil war. Section 3 proposes a model of civil conflict that links vertical inequality to civil conflict through the mechanism of bargaining over economic rights. Self-interested actors usually must rely on the state to resolve disputes over rights to property. Yet vertical inequality perverts this process by privileging the rights of a dominant group over those of a subordinate group. The result is continuing economic discrimination against the subordinate group, which in turn can lay the foundation for civil war by creating frustrated expectations, forging a deep sense of identity, and facilitating collective action within the subordinate group.

Section 4's analysis of peasant movements between the 1920s and early 1960s supports this theory. Continuing land conflicts and largely unsuccessful land reforms helped provide the motivation and organizational capacity that enabled the FARC to survive for nearly 20 years. Three patterns are clearly visible. First, the FARC's creation represented the culmination of a decades-long movement seeking recognition of peasants' private property rights. Peasants dominated the FARC's leadership, unlike other insurgent groups. Other forces certainly propelled the insurgency of its earlier years, but land inequality played a critical role. Weinstein (2007) distinguishes between two ideal types of insurgent groups: those relying on social endowments, which more successfully maintain discipline and treat civilians relatively well, and those relying on economic endowments, which encounter more disciplinary problems and more likely indiscriminately coerce civilians. Studies focusing on drug trafficking as a source of funding for the FARC implicitly place it in the latter category (Angrist and Kugler 2008; Sánchez, López-Urbe, and Fazio 2010). Weinstein (2007, 294), however, emphasizes that, despite the endowment shock of drug money, the FARC's social endowments and concomitant strong internal institutions have limited the corrosive effects of "easy money." There can be little doubt that coca cultivation has transformed the FARC, but a historical and rigid focus on drugs risks misunderstanding the group's origins and aims.

Second, the conventional understanding of the Colombian state as "weak" conceals a different perspective on the role of the state in the development of civil war in Colombia. As Section 4 describes, the Colombian state sought to quell rural unrest with military action and land reform. In the last 30 years, the Colombian political class has fought drug cartels, diminished the FARC in combat, demobilized paramilitary groups, and written a new constitution. These are not the characteristics of a powerless state. Huntington (1968, 1) declared that, "The most important distinction among countries concerns not their form of government but their degree of government." This analysis, in contrast, stresses not the degree of government, but its distribution. Rich landowners consistently could access the local and national state apparatus to protect their interests, while smallholders found the same avenues closed to them. The state, in the language of Section 3 consistently engaged in economic discrimination through biased bargaining.

Third, Colombia's decades-long civil conflict should be analyzed less in terms of national narratives and more in terms of local ones. Kalyvas (2006) finds a major disjuncture between national discourses of the Greek Civil War and the lived realities of those on the ground, for whom personal and local conflicts represented the main cause of violence. National narratives of Colombia's conflict tend to focus on issues of Communist infiltration, terrorism, crime, drug trafficking, and state failure. Yet Chernick (2007, 56) emphasizes the local when he concludes

that, “the FARC was basically an armed peasant movement in search of an ideology.” The origins of insurgency in Colombia revolve not around national narratives, but in local struggles over land and political power.

This understanding of Colombia’s past informs a discussion of its future. The Colombian government under President Juan Manuel Santos has since 2012 engaged in direct talks with the FARC to end the country’s civil conflict. Talks continue in Havana, with the parties agreeing in May 2013 to a plan for land reform that they promise signifies “the start of a radical transformation of rural Colombia.” The land reform aims to compensate Colombians who have lost property, invest heavily in rural areas, and redistribute land. Hopes for land reform resemble those from the 1930s – addressing the local roots of civil conflict, ameliorating vast inequalities in land ownership, compensating the displaced, and improving agricultural production. Sánchez, López-Uribe, and Fazio (2010), for example, argue that a more robust protection of *colonos*’ property rights would have more than doubled coffee production by 1925.

The historical view offered here nevertheless gives us reason for caution. First, as Walter (1997) recognized, the major barrier to settling civil wars is not discovering the proper terms that all sides can accept, but in enforcing such agreements. Any land reform program will be contingent on the disarmament and demobilization of the FARC, which presents a credible commitment problem. If the FARC were to demobilize first, any failures of the subsequent land reform could not be remedied by force. This is the essence of the credible commitment problem in civil war settlement. Similarly, Acemoglu and Robinson (2006) argue that promises of redistribution of wealth by dictators in the face of protests by the lower classes are inherently non-credible, since political elites can defect from such promises after the threat of rebellion has passed. This is no mere hypothetical. Section 4 showed how, when faced with conflicts over land, the Colombian government often passed land reforms, only to lose its commitment after conflicts faded. The Colombian government, then, must find means to credibly signal its commitment to meaningful land reform.

Second, the success of land reforms will depend on the disposition of large landowners. This paper’s historical analysis demonstrates that large landowners’ opposition to land reform often severely limited its impact. Albertus and Kaplan (2013) agree, finding that this opposition created piecemeal reforms that actually increased, rather than decreased, guerrilla activity. More serious land reform that reduced guerrilla activity only occurred in areas in which the guerrillas posed a sufficiently imposing threat to public order. Large landowners’ attitudes, therefore, will shape land reform’s implementation and its success in improving livelihoods, ameliorating inequality, and keeping the peace. Zartman (1985) argues that civil wars are “ripe” for resolution only when all sides realize that they have

reached a “mutually hurting stalemate,” in which no amount of further conflict will help realize their goals. That former President Álvaro Uribe, himself a son of a wealthy landowner, has strongly and publicly condemned negotiations with the FARC and the agreed upon land reforms, then, casts grave doubt on the inclination of wealthy landowners to accept real land reform. The impact might be a continuation of the structural conditions described here that helped give rise to Colombia’s civil conflict.

This logic suggests that the Colombian state remains unable to credibly commit to the land reform agreement it has concluded with the FARC. The FARC itself faces a similar problem, since failed peace negotiations in the late 1990s and early 2000s have damaged its credibility. I suggest two mechanisms to address this two-sided credibility gap. First, the belligerents should invite the United Nations to join peace negotiations. Walter (1997, 141) contends that a third-party enforcer with a strong interest in peace, a willingness to use force to maintain it, and an ability to signal resolve is necessary to enforce peace agreements. An intervention by the United Nations that involves it in the implementation of land reform, in concert with other regional and international organizations, would help lend credibility to promises by the Colombian government to fully implement land reform. Second, confidence-building measures will be necessary to build the credibility of each side during negotiations. Such steps must be sufficiently costly to credibly convey the signaler’s seriousness. The government might, for example, crack down on renewed paramilitary violence and take the first steps towards land reform while the FARC retains arms. The FARC could release any civilian hostages it still holds and clamp down on future kidnappings. Both sides could agree to a cease-fire with robust third-party enforcement. Such steps might prove necessary to ending Colombia’s long civil war and truly transforming the Colombian countryside.

Acknowledgement: I thank William Clark, Robert Franzese, Catherine LeGrand, James Morrow, Irfan Nooruddin, Juan Vargas, and two anonymous reviewers for their insightful comments. The research contributing to this article was supported by a J. William Fulbright Scholarship. All errors are my own.

Appendix

This appendix provides details on the empirical claim made in Section 4.2 that “municipalities with higher land values and access to roads also had higher rates of inequality.” This is part of a larger argument that Colombian elites were successful in excluding peasants from access to disputed land, even after land

reform in 1936. If we assume that elites held the legal and coercive power to create facts on the ground and that their motivation to do so was directly correlated with the economic value of land, then we should observe greater inequality in places with higher land values.

Daly (2012) fortunately has collected municipal-level data on land value and inequality, part of a larger data project, that permits a test of this intuition. Her data include monthly observations for 1076 municipalities between 1964 and 1984.⁸

Daly (2012) measures inequality on a 100-point scale. Two measures contained in Daly's data should correlate positively with this dependent variable. First, she measures land value on 100-point scale, using data on the "geochemical and microbiological aspects" (475) of land at the municipal level. Second, Daly (2012) collects data on the logged total length of roads, railroads, and accessible waterways. The availability of transportation, in addition to the intrinsic capacity of the soil to support crops, should increase the economic value of land.

I also include several variables as controls: the distance from Bogotá's, existence valuable gem and mineral deposits, mountainous terrain, and proximity to an international border.

Table A1: Land value and land inequality.

	Basic models		Full Model
	Land values	Roads	
Land values	0.44*** (0.06)		0.30*** (0.07)
Roads		1.09** (0.50)	1.68** (0.66)
Gems	-3.74 (4.06)	-5.58** (2.49)	-6.04 (4.28)
Population	1.34* (0.72)	1.87*** (0.67)	1.05 (0.84)
International border	-9.84*** (3.68)	-14.61*** (3.35)	9.09 (9.95)
Mountains			-10.09*** (2.20)
Distance to Bogotá			0.0014 (0.01)
Constant	25.45*** (6.76)	25.55*** (7.11)	26.67*** (9.48)
n	676	669	417

*p<0.10, **p<0.05, ***p<0.01.

⁸ Data are available at <http://www.prio.no/Journals/Journal/?x=2&content=replicationData>.

The data in Daly (2012) are time-series cross-sectional (TSCS), but none of the measures used in this regression vary across time. A simple ordinary least squares regression (OLS), is the simplest and most proper choice to test the link between land value and inequality. Results are described in Table A1 above; standard errors are in parentheses. Two models separately estimate inequality as a function of land value and roads, with only gems, population, and international borders as control variables in an effort to minimize missing data. Both land values and roads are positively and significantly correlated with inequality. The last model includes the full set of control variables – adding mountains and distance to Bogotá – and both land value and roads, reducing the sample size. Again, both roads and land value exacerbate municipality-level inequality.

In results not reported here, I also estimate a model that includes a control variable for population density instead of total population and a multiplicative interaction term of land value and population density. The model suggests that the impact of land value on inequality is substantively stronger and more statistically significant in areas with lower population density. This suggests that the connection between land value and inequality was strongest in rural areas, again supporting the point made in Section 4.2 of the article.⁹

Reference

Daly, S.Z., (2012), Organizational Legacies of Violence: Conditions Favoring Insurgency Onset in Colombia, 1964–1984, *Journal of Peace Research*, vol. 49, pp. 473–491.

References

- Acemoglu, D., Robinson, J.A., (2006), *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, New York, NY.
- Acemoglu, D., Johnson, S., Robinson, J.A., (2006), Institutions as the Fundamental Cause of Long-run Growth, in *Handbook of Economic Growth*, volume 1A, North Holland, pp. 385–472.
- Albertus, M., Kaplan, O., (2013), Land Reform as a Counterinsurgency Policy: Evidence from Colombia, *Journal of Conflict Resolution*, vol. 57, pp. 198–231.
- Alchian, A., Demsetz, H., (1973), The Property Right Paradigm, *The Journal of Economic History*, vol. 33, pp. 16–27.
- Anderson, T.L., Hill, P.J., (2003), The Evolution of Property Rights, in Anderson Terry L., McChesney, Fred S., (eds.), *Property Rights: Cooperation, Conflict, and Law*, Princeton University Press, Princeton, NJ.
- Angrist, J.D., Kugler, A.D., (2008), Rural Windfall or a New Resource Curse? Coca, Income, and Civil Conflict in Colombia, *The Review of Economics and Statistics*, vol. 90, pp. 191–215.

⁹ Results available upon request.

- Boix, C., (2008), *Economic Roots of Civil Wars and Revolutions in the Contemporary World*, *World Politics*, vol. 60, pp. 390–437.
- Brittain, J.J., (2010), *Revolutionary Social Change in Colombia: The Origin and Direction of the FARC-EP*, Pluto Press, New York, NY.
- Cardenas, M., (2001), *Economic Growth in Colombia: A Reversal of 'Fortune'?* CID Working Paper No. 83.
- Cederman, L.-E., Weidmann, N.B., Gleditsch, K.S., (2011), *Horizontal Inequalities and Ethnonationalist Civil War: A Global Comparison*, *American Political Science Review*, vol. 105, pp. 478–495.
- Chernick, M., (2007), *The Farc-ep: From Liberal Guerrillas to Marxist Rebels to Postcold War Insurgents*, in Heiberg M., OLeary B., Tirman J., (eds.), *Terror, Insurgencies, and the State: Ending Protracted Conflicts*, University of Pennsylvania Press, Philadelphia, PA, pp. 51–82.
- Coase, R.H., (1960), *The Problem of Social Cost*, *Journal of Law and Economics*, vol. 3, pp. 1–44.
- Collier, P., Sambanis, N., (eds.) (2005), *Understanding Civil War: Evidence and Analysis, Volume 2: Europe Central Asia, and Other Regions*, The World Bank, Washington, DC.
- Collier, P., Elliott, V., Hegre, H., Hoeffler, A., Reynal-Querol, M., Sambanis, N., (2003), *Breaking the Conflict Trap: Civil War and Development Policy*, World Bank, Washington, DC.
- Collier, P., Hoeffler, A., Rohner, D., (2009), *Beyond Greed and Grievance: Feasibility in Civil War*, *Oxford Economic Papers*, vol. 61, pp. 1–27.
- Colombia, (1931), *Memorias del Ministro de Industrias*, Report of Colombian government.
- Cramer, C., (2003), *Does Inequality Cause Conflict?*, *Journal of International Development*, vol. 15, pp. 397–412.
- Daly, S.Z., (2012), *Organizational Legacies of Violence: Conditions Favoring Insurgency Onset in Colombia, 1964–1984*, *Journal of Peace Research*, vol. 49, pp. 473–491.
- Diskin, M., (1996), *Distilled Conclusions: The Disappearance of the Agrarian Question in El Salva*, *Latin American Research Review*, vol. 31, pp. 111–126.
- Duckitt, J., (1994), *The Social Psychology of Prejudice*, Praeger Publishers, Westport, CT.
- Fearon, J.D., (2004), *Why Do Some Civil Wars Last So Much Longer than Others?*, *Journal of Peace Research*, vol. 41, pp. 275–301.
- Fearon, J.D., Laitin, D.D., (2003), *Ethnicity, Insurgency, and Civil War*, *American Political Science Review*, vol. 97, pp. 75–90.
- Gilhodès, P., (1970), *Agrarian Struggles in Colombia*, in *Agrarian Problems and Peasant Movements in Latin America*, Doubleday, pp. 407–451.
- Grossman, H.I., (1991), *A General Equilibrium Model of Insurrections*, *American Economic Review*, vol. 81, pp. 912–921.
- Gurr, T.R., (1970), *Why Men Rebel*, Princeton University Press, Princeton, NJ.
- Haber, S., Razo, A., Maurer, N., (2003), *The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876–1929*, Cambridge University Press, Cambridge, UK.
- Hirshleifer, J., (1991), *The Paradox of Power*, *Economics and Politics*, vol. 3, pp. 177–200.
- Huntington, S.P., (1968), *Political Order in Changing Societies*, Yale University Press, New Haven, CT.
- Jensen, P.S., Sørensen, T.V., (2012), *Land Inequality and Conflict in Latin America in the Twentieth Century*, *Defence and Peace Economics*, vol. 23, pp. 77–94.
- Kalmanovitz, S., (2003), *Economía y nación: una breve historia de Colombia*, Bogotá, Colombia: Editorial Norma.

- Kalyvas, S.N., (2006), *The Logic of Violence in Civil War*, Cambridge University Press, New York, NY.
- Knight, J., (1992), *Institutions and Social Conflict*, Cambridge University Press, New York, NY.
- Leech, G., (2011), *The FARC: The Longest Insurgency*, Fernwood Publishing, New York, NY.
- LeGrand, C., (1986), *Frontier Expansion and Peasant Protest in Colombia, 1850–1936*, University of New Mexico Press, Albuquerque, New Mexico.
- LeGrand, C., (1992), *Agrarian Antecedents of the Violence*, in Bergquist C.W., Naranda R.P., Sánchez G.G., (eds.), *Violence in Colombia: The Contemporary Crisis in Historical Perspective*, SR Books, Wilmington, DE, pp. 31–50.
- LeGrand, C., (2003), *The Colombian Crisis in Historical Perspective*, *Canadian Journal of Latin American and Caribbean Studies*, vol. 28, pp. 165–209.
- Libecap, G.D., (1989), *Contracting for Property Rights*, Cambridge University Press, Cambridge, UK.
- Machado, A., (1988), *El café: de la aparcería al capitalismo*, Tercer Mundo Editores, Bogotá, Colombia.
- Martínez, M.A., (1939), *Regimen de tierras en Colombia: antecedentes de law 200 of 1936*, Publication of the Ministry of the National Economy, Bogotá, Colombia.
- Marulanda, E., (1991), *Colonización conflicto: las lecciones del Sumapaz*, Tercer Mundo Editores, Bogotá, Colombia.
- Midlarsky, M.I., (1988), *Rulers and the Ruled: Patterned Inequality and the Onset of Mass Political Violence*, *American Political Science Review*, vol. 82, pp. 491–509.
- Molano, A., (1992), *Violence and Land Colonization*, in Bergquist C.W., Naranda R.P., Sánchez G.G., (eds.), *Violence in Colombia: The Contemporary Crisis in Historical Perspective*, SR Books, Wilmington, DE, pp. 195–216.
- Moore, B.J., (1966), *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Modern World*, Beacon Press, Boston, MA.
- Muller, E.N., Seligson, M.A., (1987), *Inequality and Insurgency*, *American Political Science Review*, vol. 81, pp. 425–452.
- Muller, E.N., Seligson, M.A., der Fu, H., Midlarsky, M.I., (1989), *Land Inequality and Political Violence*, *American Political Science Review*, vol. 83, pp. 577–596.
- Neuman, W., (2012), *Rebel Group in Colombia Announces Cease-fire*, *New York Times*, November 19, Accessed at www.nytimes.com.
- North, D.C., (1981), *Structure and Change in Economic History*, W.W. Norton & Company, New York, NY.
- Paige, J.M., (1996), *Land Reform and agrarian Revolution in El Salvador: Comment on Seligson and Diskin*, *Latin American Research Review*, vol. 31, pp. 127–139.
- Palacios, M., (1980), *Coffee in Colombia, 1850–1970: An Economic, Social, and Political History*, Cambridge University Press, Oxford, UK.
- Palacios, M., (2006), *Between Legitimacy and Violence: A History of Colombia, 1875–2002*, Duke University Press, translation by Richard Stoller.
- Prosterman, R.L., Riedinger, J.M., (1987), *Land Reform and Democratic Development*, Johns Hopkins University Press, Baltimore, MD.
- Rodríguez, M.A., Daza, N.A., (2012), *Determinants of Civil Conflict in Colombia: How Robust Are They?*, *Defence and Peace Economics*, vol. 23, pp. 109–131.
- Roldán, M., (2002), *La Violencia in Antioquia, Colombia, 1946–1953*, Duke University Press, Durham, NC.
- Ross, M.L., (2004a), *What Do We Know about Natural Resources and Civil War?*, *Journal of Peace Research*, vol. 41, no. 3, pp. 337–356.

- Ross, M.L., (2006), A Closer Look at Oil, Diamonds and Civil War, *Annual Review of Political Science*, vol. 9, pp. 265–300.
- Russett, B.M., (1964), Inequality and Instability: The Relation of Land Tenure to Politics, *World Politics*, vol. 16, pp. 442–454.
- Safford, F., Palacios, M., (2002), *Colombia: Fragmented Land, Divided Society*, Oxford University Press, Oxford, UK.
- Sánchez, G., (1992), The Violence: An interpretive synthesis, in *Violence in Colombia: The Contemporary Crisis in Historical Perspective*, SR Books, Wilmington, DE, pp. 75–124.
- Sánchez, F., Solimano, A., Formisano, M., (2005), Conflict Violence and Crime in Colombia, in Collier P., Sambanis N., (eds.), *Understanding Civil War: Evidence and Analysis*, volume 2: Europe, Central Asia, and Other Regions, The World Bank, pp. 119–159.
- Sánchez, F., López-Uribe, M., Fazio, A., (2010), Land Conflicts, Property Rights, and the Rise of the Export Economy in Colombia, 1850–1925, *Journal of Economic History*, vol. 70, pp. 378–399.
- Seligson, M.A., (1995), Thirty Years of Transformation in the Agrarian Structure of El Salvador, 1961–1991, *Latin American Research Review*, vol. 30, pp. 43–74.
- Sened, I., (1997), *The Political Institution of Private Property*, Cambridge University Press, Cambridge, UK.
- Sherif, M., (1966), *In Common Predicament: Social Psychology of Intergroup Conflict and Cooperation*, Houghton Mifflin Company, Boston, MA.
- Solt, F., (2009), Standardizing the World Income Inequality Database, *Social Science Quarterly*, vol. 90, pp. 231–242.
- Stewart, F., (2008), Horizontal Inequalities and Conflict: An Introduction and Some Hypotheses, in *Horizontal Inequalities and Conflict: Understanding Group Violence in Multiethnic Societies*, Palgrave MacMillan, New York, NY, pp. 3–24.
- Tai, H.-C., (1974), *Land Reform and Politics: A Comparative Analysis*, University of California Press, Berkeley, CA.
- Tajfel, H., Turner, J.C., (1979), An Integrative Theory of Intergroup Conflict, in Austin W.G., Worchel S., (eds.), *The Social Psychology of Intergroup Relations*, Brooks/Cole Publishing, Monterey, CA, pp. 33–47.
- Vargas, J.F., (2012), The Persistent Colombian Conflict: Subnational Analysis of the Duration of Violence, *Defence and Peace Economics*, vol. 23, pp. 203–223.
- Walter, B.F., (1997), The Critical Barrier to Civil War Settlement, *International Organization*, vol. 51, pp. 335–364.
- Wang, T., Dixon, W.J., Muller, E.N., Seligson, M.A. (1993), Inequality and Political Violence Revisited, *American Political Science Review*, vol. 87, pp. 977–994.
- Weinstein, J.M., (2007), *Inside Rebellion: The Politics of Insurgent Violence*, Cambridge University Press, New York, NY.
- Wimmer, A., Cederman, L.-E., and Min, B., (2009), Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Dataset, *American Sociological Review*, vol. 74, pp. 316–337.
- Wood, E.J., (2003), *Insurgent Collective Action and Civil War in El Salvador*, Cambridge University Press, New York, NY.
- Zamosc, L., (1986), *The Agrarian Question and the Peasant Movement in Colombia: Struggles of the National Peasant Association, 1967–1981*, Cambridge University Press, New York, NY.
- Zartman, I.W., (1985), *Ripe for Resolution: Conflict and Intervention in Africa*, Oxford University Press, New York, NY.