


Land and State Capacity During Civil Wars: How Land-Based Coalitions Undermine Property Taxation in Colombia

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Abstract

Revenue, especially that from agricultural crops, has been considered fundamental for the development of state capacity. While existing research has mostly focused on dynamics of violence, we know less about the impact of commodities shocks on a key dimension of state power: property taxation. In this article, I explore how and why *land-based coalitions*—alliances between landowners and paramilitaries around the appropriation of land—undermine taxation during civil conflict. Focusing on the expansion of oil palm in Colombia and using a difference-in-differences design, I leverage the international price of oil palm and municipal variation in crop suitability. I find that, in municipalities with higher paramilitary violence and land concentration, the palm shock was associated with lower taxation, outdated cadastral information, and lower land values. This article underscores the deleterious consequences of land inequality for the state's extractive capacity even in moments of agricultural abundance.

Keywords

state capacity, Colombia, landed elites, civil wars, taxation

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Introduction

Revenue is fundamental to the state's territorial expansion (Levi 1989). In Sub-Saharan Africa, cash crops and commercial agriculture pushed rulers to gradually build state presence, while areas without any economic potential were condemned to state neglect (Boone 2003). Similarly, during Pakistan's Green Revolution, the substantial increase in land value and revenue potential led to an incorporation of otherwise marginalized areas (Callen et al. 2015). And in 19th Century Latin America, state building projects were particularly facilitated by the availability of natural resources (Saylor 2014).

The role of agricultural resources in promoting state building is also particularly relevant during civil conflicts. In Fearon and Laitin's (2003) classic formulation, weak central governments lack strong policing and counterinsurgency capacities. Yet agricultural booms can presumably build state capacity even during conflicts (Bazzi and Blattman 2014; Blair, Christensen, and Rudkin 2021; Thies 2010). For one, rising revenue allows governments to buy off opposition, build more capable state institutions, and strengthen their coercive capacity. In addition, rising agricultural revenues may also indirectly contribute to state capacity by deterring individuals from joining rebel groups. Since agriculture is a labor-intensive activity, it tends to improve household income, increasing the opportunity costs of rebellion and offsetting the 'rapacity effect' (Dal Bó and Dal Bó 2011; Dube and Vargas 2013; Blair, Christensen, and Rudkin 2021).

How do agricultural resource booms affect property taxation during protracted civil conflicts? While the empirical literature explicitly identifies a state capacity effect, scholars have mostly focused on conflict-related outcomes. On the one hand, the literature explains how rising revenues translate into greater state capacity by giving governments the necessary resources to equip themselves against rebel groups (Bazzi and Blattman 2014; Thies 2010). The emphasis on counter-insurgency is justifiable, but it tends to overlook how militias and paramilitaries also constitute an irreversible source of state weakness. On the other hand, the literature provides few expectations about the politics of taxation, a cornerstone of the modern state and one of the main sources of revenue for local states. Although the existing research provides important insights into violence and conflict, we know less about how agricultural booms shape local taxation.

To understand how resource booms affect the state's extractive capacity during civil conflict, I focus on a recent setting of agricultural abundance: oil palm expansion in Colombia. Between 2006 and 2011, when the crop's international price rose by 135%, the Colombian state made an unparalleled effort to support its expansion, through a combination of increased police and army presence to palm areas, coupled with the allocation of credits, loans, and tax breaks to influential palm growers. Indeed, the national government saw in the palm industry a means to bring peace and prosperity and accelerate economic development in otherwise marginalized areas. However, evidence indicates that oil palm expansion was often accompanied by land-grabbing, human rights violations, and forced displacement. Did the oil palm boom in Colombia enhance or undermine property taxation?

This article investigates the idea that *land-based coalitions* can undermine local taxation in moments of agricultural abundance. Land-based coalitions are temporary alliances between influential landowners—where land inequality is prevalent—and paramilitaries around the protection and appropriation of land. My central argument is that resource booms provide a fertile ground for the emergence of land-based coalitions, actors whose economic and political survival depend on the tenure and concentration of land. Given their political influence and reliance on violence, land-based coalitions erode key property rights institutions and undermine rural legibility, with negative consequences for states' extractive capacity (e.g. [Sánchez-Talanquer 2020](#); [Ch et al. 2018](#); [Gutiérrez-Sanín and Vargas 2017](#)).

I study the palm shock's effect on local taxation by assembling a panel of Colombian municipalities between 2000 and 2014 with data on taxation and property rights, land concentration, and violent groups. I use a difference-in-differences design that leverages the crop's international price. It estimates the differential effect of the price boom on local taxation by exploiting municipal levels of land suitability for oil palm plantations using data from the Food and Agricultural Organization's Global Agro-Ecological Zones (GAEZ).

The results support the idea that land-based coalitions have a deleterious effect on property taxation. First, I find that the palm shock is negatively associated with property tax revenue in areas with paramilitary violence. Moreover, this effect is stronger and statistically significant in areas of high land concentration, where landed elites tend to be more influential and organized. Given land-based coalitions' interest in land appropriation and propensity to act opportunistically during conflict, I explore their effect on violence. I find that municipalities exposed to the oil palm shock experienced differentially higher levels of forced displacement in areas of paramilitary violence and land concentration.

Lastly, and consistent with existing evidence, I find that the erosion of taxation is closely related to changes in property rights. However, I document a contrasting effect among institutions: as oil palm suitability goes up, higher levels of paramilitary violence are associated with older *cadasters* and lower land values in areas with high land concentration. Yet I find a positive effect on land *formalization*, although the coefficient is not statistically significant. Both pieces of evidence suggest that land-based coalitions may be interested in formalizing land, or at least not eroding land registries so as not to lose newly acquired property, while at the same time preventing cadasters from recording updated information about land values, size, and owners.

The article also presents evidence on the ways through which land-based coalitions manage to undermine land institutions. The classic debate between *plata o plomo*, capture or violence, is explored with data on electoral outcomes and assassinations of politicians and state officials. I fail to find evidence that the palm shock shaped the election of right-wing candidates, which have been, in Colombia, more closely related to landed elites and paramilitaries. Such results, however, cannot be taken as definitive evidence against state capture, as much of it has taken place outside the electoral arena—state bureaucracies, police departments, and notary publics. However, results

indicate that the palm shock increased selective assassinations of state officials in areas with paramilitary violence, although the effect takes place regardless of land concentration levels.

This article engages the literature on state capacity at the subnational level (Garfias 2018), but it focuses on contexts of conflict and violence. The argument developed here is mostly related to recent studies on Peru (Dargent, Feldmann, and Luna 2017), Colombia (Cardenas, Eslava, and Ramirez 2014; Ch et al. 2018), and Sub-Saharan Africa (Koren and Sarbahi 2018) in that it recognizes how violent groups shape state capacity outcomes in varying ways. While I find paramilitaries to be negatively associated with taxation, Ch et al.'s (2018) findings stand in the opposite direction. I attribute this discrepancy to the particular setting analyzed in this article: the rapid expansion of an important agricultural resource. Because the increase in palm areas' strategic value pushed land-based coalitions to appropriate land and resources, the manipulation of property rights institutions was fundamental to illegal transactions and under-reporting of land value.

This article also sheds light on the role of landed elites for state development. Ranging from classics such as Barrington Moore to more contemporary works, an extensive literature addresses the negative impact of landowners on political development (Cinnirella and Hornung 2016), the state's legibility (Sánchez-Talanquer 2020), and their ambiguous relationship with democracy (Albertus 2017). This article underscores how landowners actively cooperate with violent actors to undermine local states' extraction even in moments of resource abundance. Because these instances of collaboration are likely to shape states at the local level, understanding 'state capacity' in the countryside requires paying attention to problems of land inequality and the actors that benefit from it.

Lastly, and related to the previous point, this article sheds light on the role of key local land institutions for the state's extractive capacity (Christensen and Garfias 2020; Martinez 2020). In the case of Colombia, where land inequality is high, the erosion of land institutions has a long tradition: for instance, Sánchez-Talanquer (2020) shows how land registration increased in Conservative areas between 1930-50, while tax revenues lagged behind, due to the systematic undervaluation of property. In this article, I document how violent actors and rural elites have varying effects on different types of land institutions: land-based coalitions eroded cadasters (which help determine tax rates), without negatively affecting land registration (the very institution that legalizes property).

How Violence and Land Affect the Local State

Land is an important asset for political actors both in wartime and peacetime. For rural elites, land constitutes their main source of revenue and economic activity, ranging from cattle-ranching to agro-industrial activities, and its tenure can facilitate the accumulation of political power (Albertus 2017; Cinnirella and Hornung 2016). Governments also derive much of their revenue and authority from the distribution and

organization of land: by selectively allocating property rights and levying taxes, governments obtain resources while exerting leverage over voters and violent actors (Boone 2003; D’Arcy and Nistotskaya 2017). Indeed, even for armed groups, land is fundamental because it guarantees a steady inflow of resources and its control facilitates civilian cooperation (Arjona 2016; Kalyvas 2006). In sum, land is a key political and economic resource.

The value of land, however, is subject to domestic and exogenous changes. While an important literature discusses how agricultural booms contribute to state capacity and diminish the propensity for violent conflict (Bazzi and Blattman 2014; Blair, Christensen, and Rudkin 2021), a different set of arguments, however, complicates the beneficial impact of resource booms on state development. For instance, some evidence shows how resource booms contributed to a deliberate process of forced displacement, violent transformation of property rights, and ‘agrarian counter-reform’. Concretely, this article shows that the oil palm expansion throughout Colombia strengthened local taxation in some areas, but eroded it in others. What explains the erosion of the local state’s capacity to levy taxes in the presence of a commodities boom?

Violence and Land: The Emergence of Land-Based Coalitions

To explain why agricultural booms undermine local taxation in the midst of civil conflicts, it is important to understand how sudden changes in the value of land lead to cooperation between landed elites and non-state violent groups—two key actors whose political influence is particularly sensitive to changes in the rural world. Both landed elites and non-state violent groups, I argue, have a debilitating effect on the state’s extractive capacity by enabling the formation of *land-based coalitions*. Given their political influence and use of violence, land-based coalitions erode key property rights institutions and deteriorate rural legibility with deleterious consequences for the state’s extractive capacity at the local level.

Land-based coalitions are temporary alliances between landed elites and violent groups interested in the protection and appropriation of resources. The protection of property is understandably the most elemental objective pursued by land-based coalitions. While landed elites may be influential actors in the rural world, their reliance on land makes them particularly vulnerable to threats by the insurgency and peasant demands. Land is an immobile and fixed asset, which tends to put its owners in permanent risk of being expropriated and extorted by states and non-state violent actors. Such an element, while not deterministic, has been associated with the use of violent and authoritarian strategies to defend their wealth. Therefore, land-based coalitions emerge in a context of insecurity and are primarily formed around the idea of protection of land.

In addition to protecting property, land-based coalitions also seek to further accumulate and appropriate. This holds particularly true for contexts of agricultural resource booms, whereby significant increases in the value of land make it a strategic

asset to control. A growing literature documents the process of large-scale land acquisitions over the past decade by which landed elites, with the involvement of de facto violent actors and elected officials, appropriate extensive tracts of land and transform communities' local political economy (Balestri and Maggioni 2021; Vargas and Uribe 2017). Since violent conflicts provide an opportunity to transform property rights with the use of intimidation and violence, the appropriation of land can be particularly acute in these contexts.

While landed elites are central to land-based coalitions, they rarely act alone. Essential to their objectives of protection and appropriation of wealth is the participation of violent groups, such as paramilitaries, capable of mobilizing coercion and minimizing external threats. Indeed, paramilitaries are the ideal 'armed contribution' to land coalitions.

First, paramilitaries' ability to mobilize coercion is a useful source of protection for political and economic elites. Insurgents are the primary source of insecurity for rural elites, who may become victims of kidnapping and extortion. Paramilitaries, in this context, provide a service of protection against such threats and "operate as private armies for a range of political elites" (Raleigh 2016, 284). A second reason why paramilitary participation is essential is that their use of coercion is an effective tool for intimidating elected officials and bureaucrats. Violence allows criminals and de facto groups to influence policy-making and shape political outcomes in their favor (e.g. Ch et al. 2018; Dal Bó, Dal Bó, and Di Tella 2006). While the degree to which state officials may be willing to collaborate with land-based coalitions varies, violence and intimidation help them eliminate uncooperative officials and persuade those that are undecided.

Lastly, paramilitaries benefit from the information and impunity provided by colluded state officials. The extensive literature on militias acknowledges how political elites may tolerate and even benefit from the presence of paramilitaries in their territory (Jentzsch, Kalyvas, and Schubiger 2015). For paramilitaries and their rural allies, this is useful not only to circumvent a decisive retaliation by the central state, thus providing a wider margin of action, but also because it enables them to establish relationships with local bureaucrats and politicians and influence institutions in a more consequential way (Hidalgo and Lessing 2019; Staniland 2015; Nieto-Matiz 2019).

Land-Based Coalitions and the Erosion of the Extractive Capacity

Why do land-based coalitions erode the local state's extractive capacity? Landed elites have usually been identified as important obstacles for state development, opposing and blocking technological change and institutional strengthening when such changes affect their political status. Improvements in public goods, for instance, ultimately undermine landowners' economic and political influence by raising living standards and increasing the cost of labor. The empirical evidence supports such an interpretation: the existence of strong landed elites is associated with the erosion of public schooling,

human development, and electoral fraud (Easterly 2007; Faguet, Sánchez Torres, and Villaveces Niño 2020).

More importantly, if land-based coalitions wish to appropriate wealth and resources, then undermining property rights becomes an optimal choice. There is an important literature addressing how political and economic elites manipulate, erode, and selectively enforce property rights when doing so helps them advance their interests (Boone 2003; Fergusson 2013; Onoma 2009). Appropriating wealth in the countryside, both through violent and non-violent means, becomes an easier task when property rights are weakly enforced or non-existing. In Colombia, for instance, paramilitaries have resorted to political, legal, and institutional resources to legitimize and hide dispossession and land transfers, sometimes forced, from small peasants to large landowners (Franco and Restrepo 2011; Gutiérrez-Sanín and Vargas 2017; Grajales 2011). Similarly, drug trafficking organizations in Guatemala, through violence and influence among land agencies and notary publics, have engaged in a process of land accumulation aimed at the cattle industry, laundering money, and gaining territorial control (Devine et al. 2020).

If resource booms and conflicts provide a good opportunity for land-based coalitions to prevent a more capable state, how do they erode the state's extractive capacity? A crucial way to accomplish this is by capturing and controlling the rural cadaster, one of the key sources of information about property and ownership (D'Arcy and Nistotskaya 2017). When asked about taxation in Colombia's countryside, an official at the National Land Agency (ANT) maintained: "The lack of clarity makes it impossible for local governments to obtain more resources and incentivizes large landowners to change this structure" (Personal Interview 7 2018). The positive consequences of cadasters for revenue generation are clear: as documented by recent empirical work, *legibility* about land—via strong and updated cadasters—increases municipal resources by 10 and 12% in Brazil and Colombia (Christensen and Garfias 2020; Martinez 2020).

Being able to manipulate land institutions is crucial because it allows actors to under-report the value of property, evade taxation without consequences, hide land transactions, and change properties' legal ownership through illegal means. Land-based coalitions use their influence and tentacles to local institutions, elected officials, and bureaucrats to distort and weaken the performance of rural cadasters. In Colombia "[i]nstitutional mechanisms of land grabbing [...] are embedded in local collusive networks linking paramilitary groups, politicians and civil servants" (Grajales 2011, 785). The strategic use of violence, however, also facilitates this process. In Brazil, paramilitaries have used violence to intimidate land occupiers and prevent their return (Hammond 2009) and in Colombia, paramilitary violence has been used to advance a massive 'counter land reform' (Gutiérrez-Sanín and Vargas 2017; Grajales 2011).

The previous discussion provides a series of expectations about the impact of the oil palm shock on the state's extractive capacity in Colombia: paramilitary violence and higher levels of land inequality should be associated with lower property tax revenue, weaker cadasters, and more violence.

Setting: Oil Palm Expansion in Colombia

Considered one of the most versatile crops in the global market, oil palm experienced a major expansion throughout Colombia between 2006 and 2011 (See [Supplementary Appendices A.2 and A.3](#)). Although it has been promoted by the central state as fundamental to peace and prosperity, a wealth of empirical evidence has found a relationship between oil palm and outcomes such as land-grabbing, forced displacement, and deforestation ([Franco and Restrepo 2011](#); [Hurtado, Pereira-Villa, and Villa 2017](#); [Maher 2015](#)).

This relationship is, to a great extent, due to oil palm's relationship to labor and capital. Despite it being an agricultural commodity, oil palm is not as labor-intensive, compared to other crops, such as banana, rubber, and coca ([Euler et al. 2017](#)). Banana plantations employed an average of 0.83 workers per hectare in 2018, while oil palm only required 0.16 workers ([Viloria-de-la Hoz 2008](#)). Instead, oil palm is comparatively more capital and land-intensive ([Palacios 2012](#)), requiring important initial investments in technology and fertilizers and higher tolerance to uncertainty due to its long-term horizon.

Hence the political and financial support of the central state has been key to the development of oil palm in Colombia. Historically, the palm industry had faced a precarious infrastructure and poor connectivity with the rest of the country, as its suitability has corresponded to areas of low state penetration and institutional weakness—remote and sparsely populated municipalities with a deficient provision of public goods and violence ([Supplementary Appendix A.4](#)). While the palm industry, mostly represented in Fedepalma, constantly voiced their dissatisfaction with the lack of financial support, it was the security crisis in the countryside what threatened the industry's stability. By the end of the 1990s, the insurgency's presence—mostly the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN)—translated into extortions and kidnappings of palm growers and the destruction of infrastructure.

With Álvaro Uribe's rise to power in 2002, palm growers found an ally. Traditional palm growers, who had invested in the crop for years, were quickly joined by a host of new investors, ranging from political elites and international firms to 'emerging' elites involved in drug-trafficking and paramilitaries. In terms of *carrots*, Uribe's administration, especially in his second term (2006-2010), introduced tax-free zones for palm-related industrial projects and handed out millions of dollars worth of subsidies and credits. In some regions, the US-funded 'Plan Colombia', a military initiative to fight insurgency and drug trafficking, allowed the state to launch a coca crop substitution program and promote oil palm. Other programs, such as Agro Ingreso Seguro, intended to stimulate small farmers through subsidies and soft loans, were allocated to large landowners and regional elites. The marriage between Uribe's administration and the palm industry became stronger than ever: many of Uribe's ministers had some personal link to oil palm ([La Silla Vacía 2009](#)).

In terms of *sticks*, Uribe's administration implemented an iron-fist policy against rebel groups, which involved a profound modernization of the armed forces, regaining territorial control, and deploying coercive presence to red zones where the insurgency was present. The army took a more proactive role in the conflict and provided palm growers increasing security for their activities. Uribe saw in the palm industry a means to accelerate economic development and a reason to increase military presence. Referring to the southern Bolívar region before palm growers, he claimed: "Eight years ago, there were only guerrillas, paramilitaries, and coca crops. Today we have about 22 thousand hectares of palm".

A crucial process was taking place simultaneously: paramilitaries' territorial expansion. With a decisive counterinsurgent orientation, they became important allies of palm producers. Taking advantage of the general situation of violence and weakness of property rights, paramilitaries profited from the oil palm boom like no other armed actor did. This, of course, involved the participation and acquiescence of local officials. As [Grajales \(2011\)](#) explains, the land grabbing mechanisms to secure vast extensions of land were embedded in networks involving politicians, state officials, and paramilitaries. "The example of oil palm exploitation conjugates violent land grabbing, business development and public policies intended to stimulate this business" ([Grajales 2011](#), 785). [Thomson \(2011\)](#) agrees with this when he observes how violence has simultaneously served the accumulation of land and promoted the development of domestic and foreign agribusiness in Colombia.

Although some palm growers refused to cooperate with paramilitary groups, some of their more important representatives failed to reject their presence and influence, as one of Fedepalma's top officials suggested: "It is important to acknowledge that if the population establishes links with illegal self-defense groups, it is only exclusively because of the state's inability to guarantee peace and security effectively" ([Hart de Vengochea 2010](#)). In 2005, Carlos Castaño, the main military commander of the demobilized United Self-Defense Forces of Colombia, described their strategy of cooperation with palm growers:

In Urabá we have palm crops. I myself got hold of the business leaders so they would invest in those projects, which are durable and productive. The idea is to get the wealthy to invest in such projects in different areas of the country. By bringing the wealthy to these areas, state institutions will arrive. ([Semana 2005](#)).

The most visible consequence of paramilitary involvement was increasing violence, forced displacement, and land grabbing. As [Grajales \(2011\)](#) explains, oil palm seemed an attractive activity for paramilitaries, because it offered direct profits from cultivation, greater state support in the form of subsidies, and possibilities for money laundering. In some Colombian regions, oil palm businesses established alliances with paramilitary groups, from which they obtained some form of protection in exchange for economic participation ([García Reyes 2014](#)). In addition, paramilitary groups engaged in

systematic forced displacement of the local population with the purpose of acquiring lands for cultivation.

Empirical Design and Data

Estimation

To understand how the oil palm boom differentially affected property taxes, I exploit changes in the international price of oil palm in the context of the 2000's commodities boom. The key identifying assumption is that, in the absence of the palm shock, property taxes in palm municipalities would have not changed significantly relative to non-palm municipalities. For completeness, I begin with a basic difference-in-differences equation

$$y_{it} = \alpha_i + \beta_t + \lambda(\text{Price}_t \times \text{Palm}_i) + \mathbf{X}_i + \delta_{it} + \epsilon_{it} \quad (1)$$

where y_{it} is the outcome, in this case, the log of property taxes normalized by population in municipality i and time t . Price_t is the annual price of oil palm in the international market, a temporal variable capturing the change in prices over time. Prices are calculated in US Dollars per metric ton, as reported and collected by the World Bank. Palm_i is an index of oil palm suitability from the the FAO's GAEZ. I use their suitability index for rain-fed oil palm, measured between 1961-1990. Since GAEZ's crop suitability values are available within a 5-arc minute grid-cell for the entire world, I calculate oil palm suitability at the municipal level by averaging the values of the grids corresponding to each Colombian municipality. [Supplementary Appendix A.5](#) shows the geographic variation of palm suitability. Relying on suitability data, in lieu of harvesting or production data (displayed in A.6), mitigates potential issues of endogeneity.

The equation accounts for \mathbf{X}_i , a vector of covariates, which includes the municipality's area, altitude, and distance to the capital, each one of them interacted by the log price of oil palm. α_i is a vector of municipality fixed effects intended to control for remaining unobserved heterogeneity related to time-invariant characteristics of municipalities, and β_t refers to time fixed effects, which is included to control for time varying characteristics. The equation, following previous work on Colombia, also includes linear time trends for the country's five main regions,¹ represented by δ_{it} , to account for omitted variables specific to each one of these regions over time. All models are estimated with standard errors clustered at the municipal level.

Building on this basic framework, I assess the impact of land-based coalitions on tax revenue by estimating the following triple differences equation

$$y_{it} = \alpha_i + \beta_t + \lambda_2(\text{Price}_t \times \text{Palm}_i \times \text{Paramilitary}_{it}) + \mathbf{X}_i + \delta_{it} + \epsilon_{it} \quad (2)$$

where the outcome, as well as Price_t and Palm_i , are identical to equation (1). *Paramilitary* is a continuous variable indicating the average number of actions per capita in

the decade prior to the palm boom carried out by paramilitary groups, like the AUC, and its successor groups, such as the Urabeños and Rastrojos. Notice that the equation's main term accounts for the role of paramilitaries. This, however, is not sufficient to draw conclusions about the role of land-based coalitions. Therefore, in order to account for the role of *both* paramilitary groups *and* landed elites—who jointly comprise land-based coalitions—I conduct a subgroup analysis. Concretely, I split the sample into cases of low and high levels of land concentration, below and above the median, and estimate equation (2) for both cases. This approach allows me to estimate how and whether paramilitary violence has a differential effect on property taxation depending on the prominence of landed elites. The expectation is that, in areas with high levels of land concentration, where landed elites are more influential, paramilitary violence will have a negative and stronger effect on taxation relative to areas with low levels of land concentration. For both violent actors and land concentration, I use pre-treatment measures (e.g. prior to 2007) in order to avoid post-treatment bias. I describe both measures at greater length in the next section. I also include X_i which controls for a set of important covariates.

Similar to the baseline equation, equation (2) includes a set of covariates, represented by X_i , but it also controls for the effect of insurgent violence interacted by the palm shock.² Even if the main focus of the article is the role of land-based coalitions, controlling for the insurgency—a key contender in the conflict—serves two functions. First, it seeks to minimize the possibility of omitted variable bias. Colombian insurgency targeted large landowners and business groups, including palm producers, many of which managed to obtain protection by paramilitary groups. Empirically, a large number of municipalities were affected by both paramilitaries and guerrillas and, as described by [González, Bolívar, and Vázquez \(2002\)](#), the actions of one side were, to a great extent, dictated by the actions of the other side.³ Second, it rules out the alternative explanation that changes in taxation are instead driven by insecurity and general violence, regardless of the type of perpetrator. Finding that the palm shock, given various levels of guerrilla violence, *also* depresses taxation would undermine the argument about land-based coalitions. Lastly, the equation also controls for municipality (α_i) and year (β_i) fixed effects and includes linear time trends for Colombia's main regions δ_{it} . All models are estimated with standard errors clustered at the municipal level.

Data

Property tax revenue. My main outcome of interest is municipal-level property tax revenue. I normalize property taxes by the municipality's population size and use its log-transformed version. Plot A.7 in the Appendix compares the evolution of property taxation in palm and non-palm municipalities. Local taxation—the state's capacity to extract resources from the population—is a cornerstone of modern states, implies gathering information about the population, and a bureaucratic body to collect taxes and punish non-payment. Moreover, changes in local property taxes typically depend on the

willingness (Christensen and Garfias 2020) and ability of local politicians to *observe* property within their jurisdictions and enforce taxation. Unlike other taxes (e.g. VAT), property taxes can only be effectively levied if the state possesses high-quality information about property and its respective owners. Data for this variable come from Colombia's National Planning Department.

Violent actors. Violent groups interested in securing territorial control may use violence to induce compliance from the population and punish challengers. Yet violence, while relatively easy to observe, is an imperfect indicator of violent group presence, let alone territorial control (Arjona 2016; Kalyvas 2006). To be sure, a problem with violence is that it may underreport the presence of violent actors. While such a limitation should not be neglected, violence plays an important role in the stages preceding the creation and transit to a new social order.

Consequently, rather than using violent data for a single year, I use past violence over a period of time to account for violent groups. This practice is consistent with recent empirical work on Colombia (Ch et al. 2018; Prem et al. 2020). Concretely, I calculate the average number of actions attributed to paramilitary groups during a ten year window—1997–2006—per 10,000 population. Such a period precedes the price increase of oil palm and captures key moments in Colombia's internal conflict, including the FARC's military pinnacle, the strengthening of paramilitary groups, and the rise of strong counter-insurgent policies. Yet at the same time the decision to truncate the series 1–2 years prior to the price shock is intended to minimize the possibility of post-treatment bias. Paramilitary groups include the United Self-defense forces of Colombia (AUC), ACCU, ACC, Urabeños, and Rastrojos, among others. Guerrilla groups include the FARC, the ELN, the Popular Liberation Army (EPL), and other minor insurgent organizations.

The information used to code violent actors comes from Centro de Investigación y Educación Popular (CINEP), a prominent Jesuit research institution and human rights think tank in Colombia, which based on both national and local newspapers and an extensive network of grassroots organizations, collects and systematizes information about human rights violations and armed attacks on a daily basis. Information about the location, victim, perpetrator, and type of action is recorded in *Noche y Niebla*, one of CINEP's main outlets, and geocoded by Osorio et al. (2019).

Landed elites. Land inequality has been used by the political economy literature of democratization and development as a proxy for landed elites. Some like Ansell and Samuels (2014) argue that "High land inequality signifies that a relatively small and cohesive group controls agricultural policy and rural labor mobility". While their theory focuses on democratization, a relationship that has been qualified by some recent work (Albertus 2017), the useful insight for this article is not that large landowners have anti-democratic preferences, but rather the observation that possessing large portions of land grants them with important political power at the local level.

To account for the prominence of landed elites, I use levels of land concentration across municipalities. The Gini coefficient is a continuous variable ranging from 0 to 1, where higher values indicate a more concentrated structure of land tenure. The data come from Colombia's Agustín Codazzi Geographic Institute (IGAC). Like in the case of violent groups, I use a ten-year period window—1997 through 2006—and calculate the average land concentration at the municipal level. For the subgroup analysis, I convert land concentration into a dichotomous variable and recode it as one if it ranks above the median and 0 otherwise. I show the distribution of the variable in [Supplementary Appendix A.8](#). The use of this measure intends to assess whether or not municipalities with high levels of land concentration prior to the palm shock were likely to experience an increase of property taxes. Whether land concentration perfectly maps onto landowners' influence is, of course, subject to debate, but its varying levels are a reflection of a specific social structure between those who own the land and those who do not ([Cinnirella and Hornung 2016](#); [Fergusson 2013](#)). And because possessing land in the countryside, *relative* to possessing no land, provides more political influence, land concentration is a useful measure to identify where and whether landed elites are more or less prominent and influential.

Empirical Findings

Baseline Results

I report the main empirical findings in [Table 1](#). The first column shows the effect of the palm shock on property taxes and the second column separately explores the role of paramilitary groups and land concentration. Lastly, columns 3 and 4, whose results I plot in [Figure 2](#), present a more direct test of land-based coalitions by assessing the differential impact of paramilitary violence in areas with low and high levels of land concentration.

As indicated by the positive and statistically significant coefficient in column 1, the palm shock had a modest and positive effect on property tax revenue in palm municipalities relative to non-palm municipalities. Substantively, the results suggest that a one standard deviation change in the international price of oil palm increased property taxes by 0.05 standard deviations. This relationship, however, is not statistically significant.

I further assess the validity of the research design by estimating an event study model which includes leads and lags of the treatment variable. I estimate the following

$$y_{it} = \alpha_i + \lambda_t + \sum_{n=2000}^{2005} \beta_n D_{it} + \sum_{n=2007}^{2014} \gamma_n D_{it} + \epsilon_{it} \quad (3)$$

where D_{it} refers to the same treatment indicator defined in equations (1) and (2). I interact D_{it} with a set of year fixed effects, or time dummies, which take a value of one when the observation takes place in a particular year. The omitted category is 2006. The

Table I. Main Results.

	Dependent variable: Property taxes			
	(1)	(2)	Land concentration	
			Low	High
	(1)	(2)	(3)	(4)
Palm × Price	0.01 (0.00)	0.02 (0.01)	0.01 (0.01)	0.00 (0.01)
Palm × Price × Paramilitary		−0.01** (0.01)	0.00 (0.01)	−0.02** (0.01)
Palm × Price × Guerrilla		0.01 (0.01)	−0.01 (0.00)	0.01 (0.01)
Palm × Price × Land inequality		−0.01 (0.02)		
R ²	0.81	0.81	0.80	0.82
Num. obs.	14,222	14,104	7043	7061
N Clusters	949	941	470	471
Controls	Yes	Yes	Yes	Yes

Note: Standard errors clustered at the municipal level. Only the relevant interactions' main terms are displayed.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

coefficients of interest are β_n and γ_n , while α_i and λ_t refer to municipality and time fixed effects. This approach has the advantage of assessing the plausibility of the parallel trends assumption, while also obtaining more disaggregated estimates of the difference between palm and non-palm municipalities over time. In the absence of the palm boom, property taxes between both types of municipalities should remain parallel and only change as a consequence of the international price shock. Even if one fails to find statistically significant effects after the treatment, the ideal scenario would be for the pre-treatment estimates (e.g. β) to be indistinguishable from zero. This would indicate the presence of parallel trends prior to the treatment, thus increasing the plausibility of the identifying assumption.

Figure 1 plots the coefficients with 95% confidence intervals. The estimates suggest that differences in property taxes between palm and non-palm municipalities are not statistically significant prior to the price shock, lending support to the assumption that both types of municipalities had similar trends. The plot also suggests that municipalities with higher levels of palm suitability, despite experiencing an international price shock, did not witness an overall sustained increase in property taxation. Overall, this piece of evidence suggests that agricultural resource booms play a minor effect in boosting the subnational state's extractive capacity.

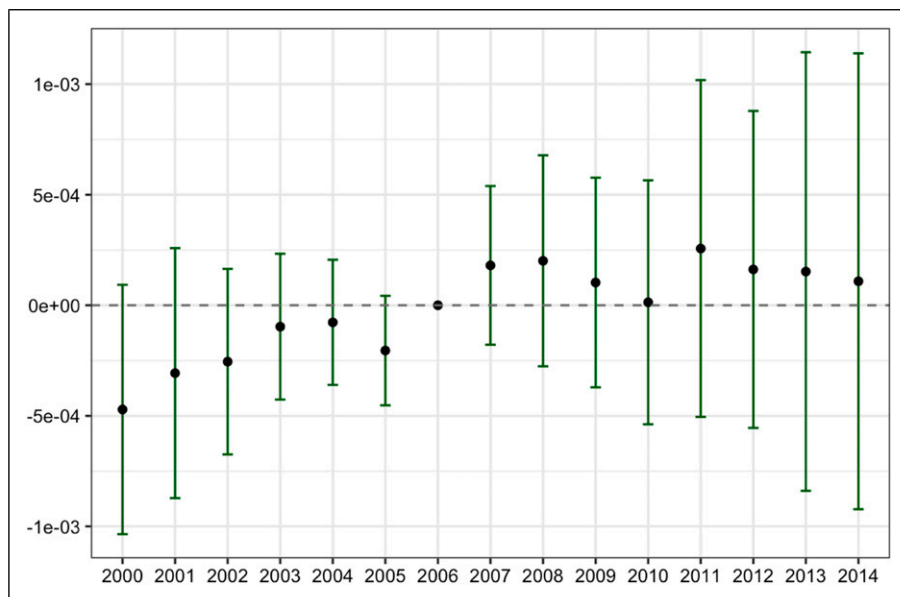


Figure 1. Dynamic estimates of the effect of palm price on property tax revenue.

The Effect of Land-Based Coalitions on Tax Revenue

While the previous analysis examines the general impact of oil palm, I now investigate how land-based coalitions affect the local state's extractive capacity. My expectation is for the palm boom to be associated with lower levels of property tax revenue in areas with both paramilitary violence and influential landed elites.

Table 1 provides evidence that both landed elites and paramilitaries play a fundamental role in the erosion of property tax revenue. First, I begin by analyzing the role of paramilitary violence and find that the palm shock had a negative effect on property taxation in areas where violence by such groups was higher. Substantively, given an increase in palm production by one standard deviation, paramilitary violence leads to a drop in property taxes of around 0.15 standard deviations. Similarly, the table also suggests that the palm shock has a negative effect on property taxes in areas where land concentration is higher, although the effect is not statistically significant. However, because this analysis examines the impact of paramilitary violence and land concentration separately, it is insufficient to draw conclusions about the role of land-based coalitions.

To understand how land-based coalitions—the convergence between landed elites and paramilitaries—shape property taxation, I conduct a subgroup analysis and split the sample into areas of low and high levels of land concentration. Consistent with the expectations, Figure 2 suggests that in municipalities with land concentration above the

median—where landed elites are relatively more prominent—paramilitary violence has a negative and statistically significant effect on taxes. In contrast, municipalities where landed elites are less influential—where land concentration ranks below the median—the effect of paramilitaries is not statistically significant. The difference between both types of areas is substantive: given a one standard deviation change in the price of oil palm, paramilitary violence is associated with a 0.22 standard deviations decrease in property taxes in areas with high land concentration, but only 0.009 in areas with low land concentration.

Two additional pieces of evidence support the role of land-based coalitions. First, a critical reader might suggest that the palm shock's negative effect on taxation could take place in the presence of *any* type of non-state violent group (i.e. paramilitaries or insurgencies alike). If it were true that taxation becomes weaker regardless of the type of violent actor, then the argument about land-based coalitions—to which paramilitaries belong—would be less credible. As shown in [Table 1](#), the palm shock only has a statistically significant effect in areas with paramilitary violence and not in areas with guerrilla violence. Second, in [Supplementary Appendix B.2](#), I use the event-study design from equation (4) and plot parallel trends for paramilitary groups in areas of low and high land concentration. As indicated by the plots, there are no statistically significant post-treatment effects in areas where land is more equally distributed. However, as expected, in municipalities where land concentration is unequal, the palm shock has a negative and statistically significant effect on property taxes over time.

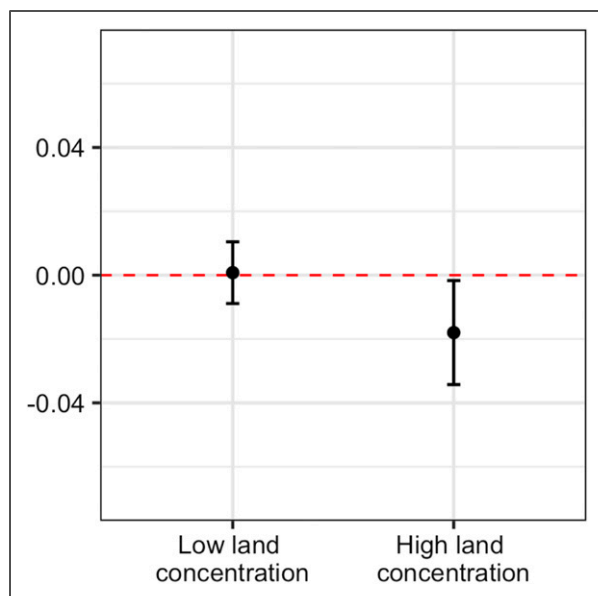


Figure 2. Effect of paramilitary violence in settings of low and high land concentration.

Overall, the results suggest that the oil palm expansion had a differentially harmful effect on property taxation in areas with high levels of land concentration and paramilitary violence. This is consistent with the observation that, in moments of agricultural abundance, land-based coalitions undermine local state capacity.

Land-Based Coalitions and the Use of Violence

In this section, I examine one additional key implication: because resource booms increase the value of land, internal conflicts should provide the conditions for both paramilitaries and landed elites to use violence to appropriate land. I examine this by testing the differential effect of the palm shock on forced displacement per 1000 population. The results, reported in [Table D.1](#), underscore the role of land-based coalitions: in areas with paramilitary violence, the oil palm boom had a null effect on forced displacement where land was more equally distributed. However, in areas with a more prominent landed elite—where land inequality is higher—the palm shock had a positive and statistically significant effect. This is consistent with both the literature that finds a strong relationship between land conflicts and forced displacement in Colombia ([Hurtado, Pereira-Villa, and Villa 2017](#); [Maher 2015](#); [LeGrand, 1986](#); [Tellez, 2022](#)).⁴

Exploring the Erosion of Property Taxation

The results so far suggest that both landed elites and paramilitaries exert a negative effect on property tax revenue. What could be responsible for this?

The Role of Property Rights Institutions

The existence of secure property rights in the countryside is a fundamental condition to promote poverty alleviation and economic development, and to facilitate the peaceful adjudication of disputes, prevent land grabbing, and reduce the prevalence of illicit crops. One key dimension of property rights and, consequently, of state capacity relates to the gathering and processing of high-quality information about land plots and their owners. A second, key, dimension relates to land formalization, typically done through land registries, which helps owners defend their property, allows the state to adjudicate disputes, and reduces transaction costs.

Both cadasters and registries belong to the ecosystem of property rights institutions and provide detailed information on a key asset: land. As [D’Arcy and Nistotskaya \(2017\)](#) write, “In terms of taxation, cadastral records enable the state to calculate tax liability more accurately, ‘by providing a parsimonious and accurate means of both fairly assessing and permanently recording the tax liabilities of a particular parcel of land’ ([Kain 2007](#), 710)”. Land registries establish and enforce ownership by “ensuring that more than one party does not have a legal claim to the same plot of land” ([Albertus 2020](#), 45). The problem, however, is that property rights, like any other institution, are not exogenous to political actors and can be manipulated, weakened, and selectively

enforced (Brinks, Levitsky, and Murillo 2020; Ch et al. 2018; Christensen and Garfias 2020). If cadasters and land titles facilitate institutional enforcement and adjudication of disputes, then low-quality information about land ownership allows rural elites and paramilitaries to carry out transactions under unfair conditions, under-report the value of property, and evade taxation.

Because the value of land tends to increase during commodities booms, one could expect land-based coalitions to undermine property rights institutions, since doing so is likely to facilitate the process of accumulation. I empirically examine this relationship by estimating an OLS equation of the following form⁵

$$y_{08-09} = \alpha_i + Palm_i + Paramilitary_i + \beta(Palm_i \times Paramilitary_i) + \mathbf{X}_i + \epsilon_i \quad (4)$$

where y_{08-09} is a outcome averaged between 2008 and 2009, $Palm_i$ is the oil palm suitability index, and $Paramilitary_i$ is the average number of actions per capita in the decade prior to the palm boom (e.g. 1997-2006). Recall that areas with higher levels of palm suitability are those in which the price shock plausibly produced a greater expansion of oil palm. The coefficient of interest, β , reflects the effect of paramilitary violence on property rights institutions given different levels of oil palm suitability. \mathbf{X}_i is a vector of control variables, including altitude, municipality size, population density, and a dummy for historical land conflicts between landowners and peasants between 1918 and 1930. The model estimates robust standard errors clustered at the department level. Like in the previous tests, I conduct a subgroup analysis and report the results in areas with low and high levels of land concentration. I show the results in Table 2. Columns 1-3 report the results for areas of low land concentration, while columns 4-6 show areas with high land concentration. Marginal effects for the three outcomes, in settings of both low and high land concentration, are reported in Supplementary Appendix D.3.

Table 2. Mechanism: Property Rights Institutions.

	Low land concentration			High land concentration		
	Cadaster update	Land value	Land informality	Cadaster update	Land value	Land informality
	(1)	(2)	(3)	(4)	(5)	(6)
Palm suitability × Paramilitary	3.10 (2.18)	−0.05 (0.13)	0.01 (0.05)	2.19* (1.10)	−0.17** (0.07)	−0.01 (0.05)
R ²	0.04	0.09	0.19	0.06	0.25	0.23
Num. obs.	405	424	421	374	391	392
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Note: Standard errors clustered at the department level.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

I begin by examining the role of land-based coalitions on cadaster updates in columns 1 and 4. Around 64% of municipalities in Colombia lack an updated cadaster. Per Colombian law, cadasters are to be updated every 5 years by the IGAC, an agency of the central government. However, it is up to municipal governments to provide the financial resources to start the update process, many of which lack the resources or incentives to do so. As shown in column 1, the interaction between paramilitaries and palm suitability does not yield a statistically significant effect in municipalities with low land concentration. However, column 4 suggests that as oil palm suitability increases, higher levels of paramilitary violence are associated with older cadasters, in particular, where land tenure is concentrated in fewer hands, which is consistent with the observation that land-based coalitions' negative effect on taxation likely operates through the erosion of the cadaster. Cadastral updates are mostly a story about intentional state efforts and institutional investments: local elected officials assess the costs and benefits of investing in the cadaster, in their interaction with violent groups and rural elites.

There exists, however, an additional channel of erosion: property taxes may change without any concomitant state action, but rather as a result of dynamics associated with the land market. Commodities booms, such as oil palm, increase the value of land and its revenue potential, which could mechanically contribute to higher taxation, without any particular state effort. It is possible to explore this using land values, technically known as cadastral appraisals (e.g. *avalúo catastral*). These appraisals are values assigned to each plot based on cadastral information and the analysis of market values and transactions. Indeed, [Figure 3](#) plots the average per capita land value across palm and non-palm municipalities and shows parallel trajectories between both sets of towns over time. After the price shock, however, the gap between them increases significantly in favor of those with oil palm plantations. Similarly, [Supplementary Appendix D.4](#) shows that oil palm suitability is positively correlated with land values.

Both pieces of evidence suggest that the palm shock increased the value of land in palm municipalities. However, the results in [Table 2](#) show that land values are importantly affected by the presence of paramilitaries and landed elites: as oil palm suitability goes up, increasing paramilitary violence and high levels of land concentration are associated with lower values of rural property. This is not entirely surprising. Market transactions, on which cadastral appraisals are partly based, are determined by the use of intimidation and price manipulation, for instance, by under-reporting the value of property (e.g. [Sánchez-Talanquer 2020](#)). In sum, while lower taxation is determined by cadastral updates, it is also shaped by other factors.

A second key dimension of property taxes relates to levels of land formalization. One plausible expectation is that land-based coalitions should be associated with higher levels of land formalization. If increases in land value, driven by moments of agricultural abundance, prompts land-based coalitions to appropriate property, legalizing new acquisitions should be a first-order concern. With evidence from Uganda, [Perego \(2019\)](#) discusses how rising agricultural prices increase the demand for titled land in Uganda. In civil wars, violent groups shape formalization according to their

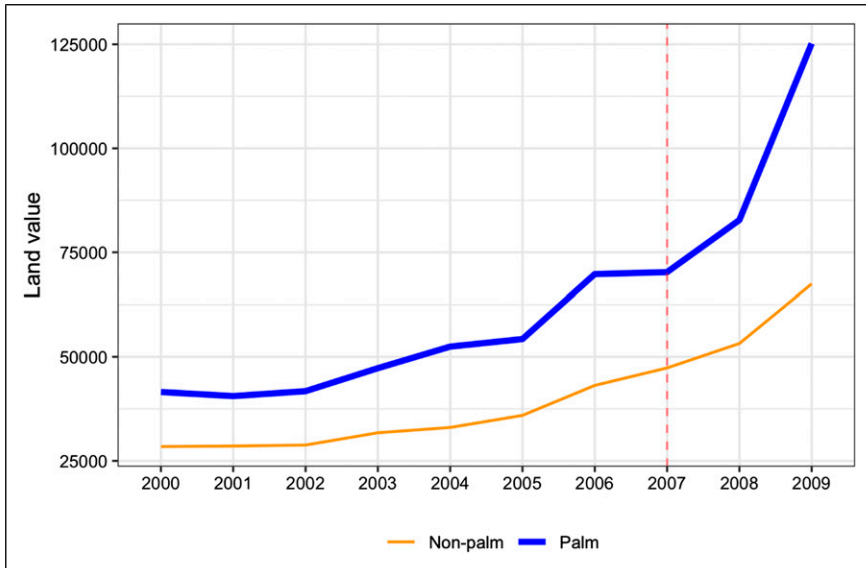


Figure 3. Land values over time in palm and non-palm municipalities.

preferences: Ch et al. (2018, 1009) suggest that “paramilitaries favor the formal land arrangements that large land owners prefer”.

In Table 2, I explore the impact of land-based coalitions on land informality, a continuous variable indicating the proportion of unregistered land plots in a given municipality. The empirical results suggest that as palm suitability increases, higher levels of paramilitary violence have a null effect on land informality. In areas of high land concentration, as palm suitability goes up, paramilitary violence is associated with more land formalization. However, the effect is not statistically significant.

Overall, the results indicate that oil palm had a *partially* deleterious effect on property rights. It is partial because while both paramilitaries and landowners might be interested in formalizing the newly acquired land, or at least not eroding land registries, the evidence suggests that they did prevent cadasters from recording updated information about land values, size, and owners, which likely contributed to a lower tax rate.

Capture or Violence?

How to manipulate property rights institutions in the countryside?⁶ One way to do so is by capturing institutions through bribes, campaign contributions, and alliances. In their analysis, Ch et al. (2018) fail to find strong evidence in favor of state capture, observing that there is “little reason to think the main channel by which armed groups influenced taxation in Colombia was by electing their favored politicians”. Using equation (4) as specification, I find that oil palm suitability, as levels of paramilitary violence increase,

has no statistically significant effect on Uribe's coalition vote share or their probability of election (sub-figure (a) of Figure 4).

These null findings, however, should not be interpreted as definite evidence against collusion with state officials. Electoral information reflects changes in public office, but it does not capture alliances or agreements with non-elected officials, such as functionaries in judicial and prosecutorial institutions, land agencies, and notary publics, all of which have been pivotal to the illicit accumulation of resources.

A different way to manipulate property rights is through violence against public officials. Despite its drawbacks, violence may contribute to the achievement of goals more effectively. I investigate whether the palm shock, conditional on paramilitaries and land concentration, had any effect on selective violence against politicians and state officials. To do so, I use *Basta Ya's* dataset of selective assassinations, developed by Colombia's National Center for Historical Memory. The dependent variable is the per capita (100,000) number of assassinations of elected officials, candidates, judicial officers, and law enforcement agents.⁷

The results presented in sub-figure (b) of Figure 4 are not entirely conclusive. As expected, the palm shock, in settings of low land concentration, has no statistically significant effect on selective assassinations, while in areas where the distribution of land is highly unequal, the effect is positive and statistically significant. However, the large overlap in their confidence intervals provides weak evidence in favor of a differential impact across different land tenure arrangements. Put differently, palm shock, contingent on paramilitary presence, positively impacts selective assassinations regardless of land concentration (also see column 2 in D.7).

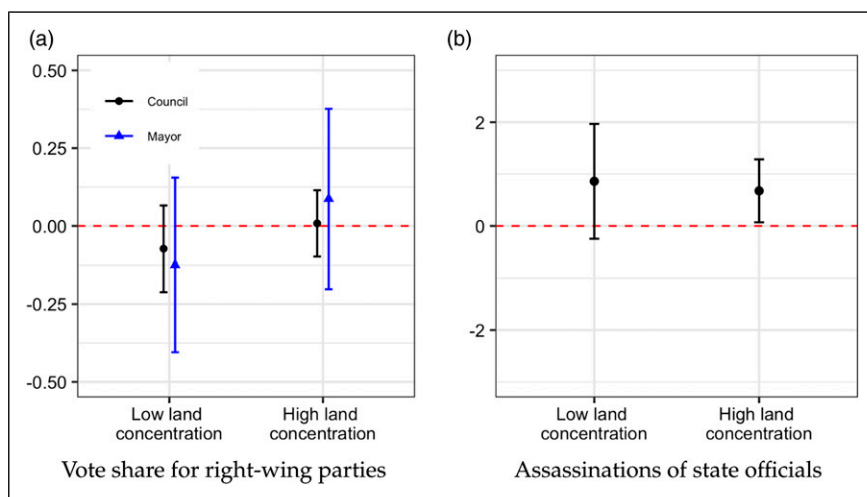


Figure 4. The role of institutional capture versus selective assassinations.

Qualitative evidence lends support to the prevalence of violence. In Northern Colombia, as they sought to consolidate their influence in the early 2000s, paramilitaries requested several notary publics to join them in the objective to accumulate properties, forge land titles, and facilitate illegal land transfers. After refusing to take part of this process, notary public Héctor Miranda was shot to death eight times ([Verdad Abierta 2013](#)). Miles away, a land restitution commission—accompanied by the municipal court and escorted by police and army—was ambushed in Tibú in 2019 by an unknown armed group after conducting a judicial proceeding in a rural plot ([El Tiempo 2019](#)). All in all, the null effects for alternative channels (i.e. elections, economic development), coupled with existing qualitative evidence indicates that coercion against public officials has not been inconsequential.

Conclusions

In countries experiencing civil conflict or transiting to peace, both political leaders and international institutions have promoted land deals with business elites and encouraged agricultural export crops as a way to improve the presence and quality of state institutions. While the existing quantitative evidence documents a robust negative relationship between agricultural commodities and conflict, this article suggests that agricultural crops may not necessarily contribute to improvements in local taxation.

In this article, I explore the argument that land-based coalitions have deleterious consequences for local state capacity. Land-based coalitions are temporary alliances between landed elites and paramilitaries aimed at the protection and appropriation of resources. Resource booms are particularly crucial windows of opportunity for their emergence, because they raise the strategic value of land. Resorting to coercion and political influence, land-based coalitions weaken fiscal extraction by accumulating property, while undermining land-related institutions throughout the territory. With a focus on Colombia's oil palm boom, I leverage municipal-level variation of palm suitability, violent actors, and land concentration to understand how the shock affected local taxation. I document that the palm boom, in areas with paramilitary violence and relatively more influential landed elites, had a negative effect on property taxation and cadastral institutions, but no significant impact on levels of land formalization. The takeaway is clear: for land-based coalitions, it is fruitful to legalize their wealth, while undermining the informational basis of property taxation.

In investigating this relationship, I highlight two related elements. First, I explicitly focus on the role of pro-government militias to understand their impact on the state. If the central state's coercive action is critical to prevent insurgencies from appropriating revenue in moments of abundance—like the existing literature predicts—its tolerance toward paramilitaries may be partially responsible for the erosion of state institutions. Second, I emphasize the 'cooperative side' of civil conflicts and in particular that between wartime elites. Wars are defined by competition and conflict, but they also generate coalitions between violent and non-violent groups: "elites seeking advantage

in the disorganized context of war” (Wood 2008) and resorting to violence and political influence to accumulate resources.

This article hopes to motivate further research on several key questions. First, I join a number of scholars exploring the politics of subnational state capacity and conflict (Ch et al. 2018; Christensen and Garfias 2020; Dargent, Feldmann, and Luna 2017; Harbers and Steele 2020). Future research should further investigate the mechanisms through which state capacity changes in contexts of large-scale political and criminal violence. As this article has shown, the ‘state capacity effect’ does not necessarily contribute to fiscal capacity. Consequently, it is crucial to gain a better understanding of the mechanisms through which resources, even if agricultural, contribute to higher levels of taxation in some cases but not in others.

A second area of research is the politics of (land) inequality. As I have shown in this article, land inequality—and the actors that benefit from it—is critical for understanding how and why states remain persistently weak in some areas (Boone 2003; Faguet, Sánchez Torres, and Villaveces Niño 2020). The issue of land is not simply about a set of citizens’ unequal access to resources, but also about how such unevenness leads to both the concentration of political power and the distortion of state-citizen relationships. Outside contexts of civil conflicts, Hollenbach and Silva (2019) study the case of Brazil to show that economic elites can undermine the state’s to collect revenues especially when levels of inequality are high. Related to this is the question of property rights institutions in the countryside (Christensen and Garfias 2020; D’Arcy and Nistotskaya 2017; Onoma 2009). Politicians, violent groups, and landowners alike, when exposed to the right window of opportunity, are willing to weaken and manipulate property rights in their attempt to accumulate wealth and land, one of the key tokens of power in the rural world. Only by fully understanding these dynamics can we begin to suggest ways to prevent forced displacement, large-scale land grabbing, and new cycles of conflict.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. The regions are Amazon, Andes, Caribbean, Orinoquía, and Pacific.
2. $Price_i \times Palm_i \times Insurgency_{it}$
3. As I describe below, however, excluding the role of insurgency yields similar results.
4. In [Supplementary Appendix D.2](#), I also explore the effects on homicides but somehow consistent with the literature, I find no significant effects.
5. Unfortunately, the outcomes are only available until 2009, making the difference-in-difference analysis unfeasible.
6. In addition to addressing the role of capture versus violence, driven by intentional manipulation, [Supplementary Appendix D.5](#) explores whether changes in property taxation are driven by an ‘economic activity’ channel.
7. Because data for violence against state officials are available for the entire time period, I use the difference-in-differences specification described in equation (2).

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