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Science

*Essays on the Political Economy of Development
in Colombia*

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Abstract

This thesis consists of three essays on the political economy of development and focuses on topics related to democratization, redistribution and conflict. It studies one the largest countries in Latin America, Colombia, and examines mostly his history during the 20th century.

The first chapter, *"Buying off the Revolution: Evidence from the Colombian National Peasant Movement, 1957-1985"*, studies the relationship between democratization and redistribution during periods of revolutionary threats. Far from causing an increase in broad redistribution (e.g. social spending), I show that the state organization of a social movement that extends the political rights of the threatening group can be used to identify rebel leaders and provide private goods to them, in return for preventing social unrest and demobilizing their supporters. I study the context of the organization by the state of the most important social movement in Colombian history -the National Peasant Movement (ANUC)- during the decades of a threat of Communist revolution (1957-1985), when the government gave ANUC direct political participation in the executive branch and economic support. Using three newly digitized data set of the Colombian municipalities, I find that this reform did not lead to higher broad redistribution towards the peasantry but it led to an increase in targeted redistribution in terms of public jobs and lands. By matching the names of the peasant leaders to the beneficiaries of the land reform, evidence suggests that peasant leaders disproportionately benefited from land reform and that targeted redistribution towards the peasant leaders was a mechanism to restrain the Communist threat. Finally, I find suggestive evidence that buying off the rebel leaders was an effective counter-revolutionary strategy as it led to less revolutionary activities after the support to ANUC was terminated (1972-1985).

The second chapter, *"Roads or Schools? Political Budget Cycles with different types of voters"* also studies one form of democratization: the franchise extension. It uses a new Colombian data set (1830-2000), to analyze how changes in the electoral legislation with regard to the characteristics of voters (in terms of education and income levels) have affected fiscal policy in election years. In line with economic theory, I show that after the male universal suffrage law was reformed in 1936 the composition of the expenditure shifted towards social spending (like education, health, and welfare benefits) but there was a decrease in spending on infrastructure

and investment projects (like roads). Consistent with the literature, I also find: 1. The timing and the size of the political budget cycles changed after 1936 and 2. After 1936 there was a shift in the funding mechanisms from indirect tax revenues to more debt.

In addition to democratization and redistribution, the third chapter examines the causes of the civil conflict in Colombia. The third chapter "*On the agrarian origins of civil conflict in Colombia*", co-authored with Fabio Sanchez, investigates the impact of land dispossessions by landlords on the origin of the civil conflict in Colombia. The study exploits variation in floods to identify how peasants' land dispossessions during the export boom (1914-1946) determine the rise of rural guerrilla movements and the consolidation of their rebel activities. It uses a novel municipal-level dataset on natural disasters and land dispossession, and documents that municipalities experiencing floods during the years 1914-1946 were substantially more likely to have land dispossessions than municipalities where floods was not severe. Floods reduced temporarily the conditions of the land and its value, facilitating the dispossession of the peasants of their lands by large landowners. Using a matching-pair instrumental variable approach, we show that the historical dispossession of lands by landlords that led to the rise of peasant grievances is associated with the presence of the rural guerrilla movement -The Revolutionary Forces of Colombia (FARC)- during the first stage of the Colombian civil conflict.

We propose two mechanisms through which previous land dispossessions facilitated the emergence of rebel armed groups and use a mediation analysis to test the indirect effects. On the one hand, exposure to previous civil wars gave military training and access to weapons and military experience to the rural population that likely created incentives for the formation of rebel groups. On the other hand, the ideological politics of rebellion by the Communist party exacerbated the grievances and helped to the emergence of rebel armed groups.

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Preface

In this thesis I examine two important questions. First, what is the relationship between redistribution and different types of democratization in Colombia. Specifically, the thesis analyses the effect of two types of democratization -franchise extension and extension of political rights of an underrepresented group- on public good provision and discusses potential mechanisms that explains this relationship. Second, I also examine the potential causes of the civil conflict the country has experienced since 1960s and how this is related to the extension of the political rights of the peasantry, the co-optation of the peasant leaders and to old grievances, in particular to peasants' land dispossessions.

The thesis contains three essays. The first investigates the experience of the organization of the Colombian National Peasant Movement -ANUC- within the context of the threat of a Communist revolution in Latin America during 1957-1985. The Colombian government organized this movement in 1967, a time when peasants could already vote and run for public office. This paper studies the effect of this form of participation -the organization of a social movement by the state- on both, broad and targeted redistribution and their effectiveness in averting social unrest. I use a difference in difference strategy that takes advantage of the variation in the timing of participation -a municipal association getting legal entitlement-, and solve the potential self-selection problem in the voluntary organization of the association by restricting the main specification to a sample that compares only municipalities that obtained legal entitlement with those that only managed to obtain legal status -recognition- during the years that the government supported the movement (1967-1972). To test the main theoretical predictions of the link between threat of revolution, democratization, and redistribution, I use a newly digitized and hand-coded municipal dataset which includes detailed information about local public expenditure and revenues, ANUC and public land allocations from 1957 to 1975. I also digitized the names of over 2,500 peasant leaders and contrasted them with the names of over 10,000 peasants that received public lands during 1967-1972 to suggest that peasants leaders benefited more from the land reform than other peasants in their municipalities.

The empirical analysis suggests four findings. First, obtaining legal entitlement did not lead to higher broad redistribution from the landowners towards the peasantry. Second, this type of empowerment led to higher targeted redistribution.

Third, targeted redistribution occurred more intensively in municipalities which experienced more violence in the previous years or where the communist threat was stronger. Fourth, by merging all data about public disorder activities in Colombia between 1972 and 1995, I find a negative correlation between co-optation of the peasant leaders and public disorder, which is consistent with the idea that the strategy was successful at buying off the revolution.

To the best of my knowledge, the present paper contributes to the existing literature in two different ways. First, it studies the effect of another form of democratization, the state organization of a social movement that empowered a particular group of the society, during periods of a threat of revolution. This type of democratization differs from the existing literature as it focus on a democratic mechanism that gives *de facto* decision power to peasants and goes beyond the traditional *de jure* decision power, universal suffrage. Second, in contrast to the existing literature, it quantifies the effect of democratization on both types of redistribution, broad and targeted, by exploiting a unique dataset that allows to identify simultaneously the leaders of the threatening group and the beneficiaries of the land reform and using it to build a proxy of co-optation.

In addition to study the organization of the social movement by the state, I also investigate in the second chapter a constitutional reform that changed the characteristics of voters in Colombia. Since independence and before this reform, the law stated that only literate men with properties or a certain amount of income per year could vote. Following the constitutional reform in 1936, the group of potential voters changed. The legislative act established that, starting from the next elections (1938), all men older than 21 years of age could vote irrespective of their income or education. This reform transformed the group of voters from a small group of high income, literate, and informed men to a large and heterogeneous group with a majority being low-income and illiterate uninformed men. I collect data on national revenues and expenditure starting in 1830 and ending at the beginning of the 21th century (1830-2000) to study how this democratic reform -franchise extension-affects redistribution and incumbents incentives during electoral years.

This paper yields three main findings. First, after the law was reformed in 1936 the composition of the expenditure shifted towards social spending (like education, health, and welfare benefits) but there was decreased spending on infrastructure and investment projects (like roads). Second, the timing and the size of the political budget cycles changed after 1936. Third, after 1936 there was a shift in the funding mechanisms from indirect tax revenues to more debt.

This paper makes two contributions to the existing literature. First, although I study just one country, I study the political budget cycles during a longer period, starting just after independence and ending at the beginning of the 21st century. Unlike most existing studies, my work covers 170 years (1830-2000). Second, I focus on the changes in the policy instruments and politicians' platforms when the characteristics of the voters change. Instead of giving priority to the type of government or democracy and studying the political budget cycle with reference to those categories, I concentrate on the particularities of voters. In this sense, I try to answer how, depending on the characteristics of the different groups of voters, the politicians use different policy instruments to attempt to get re-elected.

In the third paper, written jointly with Fabio Sanchez, we investigate the impact of peasants' land dispossessions on the origin of the civil conflict in Colombia. In addition to the conventional causes of conflict such as poverty and low economic growth, we examine the role of old land dispossessions as a historical cause of conflict. Using a matching neighbor-pair and instrumental variable approach, we find that the historical dispossession of lands (1914-1946) by landlords that led to the rise of peasant grievances is associated with the presence of the rural guerrilla movement -The Revolutionary Forces of Colombia (FARC)- during the first stage of the Colombian civil conflict (1974-1985). The variable land dispossessions suffer of measurement error, so we instrument it with a measure of floods during the same period (1914-1946). We build and test empirically the hypothesis that during periods of higher peasant vulnerability, such as floods that reduced temporarily the conditions of the land and its value, the weak enforcement of property rights facilitated land dispossessions by large land owners.

In this paper, we also propose two mechanisms to explain this correlation and use a mediation analysis to test them. On the one hand, the military feasibility that is viable during civil war periods when peasants groups had access to weapons and military equipment. On the other hand, the ideological political of rebellion developed by the guidance and support of the revolutionary parties that may trigger peasants grievances, generate political awareness among the peasantry and foster the formation of rebel groups.

Different from the literature which focuses on poverty or inequality as the ultimate cause of civil conflict, this chapter concentrates on the role of historical peasants' land dispossessions and in a window of opportunity that gave a political and military opportunity to the peasants to organize and rebel. Our paper builds and contributes to the literature on grievances and conflict and in terms of the in-

strument; this paper also contributes to the literature that relates natural disasters or climate variables and conflict by proposing a different channel between rainfall shocks that lead to floods and conflict: land dispossessions that lead to the rise of peasant's grievances.

Chapter 1

Buying off the Revolution: Evidence from the Colombian National Peasant Movement, 1957-1985.

1.1 Introduction

Governments often face threats to the status quo from groups of the society that are politically and economically excluded. One response to the threat is the implementation of democratic reforms that increase the political participation of the threatening group. Most prominently, scholars have studied reforms such as extension of the franchise, and introduction of elections, as means to reduce revolutionary threats, and have concentrated on their effect on broad redistribution, assuming that once they take place, the original status quo will be permanently secured. However, even after implementing reforms that extend *de jure* decision power, governments may still face a threat from uprisings. In this scenario, elites need to provide *de facto* power, through giving the excluded group a direct voice in the policy making process.

If democratization is defined as a process that extends the political participation of underrepresented groups, one of its form that has received little attention in the literature, is a state-sponsored participatory reform, namely the organization of a social movement by the state.¹ This democratic reform empowers the threatening group by giving them direct political representation in the executive branch of government and it is a mechanism that gives *de facto* power after the franchise is extended.

Moreover, the organization of a social movement also helps governments to identify who are the leaders, the people elites should be worried about. Large scale social movements have a vertical structure that allow their own members to select the representatives that participate in the policy making process.

This paper studies the effect of this democratic reform on both, broad and targeted redistribution and their effectiveness in averting social unrest. I find that elites use this form of democratization not as a device to increase broad redistribution - which is expected when elites do not know who is the threat- but as a mechanism to

¹In this paper, a social movement is defined as a process of mobilization that stretch across space and time, linking persons, and groups identified with particular claims and values (Escobar 1995).

identify leaders of the dissatisfied group and buy them off, in return for preventing social unrest and demobilizing their supporters.

Specifically, this paper draws on the experience of the organization of the Colombian National Peasant Movement -ANUC- within the context of the threat of a Communist revolution in Latin America during 1957-1985. The Colombian government organized this movement in 1967, a time when peasants could already vote and run for public office. Through a direct alliance between peasantry and the national state that lasted until 1972, the central government gave the peasants direct political participation in the local executive branch (a seat in local committees) and economic support (resources to organize and train peasants leaders). ANUC had a vertical organization where the peasant members elected their own and permanent leaders, who would represent them with the local and regional authorities.

In this context, a democratic reform is the extension of the political representation of a group which is dissatisfied with the status quo -peasantry- and it is measured as a municipal peasant association affiliated to ANUC obtaining legal entitlement during the years that the government supported the movement (1967-1972). Getting legal entitlement is a *de facto* devolution of power from landlords to peasants, that allows the peasantry to participate directly in the local policy making process: ANUC peasant leaders meet local authorities regularly to discuss investment projects, revise budgets and activities of their agencies and to coordinate future activities.

Crucially for my empirical strategy, obtaining legal entitlement is a two-stage process and includes an element of voluntary organization. First, an association has to get legal status (recognition) for which its members have to organize themselves and convene a local assembly. Then, it obtains legal entitlement (empowerment) by sending some documents to the Ministry of Agriculture in Bogota, which grants the new legal recognition in a process that takes, on average, between 9 to 11 months.

I use a difference in difference strategy that takes advantage of the variation in the timing of democratization, and solve the potential self-selection problem in the voluntary organization of the association by restricting the main specification to a sample that compares only municipalities that obtained legal entitlement with the compliers, those that only managed to obtain legal status due to the end of the alliance in 1972. To test the main theoretical predictions of the link between threat of revolution, democratization, and redistribution, I use a newly digitized and hand-coded municipal dataset which includes detailed information about local public expenditure and revenues, ANUC and public land allocations from 1957 to

1975.

My empirical analysis yields four key findings. First, a democratic reform that empowered the peasants did not lead to higher redistribution from the landowners towards the peasantry. Results suggest deterioration in the broad redistributive policies such as social expenditure (primary education and basic health) as well as land tax revenues, due to an heightened tax evasion.

Second, the empowerment of the peasants led to higher targeted redistribution. In places where the democratic reform took place, there is an increase in bureaucratic expenditure and in the number of public lands given to peasants. I provide evidence showing that the change in bureaucratic expenditure was driven by an increase in the number of employees in the section of public administration, in line with previous qualitative findings (Bagley 1989, Escobar 1988, Archer 1990). By matching the names of approximately 2,500 peasant leaders and the names of over 10,000 peasants that received public lands during 1967-1972, the analysis also reveals that peasant leaders benefited disproportionately from the land reform.² These private goods -public jobs and lands- represent more than just a temporary change in income and they are political (contacts) and economic (collateral) assets that can be used in the future (Lehman, 1971).

Third, targeted redistribution and co-optation occurred more intensively in municipalities which experienced more violence in the previous years or where the communist support was stronger. In contrast, wealth, collective action capacity and inequality do not seem to affect the results. This finding supports the hypothesis that the mechanism behind the increase in the targeted redistribution was the potential threat of a revolution.

Assuming that targeted redistribution is an informal contract between the leaders and the state in exchange for demobilizing their followers (Lehman 1971), I test whether municipalities where peasant leaders were co-opted through public land allocations experienced less violence following the end of the alliance. I merge all data about public disorder activities in Colombia between 1972 and 1995, which includes the number of land invasions, the Revolutionary Armed Forces of Colombia -FARC- guerrilla rebel activities and peasant protests at municipal level. I find a negative correlation between co-optation of the peasant leaders and public disorder, which is consistent with the idea that the strategy was successful at buying off the revolution.

²Albertus (2013, 2015) suggests similar findings in the case of Velasco dictatorship in Peru during 1968-1980, where the land was redistributed to "middle-class" peasants instead of landless peasants because they had the greatest potential to organize against the regime.

The study of mechanisms that increase participation is rapidly expanding as democratic reforms are seen as key drivers of redistribution and development. This paper contributes to this existing literature by studying the effect of another democratic reform, namely the organization of a social movement by the state, and how this type of representation can affect redistribution. This type of democratic reform differs from the one studied in the existing literature as it gives *de facto* decision power to peasants and goes beyond the traditional *de jure* decision power, universal suffrage. This paper also adds to the growing literature on democratization and redistribution during a threat of revolution, as it shows that the organization of a social movement by the state is a mechanism which allows the local associations to select their leaders and at the same time allows governments to identify the potential rebel leaders and buy them off. The paper exploits a unique dataset that allows to identifying simultaneously the leaders of the threatening group and the beneficiaries of the land reform. The results also complement the literature as they quantify the effect of democratization on both types of redistribution, broad and targeted. Finally, the threat of a Communist revolution and the end of the alliance between government and peasants provides a unique context to study the effectiveness of this strategy as a mechanism to avoid revolution.

The rest of the paper is structured as follows. Section 2 discusses the literature review. Section 3 describes the institutional framework of Colombia and the National peasant movement during the period of study 1957-1985. Section 4 presents the conceptual framework. Section 5 discusses the econometric specifications of the relationship between democratization and redistribution during periods of a threat of revolution. Section 6 presents the mechanisms. Section 7 presents the econometric specifications and results of the relationship between democratization, co-optation and threat of revolution. Section 8 concludes.

2 Related Literature

This paper aims to contribute to the literature on democratization and redistribution during periods of a threat of a revolution. A prolific body of work has explored the different strategies that governments can implement when there is a threat to the status quo from a group that are politically and economically excluded. One strategy to deal with the threat is to rely on repression for survival, becoming dependent on the police force or military and using a large share of resources on keeping this control. In addition to the notorious consequences of displacement and mortality,

the use of repression as a long-term strategy could facilitate that this force turned against governments. Moreover, this strategy may undermine the ability of the government, which is populated by the repressed members, to function (Haber, 2006).

Another commonly studied response by the elite is the implementation of democratic reforms, with franchise extension and the introduction of election the most commonly used and studied type of reforms (Acemoglu and Robinson 2000, 2006; Tilly, 1995; Weyland, 2010; Przeworski, 2009; Chaney 2013; Aidt and Jensen, 2014; Aidt and Franck, 2015; Aidt and Leon, 2015). These works have suggested that these forms of democratization will lead to an increase in broad redistribution (Meltzer and Richard 1981) and public good provision (Musgrave 1969; Lindert 1994; Peltzman 1980) and have assumed that once they take place, the original status quo will be permanently secured.

However, franchise extension is only one step forward in the process of democratization. In many democracies real power is rarely vested in formal political institutions and even when peasants, workers and urban poor enjoy political rights such as voting, they lack access to effective and informal channels of influence (Eckstein 2001).

There is another democratic mechanism that governments can use to restrain threats to the status quo and that has received little attention in the literature: the organization of a social movement by the state. Social movements are a democratizing mechanism because, through collective action, generate new channels of influence and people that have been traditionally excluded have now a united voice that allow them to participate directly in the policy making process (Meyer, 1994; Tarrow, 1994; Tilly 1978; Roberts 1996; Jelin and Hershberg 1996; Campbell et al, 2010; Eckstein 2001; Escobar 1998). In Latin American history, social movements have served as vehicles for the achievements of more political and economic benefits (Roberts 1996; Jelin and Hershberg, 1996).

Although the literature about social movements and their empowerment role is extensive, this work is the first attempt to study the organization of a social movement by the state in the context of a threat of revolution. Moreover, the idea proposed in this paper about the organization of social movements as a mechanism to identify leaders of the dissatisfied group and buy them off, in return for preventing social unrest and demobilizing their supporters has not been previously explored in the quantitative political economy literature.

This paper is also related to the empirical literature that studies the effect of

democratization on redistribution, regardless of the revolutionary threats. A prolific body of work suggests that introduction of election and franchise extension increase broad redistribution and public good provision (Meltzer and Richard, 1981; Lindert 1994; Peltzman, 1980; Husted and Kenny 1997; Vernby 2013; Martinez-Bravo et al 2014; Kroth et al 2016). For example, in Britain, France and Germany democratic reforms during the 19th and 20th century coincided with important educational reforms and progressivity of the tax system (Musgrave 1969; Lindert 1994; Flora 1983). In a similar spirit, Corvalan et al (2017) show that the right to run has a greater effect on redistribution than the right to vote.

The role of democratic reforms as mechanisms to identify the leaders in authoritarian regimes and co-opted them has been discussed extensively. Elections have often been used as a mechanism to identify opposition leaders in authoritarian regimes whereas parliament provide them with some policy influence (Boix and Svulik, 2007; Gandhi 2008; Malesky and Schiler 2010). Once the opposition leaders³ are identified, they are co-opted and the status quo is secured as it was the case in Russia (Reuter and Robertson 2014), Argentina during the dictatorships in the 1970s-1980s (Rock, 1987) and Mexico during the Porfiriato (Haber, Razo and Maurer, 2003).⁴

Finally, the type of democratic reform I study is closest to quotas and reservation seats for underrepresented groups. Pande (2003) provides evidence that reservation for minority groups in India -underrepresented castes and tribes- can enhance groups' influence in the policy making process and that legislators belonging to these groups have used this influence to increase targeted redistribution. Similarly, in the case of gender quotas in India, Chattopadhyay and Duflo (2004) find that the reservation of a council seat for women led to more investment in infrastructure that is directly relevant to women's needs. Despite the importance of this issue, very little is known about the causal effect of quotas or reservation seats on redistribution in the context of a threat of revolution.

³Opposition leaders can be politicians as in the Russian case or senior entrepreneurs as in Argentina and Mexico.

⁴More recently, Nicolas Maduro's government in Venezuela has clearly identified the military as a potential threatening group and has promoted more than 2000 military to general positions -US has more than double military force and only 900 generals- and has allowed them to run the oil-state enterprise or to be in charge of different Ministries as a strategy to avoid an uprising of the military forces.

3 Historical Background

The beginning of a revolutionary socialist state in Cuba in 1959 exerted a great stimulus on the aspirations of the peasants in Latin America and it was perceived by the governments in the region, including the United States, as a threat to the status quo (U.S Senate 1966, 1967; Archila 2001, Hobsbwam 2001; Hirschman 1963; Reyes 1987; Gilhodes 1988; Bagley and Botero 1994).

In particular, Colombia was seen as one of the countries with a *castroite insurgency problem* in the region (C.I.A 1961, 1967)⁵ due to the spontaneous mobilization of peasants during the civil war "La Violencia" between 1948 and 1958⁶. In terms of the political structure, Colombia was under the "National Front" coalition (1958-1974), in which the two main political parties, the Liberal and the Conservative parties, agreed to alternate power for a period of four presidential terms. However, other parties such as the Liberal Revolutionary Movement (MRL), National Popular Alliance (ANAPO) and the Communist party actively participated in local and regional elections.

To respond to the threat, Latin American governments, pressured by the US government and the Alliance for Progress, focused on implementing important agrarian reforms and rural development programs. One of the responses of the political urban elite was the implementation of democratic reforms that expand the political opportunities to peasants. Table 1 indicates that during the 1960s this policy was implemented in other countries of the region such as Brazil, Chile, Ecuador, Peru and Venezuela. The empowerment was materialized in the organization and support of social movements in the name of general national goals that transcended political party interests (Perez, 2010).

In Colombia, President Carlos Lleras Restrepo, supported by the urban elite⁷, founded in May 1967 the Colombian National Peasant Movement -ANUC- (Ministry of Agriculture, 1968)⁸, considered the most important movement in the country's history (Gilhodes, 1988)⁹. ANUC had some features that distinguished it from any

⁵Other countries that were considered to have a future prospect of insurgency were Guatemala, Nicaragua and Bolivia.

⁶According to Hobsbwam (1963) this mobilization was greater than anywhere else in the Latin American history, with the exception of Mexico.

⁷At this time, the political national elite that controlled the central government had started to separate from the local/regional rural elite due to differences in their economic interests.

⁸To found ANUC, the president skipped the traditional process through the congress and signed directly the decree of foundation (Ocampo, 2014).

⁹Its national protests achieved important press coverage and gathered more than 500.000 people in 155 cities ("El Tiempo", June 3 1968).

other rural movement in the country.¹⁰ First, it had national scope. Two years after its creation it had offices in almost 50% of the municipalities and had approximately a million members. Second, it claimed to be politically independent and its members came from different political ideologies (Zamosc, 2006; Escobar 1982). Third, members were heterogeneous. Small landowners, tenants, sharecroppers, settlers and agricultural workers were part of it (Zamosc, 2006; Bagley and Botero, 1994). The goals of the movement were the improvement of the living and labor conditions of the peasantry and the implementation of an structural agrarian reform that redistribute land to the peasants (Zamosc, 2006). The government stipulated that only members of the movement would be potential beneficiaries of the agrarian policies, making compulsory to show a membership card when a service was requested or a benefit was received¹¹.

ANUC had a vertical organization. It had a national committee that participated in the meetings with the central government, regional associations that took part in the different state assemblies and municipal associations which elected five representatives to participate in the local committees. Each municipality was in charge of organizing its own association and of getting its legal recognition. The legal process had two stages: first, the association had to obtain legal status and then the legal entitlement was granted. To get legal status, members had to convene a local assembly with a 10% minimum quorum of the registered members and to agree on the statutes of the association. This assembly also required the presence of a delegate of the Ministry of Agriculture who had to sign the act of foundation. His presence relied on the budget that the ministry had to organize the movement¹². In total, 75 delegates had to travel around the country to attend these assemblies (Ministry of Agriculture, 1968). After an association got legal status it had to send some documents (constitutive act of the assembly, electoral results of the board of directors of the associations and a copy of the statutes) directly to the Ministry of Agriculture in Bogota who was in charge of granting the legal entitlement. The time to get legal entitlement once an association had obtained legal status varied between nine and eleven months.

¹⁰The other important rural association at the time was the National Federation of Coffee growers (FEDECAFE). However, this organization did not compete directly with ANUC. Its goals and demands from the government were different. FEDECAFE's main demands were subsidies, reduction of export tariffs, improvement of mechanisms of commercialization and access to credit.

¹¹To become a member, a peasant has to show evidence of being a rural worker: laborer, sharecropper, settler or small land owner.

¹²The financial support comes mainly from the Alliance for Progress and from international organizations such as the Interamerican Development Bank (IDB).

Once an association got legal entitlement, its leaders were able to directly participate in the policy making process in their municipalities. Officials of the local entities met with peasants representatives to revise budgets and activities of their agencies and to coordinate future activities. With this representation, it was ensured that the local officials fulfilled their tasks taking into account the needs of the peasants and ensured that local entities had to study the how, when and where to provide public goods (Ministry of Agriculture, 1968)¹³.

The alliance between the state and ANUC lasted until 1972 when the government signed a new pact or agrarian counter-reform, known as the Chicoral agreement, which protected large properties and landowners. With the end of the alliance, the economic and political support of the state finished, some associations lost their legal entitlement and repression against the peasants started.¹⁴

As a result of internal divisions and the lack of mechanisms to get new economic resources, in October 1972 the movement split into two. A first group -"linea Sincelejo"- had a radical position, declared itself independent of the government and kept the revolutionary ideology of transforming the economic structure in the countryside by abolishing all type of capitalist structure. Some of ANUC members also joined the rural guerrilla group FARC that emerged in 1964 after the civil war -La Violencia- and some others founded the indigenous peasant group known as Quintin Lame (CQL) in 1974¹⁵. A second group -"linea Armenia"- supported the reforms proposed by the government and insisted upon peaceful and legal solutions through the dialogue with the authorities (Rudqvist, 1983). These two lines continue over time and although ANUC is still active, it has lost its strength and its influence in the national matters (Zamosc, 2006).

ANUC was a form of democratic reform that empowered the peasants and can be thought as a substitute for repression. Several factors can explain why the Colombian government preferred not to employ a violent strategy. First, it was costly compared to the other strategy -the organization of the peasant movement-. Bagley and Botero (1994) estimate that the cost of organizing ANUC was less than a dol-

¹³Other benefits that the associations received once they obtained legal entitlement were training to their leaders and access to credit quotas, revolving funds and marketing and technical assistance.

¹⁴In the region, military governments took power in Uruguay and Chile in 1973, and Argentina in 1976. In these countries, militaries removed presidents they saw as moving dangerously to the left and to counter guerrilla movements that threatened to topple the governments. In these three cases, the immediate threat to national security was translated as "communism or fidelismo" (Wright, 1991).

¹⁵The Quintin Lame group received military training from the Marxist-Leninist Communist Party and was formed after the killing of indigenous leaders in the state of Cauca by the repressive forces of the state and landowners (Penaranda, 2015).

lar per member. Second, between 1948 and 1958, the country had experienced the longest and most crude bipartisan civil war in the countryside, "La Violencia", that left around 200.000 deaths. When the war ended the state had a large deficit and lost part of the monopoly over violence in the rural areas. Third, international organizations encouraged governments to take control of the rural areas using peaceful means and conditioned their credit and economic resources to its achievement.

4 Conceptual Framework

Threats arise in response to grievances or unfulfilled needs that groups experience in a shared way (McAdam, 1982) and materialize when they develop a shared consciousness and collective identities (Taylor and Whittier, 1992, Johnson 1999) or with the presence of political opportunities (Tarrow 1998; McAdam, Tarrow and Tilly 2001).

The triumph of peasant revolutions in neighboring countries can exert a great stimulus on peasant aspirations, provide new political opportunities and exacerbates peasant grievances over poverty and landholding inequality, transforming the peasantry into a threat. Revolutionary events abroad also represent exogenous shocks to the information set of the elites and may be a trigger of reforms to reduce grievances (Aidt and Jensen, 2014).

Grievance accounts of peasant support for revolutionary ideas -such as the communist ideology- and guerrilla movements suggest that fulfilling their grievances should reduce peasants' support for rebels. Hence, the state can address peasants' grievances by implementing reforms that meet peasant's demands and, it can potentially "buy" peasants away from supporting revolutionary ideas and turning them into a force that supports the status quo (Huntington 1968; Paige 1975).

One response to address the grievances is to implement democratic reforms that gives *de facto* power to underrepresented groups. Elections and franchise extension are only the first step moving forward in the process of democratization. These reforms are intended to improve the welfare of the excluded group and in turn prevent social unrest when employed as commitments to future broad redistribution (Acemoglu and Robinson 2000, 2006). However, revolutionary threats may still occur after franchise extension. In democracies, where regular elections are already taking place and all citizens have been enfranchised, the representation of some groups remains limited. When there is a threat to the status quo in this context, governments have to repress the threat, implement other democratic reforms to

empower the dissatisfied group or carry out redistributive policies directly.¹⁶

One reform aimed at preventing revolution is the organization of social movements by the state, which is a state-sponsored participatory reform that generates new channels of influence by giving underrepresented groups political participation in the executive branch of the government.

The participation of the threatening group in the policy-making process is also a way to control it, as it was the case of the Latin American labor movements during the 1920s (Collier and Collier, 2012). Participation channels the threat toward administrative functions and resembles the impression that its demands are being addressed and as a result, they no longer need to be at the forefront of its activities (Murphree et al 1996).

What are the possible consequences of the organization of a social movement by the state? One possibility is that increased participation by the peasantry leads to greater broad redistribution in the form of land tax revenues and higher public goods provision. In particular, when the excluded group is the peasantry, its discontent is primarily distributive, not ideational (Finkel et al, 2015), so its empowerment will lead to demand more redistribution from the elite (landlords) to the excluded group (peasants). This broad redistribution will decrease grievances and the perceptions of inequality, by taking resources from the landowners and invest them in improving the living conditions of the rural population. By redistributing to the threatening group, it helps to appease the grievances and hence to reduce peasants' attempt to revolt.

However, larger-scale reforms that lead to higher broad redistribution are politically and economically costly. They require important economic resources and have the potential to harm elite interests.¹⁷ Because they are politically difficult to implement¹⁸, the effectiveness of the government's broad redistributive policies intended to undercut revolutionary threats and guerrilla expansion is limited, as it was the Colombian case during the 1980s and 1990s (Albertus and Kaplan, 2012). Large-scale reforms are also the strategy that governments tend to use when they have uncertainty about who can revolt or who are the leaders. For this reason,

¹⁶For example, during Velasco dictatorship in Peru between 1968-1980, the regime targeted directly the largest and most influential landowners for expropriation, redistributing to peasant workers (Albertus, 2013, 2015).

¹⁷This is not the case in nondemocratic regimes where the interest is precisely to destroy the power of economic elites and to diminish their influence, as it was the case of Peru during the 1970s.

¹⁸In Colombia, powerful landowners blocked extensive land reforms and successfully lobbied for INCORA to focus its efforts at those projects least disturbing to the existing land tenure (Albertus and Kaplan, 2012).

looking only at the effect of a participatory reform on broad redistribution as a way to avoid revolution is incomplete.

Governments have another, potentially effective, strategy: use the organization of the peasant movement to identify the leaders of the group. Social movements are a device to identify the leaders since they have a vertical structure and through an internal process they select their representatives. Once identified, the leaders can be bought off with particularistic benefits such as patronage jobs or public lands in exchange for demobilizing their followers.¹⁹

Whether the demobilization occurs as a result of an implicit contract between leaders and elites or because leaders have now a vested interest in the status quo due to an increase in "ownership" and "identification" leads to similar outcomes.²⁰ Demobilization and the appeasement of a threat to the status quo occur when leaders with significant power over their followers are co-opted by the state. Elites have incentives to use the organization of the social movement as a tool of political control and the co-optation of leaders strengthens the state's control over the threatening group while reducing the bargaining power of the rest of the movement's members. When leaders become part of the status quo, members face higher costs to organize against the government and overcoming the collective action problem is harder due to the loss of trust.²¹ Leaders can exploit their power over the members to encourage demobilization and any attempt to revolt. Hence, the co-optation of leaders will be negative correlated with violent activities against the status quo.²²

In terms of the role of the leaders, they will serve as a link between the state and the movement's members. Followers are grateful to leaders for speaking and acting on their behalf, even though leaders can potentially become part of the political elites.²³ Followers willingly cede agency to their leaders, for example due to their

¹⁹This strategic policy is similar to the political economy theory proposed by Biais and Perotti (2002) in which a government implements a Machiavellian privatization that allocates a significant share ownership to a targeted section of the population, leading to a shift in the political preferences that ensures reelection. Similarly, the selectorate theory proposed by Bueno de Mesquita and Smith (2012) also suggests that the elites will use private goods to buy off the "essentials", those whose support guarantee the permanence of the status quo.

²⁰This increase in identification can occur even when these policies do not imply substantial changes or outcomes are not very satisfactory to the group goals.

²¹For example, Mattingly (2016) shows how the inclusion of lineage leaders in village political institutions in China weakens villagers' land rights and is used by the elite to elicit compliance from villagers for land expropriation policies.

²²Future work might study whether co-opting the leaders is an effective long-term strategy.

²³Michels's (1962) theory of political leadership suggests that in large-scale movements, leaders inevitable become oligarchical as they are motivated to preserve their own power and positions and are more concerned with organizational maintenance than the original goals of the movement.

apathy or lack of competence in comparison to their skilled leaders (Michels 1962).²⁴

If this is the case, the empowerment of peasants will redistribute private goods which are political and economic assets for the peasant leaders.²⁵ Receiving private goods will also help the leaders to keep the vertical structure of the movement by consolidating their economic and/or political power and help them to differentiate from the rest of the members. The advantages of this strategy are its political and economic costs as it requires less economic resources (near zero in terms of the public budget) whereas it protects the elite interests.

By extending the political rights of the threatening group, governments also need to manage the balancing act of increase representation of this group without threatening the stability of the status quo. When governments decide to empower these groups they cannot risk their own power. In the case of social movements organized by the state, governments control their economic resources and their participation gives them a voice but not a vote over policy decisions, limiting their access to the state budget.

This framework relies on two assumptions. First, it assumes that leaders have sufficient control over their followers in order to avoid revolution if they decide it. Leader's power is particularly strong in large-scale social movements as they need to have a considerable influence on their followers in order to keep the movement cohesive (Hobsbawm 1993; McCarthy and Zald 1977).²⁶ Second, it assumes that leaders value more private goods than public goods.

I apply this framework to the Colombian case during the 1960s when there was a threat of a Communist revolution. The threatening group -the peasantry- was empowered by the state in order to avoid it being captured by the communists and rebel against the status quo. The empowerment occurred through the voluntary organization of a peasant association that gave the peasants direct participation in the policy making process. Their representatives in the local state organizations were the peasant leaders, who were elected by each municipal association. The strategy of the government in order to avoid a potential unrest was to give the peasant leaders economic -lands- and/or political -public jobs- assets and in exchange, these leaders

²⁴Marx and Engels (1968) and Lenin (1975) also shared the view that only intellectuals should be the leaders of revolutionary movements because they are able to understand the meaning of revolutionary struggle.

²⁵Public jobs are seen as political assets that facilitate building contacts, political capital and networks that give political gains. In particular, public jobs in administrative sections allow employees to become familiar with both legal and administrative complexities of the State (Lehman, 1971).

²⁶As Morris and Staggenborg (2012) suggest leaders help to create or undermine political and economic realities that influence the trajectories and outcomes of social movements.

had to demobilize their followers and avoid potential revolts.

5 Democratization and Redistribution

The objective of the empirical exercise is to estimate the effect of peasant empowerment during the period 1967-1972 on two types of redistribution, broad and targeted. I employ a difference in difference regression with municipality and year fixed effects and state specific-time trends in a panel data of 1088 Colombian municipalities between 1957 and 1975. I use obtaining legal entitlement as a proxy for peasant empowerment and exploit the variation in the timing of obtaining it.

During the years that the peasant movement had the support of the state, 552 municipalities got empowerment (legal entitlement and legal status) and 92 only got recognition (legal status). 444 municipalities did not get any type of legal recognition. Table 2 shows yearly the number of municipalities that obtained legal entitlement and legal status and its variation over time and Figure 2 presents the spatial distribution of the municipalities that got legal entitlement and legal status only.

To test the effect of the participation of peasants in the policy-making process on broad redistribution I use information on land tax revenues, central transfers and social expenditure. Land tax revenues are a good proxy of broad redistribution since relate three actors: landowners who pay the taxes, local governments who collect them and peasants who are the potential beneficiaries. Land tax revenues were the main component of a municipality's revenues but the enforcement of their collection was very low. Local social expenditure includes the spending of projects in primary public schools and health centers reported by a municipality and central transfers are additional revenues for specific projects related to health, education and infrastructure that municipalities received from the central government.

To test the effect on targeted redistribution I collected data on bureaucratic expenditure, number of public employees and hectares of public lands given to peasants. This type of expenditure redistributes resources to selected people by giving them private goods such as jobs and lands. Bureaucratic expenditure includes all the spending in the general direction of a municipality. This refers to the spending in general administration and executive power such as majors, local assemblies and local administrative directions (government, education, health, justice, infrastructure, finance, labor, agriculture and economic performance). This spending is a good proxy of targeted redistribution because it includes the budget spent in public jobs that are potential political assets and job positions that facilitate building contacts

and clientelistic relations.

The second proxy of targeted redistribution is the number of hectares of public lands allocated to peasants. Land is considered the most valuable asset for a peasant. Although agrarian reforms are aimed at benefiting most of the rural population, the policy is selective and usually ends up assisting only a small fraction of the peasants²⁷. Theoretically, all the agricultural workers could be potential beneficiaries of the agrarian reform. In practice, less than 5% of the peasants received public lands during these years²⁸. Because of selectivity in targeted redistribution, some members have disproportionately benefited from this type of redistribution.

Table 28 presents the descriptive statistics of the different variables used in the specifications.²⁹ The treatment are those 552 municipalities that obtained legal entitlement. In the case of the full sample the control group is all the municipalities that did not get this legal recognition and in the case of the restricted sample the control group is the 92 municipalities that obtained legal status but did not get legal entitlement.

5.1 Identification Strategy

My main specification uses a restricted sample of 644 municipalities to solve for a potential self-selection problem in the voluntary organization of the association. In this sample, I compare only municipalities that got both legal entitlement and legal status (treatment) with municipalities that only got legal status (control) during the years that the government supported the organization of the peasant movement (1967-1972). Given that the average time to get legal entitlement after obtaining legal status was between 9 and 11 months, the control group includes municipalities that were pending to obtain the legal entitlement when the alliance between government and peasants ended in October 1972 and hence only obtained legal status. The self-selection problem is solved in the restricted sample because all the municipalities in it follow the requirement of voluntary organization and they only differ in

²⁷Law 135 of 1961 provides to peasants two different mechanisms to receive public lands. First, through the regular process of public land allocations in which the peasants have to demonstrate that they have worked on at least 2/3 parts of the land they are claiming. Second, through colonization in which public lands are allocated free of charge to "poor rural workers or low income families". The decision relies on the Colombian Institute of Agrarian Reform (INCORA) which is a public national institution with administrative autonomy.

²⁸Rural population during these decades was around 14 million and overall the agrarian reform implemented since 1961 gave out around 300.000 plots of lands to peasants

²⁹Table 38 shows the descriptive statistics of the dependent variables for both treatment and control groups during the pre-treatment years (1957-1966).

the legal entitlement requirement which was a process that depends on the Ministry of Agriculture.

I also include other controls in the main specification. First, I control for potential income shocks that municipalities may experience every year. This captures changes in yearly municipalities' income depending on their suitability to produce some crops. This variable is the average of the land suitability of the main four crops (coffee, sugar, tobacco, banana) weighted by the national average price of each crop in 1957 COP. Second, I include other variables that might affect the timing of getting legal entitlement. These variables are population in 1964 and the number of tractors in 1960 interacted with a linear time trend t to allow their impact to vary over time.

The following difference in difference model is estimated:

$$y_{i,j,t} = \alpha_i + \delta_j t + \beta_1 D(\text{peas_asso})_{i,j,t} + \beta_2 x_{i,j,t} + \beta_3 (X_{i1960/4} * t) + \lambda_t + \varepsilon_{i,j,t}$$

where $y_{i,j,t}$ is measured as the log of both broad -land tax revenues, central transfers and social expenditure- and targeted -bureaucratic expenditure and public lands granted to peasants- redistributive variables in municipality i , state j in year t ; $x_{i,j,t}$ is the income shock; $X_{d1960/4}$ is a vector of baseline demographic and economic variables (population and tractors) obtained in 1964 and 1960, t is a linear trend and α_i , $\delta_j t$ and λ_t are municipality, state specific-time trend and year fixed effects respectively. The inclusion of municipality fixed effects in the main specification controls for any selection into treatment that is due to municipality time-invariant factors. Year fixed effects capture the influence of aggregate shocks and state specific-time trend control for the economic and institutional differences across states in Colombia during 1957-1975. The variable $D(\text{peas_asso})_{i,j,t}$ takes value 1 from the year t that a municipality i in state j gets legal entitlement until 1972 and 0 otherwise. The standard errors are clustered at municipality level to allow for within-municipality correlations.

The coefficient β_1 is the difference-in-difference estimate of the impact of legal entitlement of the municipal peasant association on the outcome variables during the years that the government supported the peasant movement (1967-1972). Interpreting β_1 as the causal effect of obtaining legal entitlement does not require to assume that the legal entitlement timing within municipalities was random. Instead, it requires the weaker assumption that conditional on the baseline controls, obtaining legal entitlement is not correlated with time-varying municipality characteristics that affect broad and targeted redistributive variables through channels other than the peasant movement. The second assumption that the identification

strategy relies on is the standard parallel trends in the absence of the shock to peasant organizations.

5.2 Results

I test the hypothesis that averages of both broad and targeted redistributive variables in municipalities that got full empowerment and those that got just legal status (partial empowerment) were different during the years that the government supported the peasant movement (1967-1972). Table 4 presents the effects of legal entitlement on broad redistribution and Table 6 presents the estimations on targeted redistribution. All estimations include municipality and year fixed effects. Columns 1, 4 and 7 in both tables include state specific-time trend, columns 2, 5 and 8 include state fixed effect and municipality specific-time trend and as a comparison columns 3, 6 and 9 present results for the full sample.

5.2.1 Broad Redistribution

Columns 1-3 in Table 4 report the results of obtaining legal entitlement on land tax revenues, columns 4-6 on central transfers and columns 7-9 on social expenditure.

Results indicate that obtaining legal entitlement did not lead to higher broad redistribution towards the peasantry. This implies a change in policy variables when a peasant association only got recognition compared to when it got full empowerment³⁰. The magnitude for the coefficient on land tax revenues is about 0.114 relative to the sample mean 12.0, which implies a 12%³¹ decrease in land tax revenues once an association got legal entitlement. The decrease in land tax revenues seems to be offset by an increase in transfers from the central government of around 10% but this coefficient is not significant³². The magnitude of the coefficient of social expenditure is 0.19 relative to the sample mean 10.4, which implies a decrease of 21% in municipalities that got legal entitlement with respect to those that only obtained legal status and is significant at 5%.

The negative and significant estimates for the legal entitlement dummy are robust when I use the alternative specification -municipality time-trend-, while the coefficient on central transfers remains insignificant. The magnitude of the coefficients is larger when I use the full sample and include as a control group not

³⁰The size of the coefficients is larger when the full sample is used.

³¹Because the dependent variable is in log, this result is obtained from $\exp(0.114) - 1 = 0.12$.

³²Although results are not significant, Table 45 in the Appendix B also indicates that indirect tax revenues, such as local taxes on alcohol and cigarettes, increased during the same period and could have helped to offset the reduction in land tax revenues.

only municipalities that just got legal status but also municipalities that did not get any type of recognition. Moreover, the coefficient on central transfers becomes considerably larger and statistically significant.

In order to have a better understanding of the results, I explore different explanations behind the reduction in land tax revenues. The main payers of land taxes, given the exemptions to small plots of lands, were the landowners. There are four plausible explanations for the reduction in land tax revenues: i) cadastral updates, ii) changes in the tax rate, iii) changes in the statutory tax base or iv) changes in the effective tax base (tax evasion).

There was not cadastral update³³ or evidence of a tax rate change during this period.³⁴ To study changes in the statutory tax base I collect cadastral information between 1957 and 1972 at municipal level -number and value of taxable rural properties-. Table 5 tests whether obtaining legal entitlement between 1967-1972 have an effect on the number of rural taxable plots and their land values. Results suggest that in municipalities where peasants were empowered, both the number of taxable plots and their cadastral value increased with coefficients significant at 1%. Consequently, the decrease in tax revenues can only be due to a decrease in the effective tax base, which is related to higher tax evasion by the main taxpayers, the landlords.

Theoretically, this result is also consistent with the idea that social movements also create, expand and amplify the political or economic opportunities for the opponents, which in this context were the rural elites (Tarrow, 1994). Landowners could have benefited from the organization of the peasant movement through a lower enforcement in the land tax collection in exchange for not interfering in the campaign to organize the movement and for recognizing the participation of the peasants in the policy making process.

³³The official newspaper *Diario Oficial* indicates that the only cadastral update that took place during the period 1957-1975 was during the the dictatorship of Rojas Pinilla in 1957-1958 (Decree 2317 and 2615, 1953).

³⁴Since the government of Lopez Pumarejo (1934-1938) land was subject to taxation through two different and fixed taxes: the main municipality revenue, the real estate land (land tax) of 4 x 1000 and a state tax, patrimony (net worth) tax of 1.35 x 1000 to 15 x 1000 in taxable property in excess of one million. Exemptions in both cases were applied to subsistence properties and communal lands (Pecaut 2006, Gonzalez and Calderon, 2002 and Hirschman, 1963). During the second government of President Lleras Camargo (1958-1962) a new tax bill that proposed a "territorial tax" and increased the cultivation requirements and the penalties for non-compliances was not approved by the Congress (Hirschman, 1963).

5.2.2 Targeted Redistribution

Table 6 test the effect of obtaining legal entitlement on the targeted redistributive variables: bureaucratic expenditure and public lands allocated to peasants. These variables redistribute resources to the peasantry, but instead of benefiting the group as a whole they aim at favoring a selected group within the peasantry.

Column 1 indicates that obtaining legal entitlement will increase bureaucratic expenditure by 0.26 relative to the mean. This expenditure is around 30% higher for municipalities that got legal entitlement than for those that only got legal status. This expenditure includes all the spending in the general administration of a municipality. While the relevance of bureaucratic jobs is the potential access to political networks, peasant leaders could also get jobs in other sectors such as education, health or judicial system, but these would give them less political gains. If public jobs are seeing as political assets that facilitate building contacts and clientelistic relations, general direction job positions in the municipality executive power are the closest ones to achieve this objective.

To link the increase in bureaucratic expenditure with public jobs I collected information about the number of municipal employees in the different administrative sections. This data is only aggregated at state level for the period 1957-1972, so in this case I regress the percentage of municipalities in the state that got legal entitlement out of the total that got either entitlement or legal status on the number of municipal public employees.

Results in Table 7 show that the total number of municipal public employees increases in those states that have a higher share of municipalities that got legal entitlement. This increase is due to a substantial expansion in the number of jobs in the general administration section. An increase of 1 percentage point in this share is associated with an increase of 59% in the number of employees in general administration. Other sections such as education, health, judicial system or tax collection did not experience a significant increase in the number of employees.

The second channel of targeted redistribution, public lands granted to peasants, is measured as the total number of hectares (in thousands and log) allocated to peasants at municipal level.³⁵ Column 4 in Table 6 indicates that obtaining legal

³⁵I use the average measure of a Family Agriculture Unit (UAF) as the threshold. A UAF is defined as the number of hectares that a family of four needs to subsist for a month. This number varies depending on the soil conditions and type of crops produced but Tobon (1972) calculated that plots of land that are 20 hectares or larger can give a family an annual income of 8800 COP. I use this number to define the lands given to the peasantry and aggregated all allocations below this number to calculate the total number of hectares given to peasants yearly.

entitlement increases the number of hectares allocated to the peasants by 0.014 relative to the mean 0.02. This represents an increase of 1.5%. This change is small compared to the coefficients found in the other policy variables, indicating that the empowerment of peasants had a limited effect on implementation of the agrarian reform.

In order to establish who received public lands in the municipalities with legal entitlement during the years the government supported the movement, I match the list of names of the five municipal peasant leaders that attended the second national assembly of ANUC in 1971³⁶ in Bogota to the names of approximate 10.000 peasants that were listed as beneficiaries of public lands and were daily reported in the newspaper *Diario Oficial* between 1967 and 1972.

This exercise allows me to identify whether the peasant leaders were the main beneficiaries of the agrarian reform. Table 8 shows the number of municipalities that allocated lands to peasants, that obtained legal entitlement and that had peasant leaders that received public lands. Out of 1088 municipalities, 462 implemented an agrarian reform (=42%) during the years 1967-1972.. Out of these 462 municipalities, 63% (295) of them had a peasant association that got legal entitlement. Finally, 210 of the 295 had at least one peasant leader that received land during the years 1967-1972. This represents 71% of the total municipalities that got both agrarian reform and peasant association. Overall, 20% of the peasant leaders received land in this period. Based on the Ministry of Agriculture estimates of the number of members of ANUC (approximately one million members) and on INCORA reports on the number of public lands allocations (10.000 plots of lands in the empowered municipalities), only 1% of the members were beneficiaries of the state policy during the years that the peasants participated in the policy making process.

Moreover, I compare the average size of a plot of land with the average size of the land given to the peasant leaders and find that the land given to the leaders is twice greater than the average size of the land granted to peasants: 10.82 against 5.33 has respectively. In terms of the distribution, Figure 5 shows that more than 50% of the public lands given to peasants were smaller than 5 has, regardless of the characteristics of the peasant association.

The timing of co-optation is also consistent with the hypothesis that the government organized the peasant movement to identify the leaders and buy them off. Only 22% of the leaders received their land before their association was orga-

³⁶ Although I only observe the name of the five peasant leaders once (1971), I had access to the list of peasant leaders in two states -Huila and Meta- in the following year. Only two leaders in the municipalities of Tarqui and Gigante were dropped of the lists and replaced by a new leader.

nized, whereas 78% received it after the movement was organized, their leaders were elected and the association obtained legal status.³⁷ Overall, these results suggest that municipalities that got legal entitlement experienced on average higher targeted redistribution, with peasant leaders disproportionately benefiting from it.

Results are still robust to different specifications. First, when I allow heterogeneity in the trends of the outcome variables across municipalities by including municipalities specific-time trends (results presented in Tables 4 and 6). Second, when I use the full sample the magnitude of the coefficients on both variables is smaller but still statistically significant at 1%.

I also report additional robustness checks to address other potential concerns about the estimates for both types of redistribution.³⁸ Table 48 uses just the sample of municipalities that got legal status during 1971 (95) using as a treatment group those that obtained legal entitlement either in 1971 or 1972 (33 municipalities) and as a control municipalities that only managed to get legal status in 1971 due to end of the alliance between the movement and the government (62 municipalities). Although results are not significant due to the low power of the sample, all the signs are consistent with the results presented in Tables 4 and 6.

Table 49 includes indicator variables for 1 and 2 years before and after getting legal entitlement. The coefficients on the legal entitlement leads are close to zero, showing little evidence of an anticipatory response within a municipality about to obtaining legal entitlement. In the year that an association gets legal entitlement the change in land tax revenues, social expenditure and bureaucratic expenditure is around 25%, after which the change is much smaller. Although for this specification the estimates of the public land allocations are not significant, the size of the coefficients increases substantially the year that an association gets legal entitlement compared to the previous and following years.

5.3 Validation of assumptions

One of the main assumptions in a difference in difference framework is the parallel path: the trends for treated and non-treated municipalities would be the same in

³⁷12% of the peasant leaders received land during the months between obtaining legal status and legal entitlement and 66% obtained land after the legal entitlement was granted.

³⁸I also run a seemingly unrelated regression where I allow errors associated with the dependent variables to be correlated across different equations. Results are still robust for three of the dependent variables (land tax revenues, central transfers and bureaucratic expenditure) and are presented in the Appendix B, Table 50. A jointly significant test rejects the hypothesis that the coefficients on legal entitlement are jointly zero in the four simultaneous equations.

the absence of treatment (Lechner, 2010). To validate this assumption I run two exercises.

I run the main specification for the pre-treatment period (1957-1966) and regress the outcome variables against an indicator of whether the municipality received treatment or not.³⁹ Results are presented in Table 39 for the restricted and full sample and suggest that neither the broad nor the targeted redistributive variables in municipalities that received the treatment differ from those that did not receive it.⁴⁰ These results are also shown in Figure 3 which presents the pre-trends of the five outcome variables for the two groups (legal status only and legal entitlement)⁴¹.

I also estimate a placebo experiment only using the pre-treatment period (1957-1966) of the data and moving the legal entitlement years from 1969-1972 to 1960-1963 and results are reported in Table 40. The coefficients for the restricted sample are all close to zero, and none of them are significant, indicating that outcomes variables in municipalities that later obtained legal entitlement were not already on a similar trend before 1967.⁴²

The second assumption is that the timing of obtaining legal entitlement in Colombian municipalities depends on pre-determined variables that are accounted for in the main specification. I estimate the following specification to check this assumption:

$$D(\text{peas_asso})_{i,j} = \beta_1 X_{i,j} + \varepsilon_{i,j}$$

where $D(\text{peas_asso})_i$ is a dummy variable that takes value 1 if an association got legal entitlement during the period 1967-1972 and 0 otherwise and $X_{i,t}$ is a vector

³⁹These regressions include year fixed effect, state fixed effect and geographical and economic controls. This shows whether there is any difference in broad and targeted redistribution between municipalities that got legal entitlement and those that only got legal status before the foundation of the peasant movement.

⁴⁰When the specification includes region instead of state fixed effect, the effect on transfers is significant and positive, indicating that differences on the central transfers between municipalities that got legal entitlement and the control group in pre-treatment years are mainly driven by state characteristics.

⁴¹The figures indicate an important reduction in revenues and expenditure in 1963. The significant reduction in the dependent variables in this year is the result of an increase in inflation of around 400% between 1962 and 1963 (6.3% in 1962, 33.6% in 1963 and 8.8% in 1964). The large change in inflation was the result of two different policies: a decree that increased the minimum wage issued at the beginning of 1963 and a drastic devaluation of the Colombian peso implemented by the Central Bank due to a currency shortage because of low coffee prices, the main export.

⁴²In the case of the full sample, the coefficients of land tax revenues and public land allocations are significant, but in the case of the land tax revenues is the opposite to the one observed once the municipalities received the treatment.

of different time variant and invariant variables.⁴³

Table 41 presents the results of an OLS and probit estimation for both full and restricted sample. As expected, more variables are correlated with legal entitlement in the full than in the restricted sample. In both samples, the difference between getting legal entitlement or getting partial or not treatment depends mainly on geographical variables, which is expected given that one requirement to get full legal recognition was to send paperwork to Bogota for approval. Experience in organizing (historical peasant leagues) and the support to communist parties is also correlated with obtaining legal entitlement, but only in the full sample.

As an additional validation, Table 42 shows the results of an ordered response model⁴⁴ to explain differences in the timing of obtaining legal entitlement. Results indicate that municipality characteristics such as temperature and experience in organizing are correlated with the timing of obtaining legal entitlement. The marginal effects indicate that having one more peasant league during the 1920s -which is a proxy of collective action capacity-, relative to the mean 0.76, increases the probability of obtaining legal entitlement during the first year (1970) by 0.08 percentage points. In addition, places less urbanized but with higher average wage are also correlated with a higher probability of obtaining legal entitlement earlier.

These variables are controlled in the main specification by the municipality-fixed effect. Other time-varying economic and political variables such as literacy rate, political competition, land tenure distribution, infrastructure, and lands for coffee or banana production are not correlated with receiving the treatment.

6 Heterogenous Effects

Results in Tables 4- 8 suggest that the empowerment of the peasants, measured by a peasant association obtaining legal entitlement, led to a decrease in broad redistribution but an increase in targeted redistribution. In this section, I try to deepen potential mechanisms through which empowerment can affect broad and targeted redistribution. While it is infeasible to study all possible channels, existing

⁴³This vector includes variables such as rainfall, altitude, temperature, area, distance to capital, population, peasant leagues (1945), "La Violencia", land reform (1930-1960) and for the year 1960 data on roads, railroads, irrigated lands (has), coffee lands (plots), banana lands (plots), literacy (%), tenants (%), number of tractors, number of workers, share of votes of radical left-wing parties in presidential elections in 1946 and share of votes of the winner in presidential elections in 1966.

⁴⁴In this model the dependent variable takes value 3 if a municipality gets legal entitlement during the first year (1970), 2 if it is in 1971, 1 if it is in 1972 and 0 otherwise (full sample) or if it gets just legal status (restricted sample).

literature provides some guidance on the mechanisms that are especially important.

6.1 Threat of a Communist Revolution

I start providing some empirical evidence supporting the plausibility of a threat of a communist revolution as a central channel through which democratization have an effect on redistribution.

Before the Cuban revolution, the communist ideology was asleep in Colombia and did not have a real chance to translate into a serious and credible speech that could get into power. The events in Cuba inspired the peasants to try to break the deadlock of landless, political exclusion and low public good provision, threatening the political elite with the loss of their traditional political power based on exclusion (Wright, 1991).⁴⁵

The influence of the Cuban revolution was higher in places characterized by a historical "revolutionary spirit" where the leftist and revolutionary ideas were deeply embedded in the society (Hobswam, 1973). Municipalities with a stronger support to the communist party and ideologies were more vulnerable and sensitive to the Cuban situation and hence, more willing to protest and rebel for a potential change in the status quo.

I use the political support to radical left-wing parties (communist, socialists, maoists and radical liberals) as a first proxy of the threat of revolution. In order to avoid potential reverse causality with the outcome variables, I exploit the persistence in the communist support over time and its variation across municipalities by using the share of votes that the radical left wing parties obtained during the presidential elections in 1946, when all radical lefty parties jointly supported one candidate.⁴⁶ The second proxy of a threat of revolution is the exposure to the civil war "La Violencia" during the years 1948-1958. During the war, conservative guerrillas started to go after the liberals and communist peasants, who also had access to weapons and military armament. The civil war took place in municipalities where peasants were highly influenced by either the radical wing of the liberal party or the

⁴⁵In Colombia, the influence of Cuba was manifested in the radicalization of left-wing parties such as the communist party and the liberal revolutionary movement (MRL), which started to pursue a change "*a la cubana*" (Romero and Castro, 1978) and were fed on the legacy of the past civil wars.

⁴⁶Table 51 suggests a strong correlation between the share of votes of the communist party in departmental assemblies elections in 1966 -one year before the movement was founded- and previous elections. The correlation is around 0.4 with the previous presidential election in 1962 and is smaller but still statistically significant at 1% when I compare it with the elections in 1966.

communists, which were also the target of the Conservative army (Trejos, 2011).⁴⁷

Both of these proxies are transformed into binary variables to facilitate the interpretation of results and are included in the main specification as an interacted variable with the legal entitlement dummy.⁴⁸ Panel A in Table 9 presents the results for the first proxy of threat -communist support- and Panel B in the same table for the second proxy -exposure to civil war. I test whether broad and targeted redistribution are affected by variation in the threat of a revolution. In panel A of Table 9, column 1 and 3 indicate that broad redistribution is smaller in places where the peasants are empowered and the threat of an uprising is stronger. However, just the coefficient of the interaction variable in the case of land tax revenues is statistically significant. Column 4 also indicates that targeted redistribution, measured as bureaucratic expenditure, increases significantly in municipalities empowered and with high support to the communist, compared to the national average.

Similarly, panel B in Table 9 suggests that broad redistribution in municipalities where the peasants are empowered falls significantly more if they have been exposed to the civil war during the previous decade (1948-1958). The interaction term in panel B in column 1 and 3 implies a decrease of around 25% in land tax revenues and social expenditure in municipalities that get legal entitlement and also are exposed to La Violencia. The positive and statistically significant coefficients in column 4 and 5 capture the intensification of the effect of the democratic reform on targeted redistribution in municipalities that participate in the civil war during the 1950s.

In addition, I run a standard OLS regression using two measures of peasant leaders co-optation (number and land share) as dependent variables on different geographical, economic, social, historical and political variables. Table 10 suggests that co-optation of the peasant leaders is significantly and positively correlated with previous exposure to violence and with revolutionary threats. Graphically, Figure 6 shows a positive correlation between the share of land given to peasant leaders and the communist support. Other geographical, economic and social variables are not correlated with leaders co-optation.

An interesting result in Table 10 is that leaders co-optation is not correlated with

⁴⁷To respond to this persecution, the communist party organized "self-defense" groups in areas of their influence, that later were known as "independent republics", due to the lack of state presence (Medina, 1980). The "self-defense" communist peasants groups founded the Revolutionary Forces of Colombia -FARC- in 1964.

⁴⁸The communist support in 1946 that takes value 1 if the percentage that the communist parties obtained in the presidential elections in 1946 is above the median and 0 otherwise and the exposure to civil war takes value 1 if a municipality experienced any violent event during "La Violencia" and 0 otherwise.

political competition, measured as the share of votes of the winner candidate in the presidential elections in 1966. This result suggests that land allocations to peasant leaders are not rewards in exchange of mobilizing political support and votes.

6.2 Alternative mechanisms

While I have argued that the threat of a revolution is an important mechanism linking democratization to broad and targeted redistribution, an alternative hypothesis is that experience at organizing facilitates the process of voluntary democratization and due to higher levels of collective action capacity, governments will have more incentives to co-opt the leaders and capture these groups⁴⁹.

I define collective action capacity as the ability of organizations to independently recruit and mobilize members and use two proxies to measure it.⁵⁰ The first one is the number of peasant leagues that obtained legal entitlement between 1918 and 1947⁵¹. The second one is a measure of colonial collective organizations: the presence of slave palenques or indigenous resguardos between 1500 and 1851.⁵² Both of these measures reflect previous experience and history at organizing since they require high levels of coordination, networking and strong ties among their members and within communities.

Table 11 explores this hypothesis and columns 4 and 5 examine the effect of democratization and collective action capacity on targeted redistribution. None of the coefficients of the interaction variable are statistically significant. However,

⁴⁹ Seabright (2000) has explained how cooperation may be self-reinforcing or habit-forming in South India. Bardhan (2000) studies 48 irrigation communities in South India and shows more cooperative behavior in communities where the water-user's organization has existed for more than 20 years. Shin (1994) demonstrates how prior collective actions contributed to the Korean peasant uprisings of 1946 by developing a political and national consciousness. In a recent paper, Finkel, Gehlbach and Kofanov (2017) show that the persistence in repertoires of collective action are potential determinants of the peasant organization and disturbances that Russia experienced between March and October in 1917. On the same lines, Golden (1988), Hammond (2009), Jenkins and Perrow (1977) and Gurr (1968) show how previous social movements or past struggles facilitates the development of a consciousness that result in subsequent collective actions.

⁵⁰ They are measured before 1948, when the civil war "La Violencia" started.

⁵¹ Although the law that allowed workers and peasants to organized was issued in 1931 (Law 83), the first peasant organizations were founded at the end of the 1920s in areas of agricultural exports such as Santa Marta (United Fruit Company), Viota (coffee plantations), Puerto Berrio (league of settlers from Antioquia) and in some indigenous areas of Cauca (Sanchez, 1977).

⁵² Slave palenques were free-black agricultural communities and defensive centers that sought self-sufficiency and were founded by escaped slaves. Indigenous resguardos were territorial units that comprised communal lands administrated by native authorities. They are measured as dummy variables that take value 1 if there was either a palenque or an indigenous resguardo in the municipality between 1500 and 1851, year in which slavery was abolished and indigenous resguardos were dissolved.

the coefficients on *legal entitlement* is positive and statistically significant for both measures and their size is very similar to the baseline coefficients.⁵³ These results suggest that targeted redistribution was not higher in places where the collective action capacity was stronger. On the contrary, results indicate that municipalities with no history at organizing were easier to co-opt.

The relative wealth or agricultural development of a municipality can be an alternative mechanism that affects the intensity of the effect of democratization on broad and targeted redistribution. Poor municipalities have lower living conditions and hence higher economic grievances, which give them more incentives to organize and rebel. If this is the case, threat would be higher in poorer municipalities and the government would try to co-opt the leader in those places. Table 12 explores this hypothesis using as a measure of wealth and agricultural development the daily wage in 1968 and the number of tractors in 1960.⁵⁴ None of the interaction variable coefficients in Panel A in Table 12 are statistically significant. In the case of tractors in Panel B, the interaction term on column 4 is not significant and the coefficient on legal entitlement is larger than the baseline coefficient. The coefficient estimate -0.019 on the (*legal_entitlement* x *tractors*) interaction in column 5 captures the elimination of the effect of legal entitlement on public land allocations in municipalities with higher agricultural development. Table 12 suggest that wealth or agricultural development were not mechanisms driving the effect of democratization on broad and targeted redistribution.

Table 13 presents results of heterogeneous effects using variation in inequality in the rural areas. I measure inequality as the share of no owners (settlers, sharecroppers, tenants, agricultural workers) working on rural areas in terms of the number of properties and of area cultivated.⁵⁵ In the case of broad redistribution, none of the coefficients are significant for both type of measures (Panel A -number of properties or Panel B-area). In the case of targeted redistribution, the coefficients estimates of 0.362 and 0.019 on legal entitlement in column 4 and 5 of Panel A imply that the effect of legal entitlement on targeted redistribution is 35% higher in municipalities with lower percentage of no owners relative to the baseline results. However, the

⁵³This result is also suggested in Table 10 where the history at organizing (peasant leagues 1918-1945) is negative correlated with the number of peasant leaders co-opted.

⁵⁴For means of comparison, a dummy variable that takes value 1 if the log of the daily wage in 1968 or the number of tractors in 1960 are above the median and 0 otherwise. For the specification that uses the interaction with the number of tractors as one of the explanatory variables, I drop the variable that is interacting tractors with a time trend in the original specification.

⁵⁵I transform these two variables as binary indicators equal to 1 if they are above the median and 0 otherwise.

coefficient estimates on (*legal_entitlement* x *%_no_owners*) of -0.128 and -0.017 reduce the bias when municipalities with higher percentage of no owners are taken into account. These results indicate that inequality in land tenure is not a factor that explains the differences in the effect of legal entitlement on redistribution.

7 Democratization, Co-optation and Threat of Revolution

A Colombian liberal politician recognized that with the foundation of ANUC "*the goal of the state was not to organize a peasant revolution but to avoid one*" (Perez, 2010). I then explore whether the results on targeted redistribution reported in Tables 6-8 are consistent with a government strategy to avoid violent activities by using a data set that contains economic, social and political information about 1088 municipalities from 1972 to 1995. I test whether the strategy of the government -once the leaders are identified to co-opt them- was effective at reducing violent activities after 1972, when the alliance between the government and the peasant movement ended.

With this cross-section data set, I study the relationship between legal entitlement, co-optation of peasant leaders and revolutionary activities. I work with a restricted sample of 644 municipalities that includes only municipalities that got legal entitlement or just legal status and I use legal entitlement (1967-1972) as a proxy for empowerment.⁵⁶

After matching the names of peasant leaders with the names of peasants that received land, I calculate three measures of co-optation. First, a dummy variable that indicates whether the municipality experienced co-optation of their leaders or not. Second, the number of municipal peasant leaders -of the 5 delegates that attended the II ANUC national assembly in 1971- that received a public land between 1967 and 1972. Finally, the share of land that peasants leaders received during the same years relative to the total land that was granted to the municipality.

I use three different proxies for revolutionary activities. First, the number of land invasions after the alliance between government and ANUC ended (1972-1978). When the relationship between the government and the peasants officially ended in 1972, a section of ANUC announced the direct opposition to the government and a wave of land invasions started across the country.⁵⁷

⁵⁶Results when using the full sample are presented in the Appendix B, Table 53.

⁵⁷Figure 7 shows the number of land invasions during the 1970s: while there were not more

Second, FARC rebel actions during the years 1974-1985, which include the number of threats to civilians, attacks, assaults and extortions. When the alliance ended in 1972, a faction of ANUC decided to continue the fight and joined the newborn rural guerrilla group FARC, whose aspirations were aligned with ANUC goals: improvement of the living conditions of the peasants and the implementation of an agrarian reform that transforms the economic structure of the rural areas (Molano, 2015).⁵⁸

Finally, I use the number of peasant protests over the period 1974-1995. These protests reflect more spontaneous associations either organized by ANUC or by other sectors of the peasantry, and aim at bringing government attention to rural areas⁵⁹.

I run a standard OLS and a negative binomial estimation⁶⁰ to test whether obtaining legal entitlement and co-opting the peasant leaders during the years that the government supported the movement (1967-1972) is correlated with the increase in revolutionary activities that is observed after the alliance between government and ANUC ended (1972-1995). The following equation is estimated:

$$\text{threat}_{i,j} = \gamma_0 + \gamma_1 D(\text{peas_asso})_{i,j} + \gamma_2 \text{cooptation}_{i,j} + X'_{i,j} \beta + \alpha_j + \varepsilon_{i,j}$$

where $\text{threat}_{i,j}$ is any of the three measures of public disorder -number of land invasions (1972-1978), number of FARC rebel actions (1974-1985) or number of rural protests (1975-1995)- in municipality i in state j , $D(\text{peas_asso})_{i,j}$ is a dummy variable equals to 1 if municipality i obtained legal entitlement during 1967-1972 and 0 if just got legal status.

The variable $\text{cooptation}_{i,j}$ is measured as the number of peasant leaders (takes value between 0 to 5) that received land during 1967-1972, as the share of land granted to peasant leaders relative to the total land that the municipality received during the same period or as a dummy variable that takes value 1 if municipality experienced co-optation of their leaders during these years and 0 otherwise. $X'_{i,j}$

than 30 in 1971, this number exceeded 600 in 1972. These invasions were initiated and supported by ANUC and were the result of the unfulfilled government promises (Escobar, 1972).

⁵⁸FARC was considered the military wing of the communist party and its influence is reflected by the fact that Manuel Marulanda Velez, main leader of the guerrilla group, was a leader of this party before the foundation of FARC.

⁵⁹The main causes of rural protest during these years were access to land and public good provision. Since the 1990s the human rights motive was also part of the protests.

⁶⁰Due to the characteristics of the dependent variables (nonnegative count values reflecting the number of occurrences of an event in a fixed period of time) OLS models are not the best method because they usually violate two of their main assumptions: conditional normality and homoscedasticity. Both of these problems are solved with the negative binomial model which is flexible in the error structure and assumes a Poisson distribution of errors.

contains a vector of time invariant geographic characteristics and other controls. ⁶¹

Table 14 shows the results of the ordinary least squares estimates. The dependent variables are specified in the headers of the columns. Columns 1-3 look at the number of land invasion between 1972 and 1978, column 4-6 look at the number of FARC rebel activities between 1974 and 1985 and column 7-9 look at the number of peasant protests over the period 1974-1995.

Overall, this table shows a strong negative correlation between the co-optation of peasant leaders through public land allocations and the posterior violent activities that the country experienced (1972-1995). As it is expected, results are stronger in the case of land invasions since they were greatly linked to the peasant movement and its members. Most of the land invasions were called under ANUC name and the movement publicly supported them (Escobar, 1982).

The results in the second row of the table indicate that a peasant leader co-opted reduces the number of rebel activities, on average, by 1 event. All of these results are statistically significant at 1% level. The third row shows that an increase in the number of peasant leaders that received private benefits leads to, on average, a 0.3 decrease in the number of rebel activities. These results are statistically significant at 1% level for land invasions and peasant protests and at 5% level for FARC rebel activities. The fourth row indicates that a 1 percentage point increase in the share of land that peasants' leaders received is correlated with a 2.5 to 3 decrease in the number of rebel activities. This coefficient is statistically significant at 1% level for land invasions and FARC rebel activities but it is not significant in the case of peasant protests.

Table 15 and 16 show the estimates of the negative binomial model and its incidence rate ratios respectively. Municipalities where the peasant leaders were co-opted are expected to have a rate 0.6 times lower for land invasions and FARC rebel activities. The coefficient when the explanatory variable is the number of peasant leaders co-opted indicates that if a municipality were to increase its number of peasant leaders co-opted by one, its rate for land invasions and FARC activities would be expected to decrease by a factor 0.7 and 0.8 respectively. These coefficients have the expected sign in the case of peasant protests but are not statistically significant. Similarly, if a municipality increases the share of land given to its leaders by 1%, its rate for land invasions would be expected to decrease by 0.03, while holding all other variables in the model constant. The results of both the standard

⁶¹This vector includes variables such as land tenancy (1960), population (1964), communist support (1946), dummy of "La Violencia", historical peasant leagues (1931-1947) and land conflicts (1878-1964) and α_j is a state fixed effect.

OLS estimation and negative binomial indicate a negative correlation between co-optation of the peasant leaders and revolutionary activities, suggesting that the co-optation strategy was, to some extent, effective.

Results in Table 52 in the Appendix B show the relative importance of the extensive margin over the intense margin: the largest and significant difference is when three or four peasant leaders are co-opted. This is consistent with the idea that members in a large-scale movement do not follow a charismatic leader but a cohesive group of leaders. When the majority of the leaders are co-opted and use their influence to demobilize their followers, it is harder for their members to oppose and replace them.

In addition, I also find a positive correlation between municipalities that got legal entitlement but were not co-opted and land invasions. Although the sign of this correlation holds for the negative binomial estimation, this result is not significant. This result suggests that municipalities that were organized and empowered but did not benefit from targeted redistribution are correlated with higher public disorder afterwards.

This empirical result must be interpreted cautiously, as elites strategically selected where to co-opt the leaders. However, if elites co-opted them when the threat of a revolution was higher, then it is arguable that the estimates are likely to be downward biased (in absolute values).

8 Concluding remarks

In this paper I estimate the effect of a type of democratic reform -organization and political participation of a peasant movement- on broad and targeted redistribution in Colombian municipalities during the years of a potential threat of a Communist revolution (1957-1985).

In the Colombian case during the 1960s when there was a threat of a Communist revolution, the threatening group -the peasantry- was empowered by the state in order to avoid it being captured by the Communist and rebel against the status quo. The empowerment occurred through the voluntary organization of a peasant association that gave the peasants direct participation in the policy making process. Their representatives in the state organizations were the peasant leaders, who were locally elected by each municipal association. The strategy of the government in order to avoid the Communist revolution was to provide the peasant leaders with economic -lands- or political -public jobs- assets.

I show that in municipalities where the peasants were empowered -an association getting legal entitlement- broad redistributive variables decrease during the years that the government supported the peasant movement (1967-1972), while simultaneously targeted redistribution increases. I provide evidence on the drivers of the increase in targeted redistribution: more public jobs in municipalities empowered and more public lands for the peasant leaders. I also provide suggestive evidence of the negative correlation between the co-optation of the peasant leaders and the public disorders events that Colombia experienced during the 1970s and 1980s.

This paper studies the effect of democratization on a particular type of redistribution -targeted-, transcending the idea that democratization only is correlated with broad redistribution. These results also confirm previous findings in the autocracy case regarding the strategies of the government to co-opt potential opposite groups such as the provision of rent-seeking positions in the legislatures. But the evidence goes further, as they provide direct evidence of the private goods received -lands- and how this is linked to revolutionary activities. Finally, this paper explores a particular democratic mechanism that extends the political rights in democracies beyond the *de jure* decision power, such as universal suffrage.

The findings of this paper, insofar as they provide evidence on the effects of democratic reforms on targeted redistribution and the effectiveness of this strategy during times of a threat of revolution, have important implications for theories of conflict, democratization and redistribution. If governments recognize that to avoid public disorder, targeted redistribution to well-connected social movements leaders can be more successful than reforms aimed at increasing broad redistribution, particularistic benefits to the leaders become more likely despite increases in inequality with the threatening group.

Future research must try to explore the effect of other type of democratic reforms such as quotas in the legislative branch as a mechanism to prevent unrest. In the case of Colombia, more research needs to be done related to the effectiveness at increasing public good provision in terms of the different repertoires -land invasions or new political parties- that were used once the peasant movement lost the state support. Moreover, there is a research gap in the study of the new clientelistic relationships that arise with the emergence of peasant leaders as political actors and their different implications on public good provision and state capacity in the medium and long term.

Chapter 2

Roads or Schools? Political Budget Cycles with different types of voters.

2.1 Introduction

An important question in political economy is how, if at all, policy instruments affect voting behavior. Although there is a large literature that has studied evidence of politically-driven manipulations of economic policy in electoral periods, most studies have focused attention on developed economies or on the type of government or form of democracy in place. However, the strongest evidence of opportunistic cycles in economic policy has been found in what is called "weak democracies", mainly developing economies in Latin America and Africa.

Evidence has shown that political budget cycles are persistent in developing countries and in particular in nascent democracies that are vulnerable, have weaker institutions, impose fewer restrictions on government actions and usually do not have independent central banks (Brender and Drazen, 2005). However, in recent decades these democracies have become more inclusive, which has augmented popular pressures on political leaders (Remmer, 2003).

The size and the composition (taxes vs. spending) of the electoral policy cycle also depend on the political and institutional features of the country. In particular, Latin America has been characterized as having unsophisticated voters and simple economies, creating greater incentives and opportunities for politicians to manipulate fiscal variables in order to increase the probability that they will stay in power.

Within Latin America, Colombia has been a country of electoral traditions, strongly rooted in the 19th century and reinforced by intense election campaigns and by a commitment to suffrage that grew to involve substantial sectors of Colombia society during the 20th century (Posada Carbo, 1997). Without denying the problems of the electoral system, historians such as David Bushnell (1993) and Malcolm Deas (1993) have emphasized the early expansion of Colombian suffrage, the relatively high levels of voter participation in certain periods, the intensity of the competition, and the long-term impact of frequent electioneering.

These electoral traditions and political contests make Colombia an interesting case for study. In particular, the constitutional reform established in 1936 by the

liberal President Alfonso Lopez Pumarejo can be viewed as a natural experiment in politics.⁶²

Since independence and before this reform, the law stated that only literate men with properties or a certain amount of income per year could vote.⁶³ These laws had reduced the number of potential voting block to a limited group of rich and educated men with access to government information and as a result, electioneering was concentrated on just a small group of homogeneous voters. Following the constitutional reform in 1936, the group of potential voters changed. The legislative act established that, starting from the next elections (1938), all men older than 21 years of age could vote irrespective of their income or education. This reform transformed the group of voters from a small group of high income, literate, and informed men to a large and heterogeneous group with a majority being low-income and illiterate uninformed men.

This paper studies this constitutional reform, which changed the characteristics of the voters, by reference to the theory of Political Budget Cycles. In particular, it is based on our paper on the theoretical approach proposed by Rogoff and Sibert (1988), Rogoff (1990), and Drazen and Eslava (2010). The former papers introduced the signaling role of a pre-election fiscal expansion under asymmetric information and unobserved competence.⁶⁴ In these models, incumbents want to appear competent in the eyes of voters during electioneering because more competent politicians can generate higher welfare and they are then preferred by voters. They have the incentive to do this by manipulating fiscal instruments during electoral periods. One important characteristic of these signaling models is the voters' incomplete ability to observe the overall level of spending or revenues. Were they able to do so, they could perfectly infer politicians' competence.

Drazen and Eslava (2010) proposed an alternative signaling model: even if voters are well-informed or fiscal conservatives, during electoral periods fiscal manipulation may be observed via the composition of the budget (expenditure or revenues) being targeted at some particular voters at the expenses of others. If it is the composition of spending or revenues that is manipulated for electoral purposes, rational voters may infer something different from, or additional to, competence. In this view, voters who are targeted before elections want to know the incumbent's competence

⁶² This constitutional reform also stipulated among other things, agrarian reform, private property reform and a list of rights for workers (Botero, 2006).

⁶³ The value of property and the level of income required were updated in each new Constitution during the 19th century.

⁶⁴ Competence is defined as the ability to deliver more public goods for the same level of taxes.

and also whether they will be still favored after the election. This is a different signaling problem faced by the voters: whether receiving high targeted expenditures before elections signals a greater weight of their group in the incumbent objective function than other voters' groups or whether it signals the interest of the incumbent in increasing the number of votes by targeting their group with more expenditure or raising less revenues. Drazen and Eslava (2010) show that even with fully rational voters, there exists an equilibrium in which voters rationally respond to electoral years' expenditure or revenues and politicians make budgetary decisions according to this behavior.

Politicians target spending or revenues towards electorally attractive groups in electoral periods and choose their platform depending on the type of voters. Based on this, we test how the characteristics of the voters (in terms of income, education and information access) determine politicians' platforms.

Our hypothesis states that when the potential voters were a small but well specified economic group (high income, literate and well-informed men), politicians decided to target the expenditure that benefited them more (infrastructure) and this strategy shifted when the characteristics of potential voters changed. After 1936, when the majority of voters were illiterate, low-income and uninformed men, incumbents decided to target a different type of expenditure (social) that mainly affected this new majority. In this way, they increased their probability of staying in power. However, eventually some minorities can still have political power to make this new decision non trivial to the politicians and thus the policy manipulation less strong and clear in time.

We expect that the incumbent will always prefer to choose an electoral platform that targets the expenditure and the revenues that benefit the voters most. The targeted expenditure, or revenue, changes according to the characteristics of the majority of voters. In the Colombian case, prior to 1936 when this group was homogeneous and better informed, voters belonged to the high-income group. They were mainly landowners and traders who were usually interested in increasing their profits and economic activity. Although the government could directly benefit firms in several ways, primary sources show that voters usually requested better railroads, highways, roads and bridges that could help to improve trade inside and outside the country. This particular group of voters did not request more social expenditure, such as schools or public hospitals, from the government, since they could afford this type of expenditure by themselves.

After 1936, when voters were on average less informed and more heterogeneous

and the majority belonged to an illiterate low- or medium- income group, the incentives for the political parties were different. Since a higher portion of voters valued more basic or subsistence necessities, politicians preferred to focus on social expenditure (public schools and hospitals) instead of investing in development projects. This could also partly explain the lag in new roads and railway system that Colombia experienced during the 20th century.

This hypothesis agrees with the results found by Lopez-Urbe and Espinosa (2012) in Colombia during the 19th century. They followed presidents' political careers, and showed that being Minister of Infrastructure during this period increased the probability of becoming President by 30% while being Minister of Education decreased it by 22%.

We keep the usual assumptions of the Political Business Cycles theories: (i) politicians are identical and opportunistic (their only interest is to remain in power) and (ii) voting rule is rationally retrospective: voters are naive and support the incumbents based on observed outcomes; if they are favorable, the incumbent is re-elected, otherwise the challenger wins.⁶⁵ These models assume that voters have imperfect information about politicians' competence and that they know it only in retrospect, while politicians know their competence from the outset. In this sense, voters base their decision on the information that is available, linked to what they observe. Hence, before elections incumbents attempt to signal their competence and have incentives to manipulate the public expenditure and revenues in an effort to show the results of their policies. This will increase their chances of re-election. However, the imperfection of the information, the characteristics of the voters and the tools that politicians use to stay in power (monitoring institutions) change between periods.

We should also note that, fortunately for us, the timing of presidential elections in the whole period under study was determined by the constitution, even during war periods. Since independence, Constitutions established the exact timing of presidential elections (two, four or six years).⁶⁶ In this sense, we can take election years as exogenous since these were pre-determined by the law. Going even further, presidential elections always took place in the first semester of the year, and most of them during March and May.

⁶⁵Studies have criticized the characterizations of the opportunistic politician framework (see Hibb (1977), Lohmann (1998), Rogoff and Sibert (1988))

⁶⁶Article 102 of the 1832 constitution, article 87 of the 1843 constitution, article 27 of the 1853 constitution, article 61 of the 1858 constitution established presidential elections every four years. Article 64 of the 1863 constitution established presidential elections every two years and article 114 of the 1886 constitution established presidential elections every six years.

We focus upon the influence of electoral cycles on fiscal policies instead of dealing with how governments attempt to manipulate the economy. It seems easier to manipulate budgets than macroeconomics outcomes such as GDP, inflation or unemployment. Economic performance is the outcome of decisions taken by consumers, workers, producers and others countries as well as national and local governments. In particular, during the 19th century the economy depended mainly on imported goods for consumption and there was not a clear monetary policy and central bank did not exist. Governments are in control of their budgets, whereas they can only hope to have some indirect impact on the economy. Hence, increasing spending during electoral periods must appear a much simpler and potentially rewarding strategy than trying to produce a business cycle through fiscal and monetary policies (Blais and Nadeau, 1992). As Rogoff (1990) has pointed out, it is "more promising to focus empirical research for electoral cycles on taxes, transfers and government consumption".

We limit the analysis to presidential elections based on the idea that they have a more direct impact upon power than elections for senators and councilors. We might expect stronger electoral cycles under presidential regimes given that individual political accountability gives stronger incentives than collective accountability (Persson and Tabellini, 2003). This has also been proved empirically in the U.S states by Lowry, Alt and Ferree (1998) who show that voters respond more to policy in gubernatorial elections than in legislative ones.

To test our hypothesis we run different exercises with two groups of dependent variables (fiscal policy). The variables in real terms help to understand the changes in magnitude of the fiscal policies while the variables in percentage as a fraction of total expenditure or revenues help to understand the changes in distribution of its components.

One caveat that we should note is an overestimation of the results as a consequence of the time period of the law change. The 1930's was also a decade of important changes in terms of the role of the state as a provider of public goods. Although the notion of the welfare state was not officially established in Colombia until 1991, the idea of a major state intervention in social issues was intensified during these years. So, a higher social expenditure could not only be a result of the new type of voters but of a global change of perspective. However, we run some robustness tests showing that the main change in the political budget cycles was around 1936 compared with the years before and after. This result reinforces our hypothesis of the relationship between the change in the electoral law and a different

expenditure and revenue composition in electoral periods.

This paper differs from the existing literature in two different respects. First, although we study just one country, we study the political budget cycles during a longer period, starting just after independence and ending at the beginning of the 21st century. Unlike most existing studies, our work covers 170 years (1830-2000). Second, we focus on the changes in the policy instruments and politicians' platforms when the characteristics of the voters change. Instead of giving priority to the type of government or democracy and studying the political budget cycle with reference to those categories, we concentrate on the particularities of voters. In this sense, we try to answer how, depending on the characteristics of the different groups of voters, the politicians use different policy instruments to attempt to get re-elected.

The rest of the paper is organized as follows. Section 2 gives a short historical background on Colombian politics. Section 3 briefly reviews the existing literature on political budget cycles. Section 4 describes the data. Section 5 describes the empirical setup and section 6 presents the results. Section 7 discusses some robustness tests. Finally, section 8 offers some conclusions.

2.2 Literature Review

In the last three decades there have been many works in the literature on political business cycles and political budget cycles. The pioneering work by Nordhaus (1975) considered the idea that governments may act opportunistically by adapting fiscal policy to the electoral cycle. He linked the opportunistic manipulation of economic policy to election times - making decisions biased against future generations - and showed the long-run and short-run equilibrium in the economy when politicians face choices between present and future welfare ⁶⁷.

There are two types of model in the political business cycle research. One of these models assumes that voters are myopic, non-rational and easily fooled by policymakers, in which case it is simple to predict the existence of a systematic opportunistic cycles in fiscal policy and macroeconomic variables. The other model rejects the irrationality of voters, limiting the ability of government to manipulate the economy in order to be re-elected. Nevertheless, still appears to be opportunistic behavior by policy makers as an equilibrium to a signaling game under asymmetric information,

⁶⁷ In this literature there are two types of model. One is the traditional opportunistic model derived by Nordhaus (1975) and the other one, called the "rational political business cycle", incorporates rational expectation and suggests strategic behavior and asymmetric information. The most relevant works in this line are papers by Rogoff and Sibert (1988) and Rogoff (1990).

where voters do not know the government's competence while government does.

In the structure of these models the incumbent government values being re-elected but governments differ in their levels of "competence": governments with high competence value being re-elected more highly than governments with low competence. One important feature of these models is the moral hazard problem: the incumbents' ability to manipulate policy instruments in order to bias the voters' perception in their favor. Another key feature is the existence of information asymmetry. While incumbents know their level of competence, voters can not observe it: they must try to perceive it by observing economic outcomes, in this case the production of public goods, in retrospect. Then, incumbents must signal their competence to voters to increase their chances of re-election through a higher provision of public goods, hoping that voters would attribute the increase to their competence.

In our paper, we assume the existence of asymmetric information on the part of the voters but assume that there are two levels of it (one less informed than the other one): uninformed voters (after 1936) and informed voters (before 1936). None of them observe politician's competence perfectly, but voters before 1936 had a better signal of it.

Rogoff(1990) refined to these competency models to distinguish between different types of government expenditures: "current" or "visible" expenditures, the benefits of which can be easily observed by voters before elections; and "capital or "less visible" expenditures, the benefits of which are less easy to observe prior to elections and which in many cases are realized in subsequent periods. In this sense, an incumbent government has the incentive to focus in "visible" expenditure in order to send as efficient a signal as possible about its competence. Signals must be seen to be effective, and therefore it is more important for the government to focus on areas with the most visible expenditures instead of thinking about the timing of the benefits. In our paper, both social and infrastructure expenditure could be included in the "visible" category while the other components (finance, institutional, defense and debt) would be part of the "less visible" expenditure.

The evidence about political business cycles is not conclusive. Therefore, empirical studies began to focus on cycles in policy instruments, in particular, fiscal expansions before elections and contractionary policies once the election is over, known as "Political Budget Cycles". A political budget cycle is defined as a period of fluctuation in a government's fiscal policies, which is induced by the cyclicity of election (Shi and Svensson, 2003). The main idea in this literature is that voters make their decision based on visible economic policies. Policymakers have the

incentives to stimulate the economy with the help of fiscal or monetary policies in order to generate employment gains or wealth transfers that increase their's popularity, but these policies have to be visible to the voters. Once the elections are over, contractionary policies are pursued to reduce a fiscal deficit or inflation.

The literature on political budget cycles has concentrated on the manipulation of government expenditures by the incumbents in order to get re-elected. It does not give an important role to revenues and taxes.

Empirical' works on Political Budget Cycles are extensive and have found different evidence about the incidence of fiscal deficits, total expenditures and total revenues before elections. The results differ between the group or country under study. For developed and less developed countries, Persson and Tabellini (2003) did not find any change of government expenditure before elections. Shi and Svensson (2006) provide an empirical analysis based on a large panel of developed and developing countries and found that, on average, the fiscal deficit increases by 22% in election years. However, the size of political budget cycles is much larger in developing countries. They argue that the main reason for this difference is that in developed countries there exist strong institutional constraints on politicians and a large section of informed voters, which makes fiscal policy manipulation less effective. Similar results were found by Brender and Drazen (2005) in a broad cross-section of democracies over the period 1960-2001. However, they highlight that the existence of a political expenditure cycle in the fiscal balance is extremely sensitive to the set of countries included and that once they drop "new democratic" countries the effect disappears. At the same time, they find a significant revenue cycle (revenues fall in an election year) when they only include "old democracies". In the same wave, for developing countries between 1970 and 1992, Schunknecht (1996, 2000) found increases in public expenditures and in fiscal deficits in pre-electoral periods and contractionary policies thereafter, emphasizing that these fiscal policy cycles are stronger in less trade-oriented economies⁶⁸.

Additionally, Block (2002) found evidence of pre-election manipulation of fiscal policies (fiscal deficit, public expenditure, tax revenue and government consumption as a share of GDP) in a sample of 44 Sub-Saharan African countries between 1980-1995⁶⁹. An explication of this result is given by Brender and Drazen (2005) who argue that this could happen to "new democracies" in the first years after their

⁶⁸He also found that natural catastrophes affect current expenditure, probably through expenditure on emergency relief and improvements in the terms of trade decrease current expenditure.

⁶⁹He also found strong evidence of political business cycles in monetary policy. In particular, election years see faster monetary expansions and lower nominal interest rates.

transition to democracy. This might suggest that political deficit cycles only emerge when voters and the media have not yet developed the ability to monitor fiscal policy.

The literature on Latin American political budget cycles has yielded inconclusive findings. Ames(1987) found that government expenditure increased in the year before elections and decreased in the year after elections for a pool of seventeen Latin America countries between 1947 and 1982. Remmer (1993) reports that the quarterly percentage change in the fiscal balance is heterogeneous across eight South American democracies during the 1980s. Mejia Acosta and Coppedge (2001), and Amorim Neto and Borsani (2004), found that budget deficits worsen during elections but government expenditure does not increase. This result has been strengthened recently by the work of Barberia and Avelino (2011) who argue that the increase in the deficit and the fiscal difficulties during elections are mainly driven by the reluctance of governments to increase taxes.

Studies focused on particular countries and on particular political levels (national, regional or municipal) have found, in general, that the share of votes obtained by the incumbent party is negatively related to the level of government spending and/or the fiscal deficit observed just before elections, but they do not agree on the changes in the expenditure composition before elections.

In this sense, at municipal level in Israel Brender (2005) found between 1989-1998 that voters reward high expenditure in development projects and education expenditure (measured as the education system's performance), but they penalized increases in deficits⁷⁰. Similar results were found in Canada by Kneebone and McKenzie (2001) where there was a clear electoral cycle in revenues and spending: in particular, an increase in education, transportation, recreation and culture spending and a decrease in spending in health, social services and industrial development during electoral years. At national level, Gonzalez (2002) did not find evidence of pre-electoral increases in aggregate spending in Mexico, but there are indications that just before elections, spending on social services and health increase while the increase in investment in infrastructure starts early in the pre-election period. In addition, in Mexico Gamez and Ibarra-Yunez (2009) and in Russia Akhmedov and Zhuravskaya (2004)⁷¹ examined the existence of an expansionary political cycle in

⁷⁰ In particular, Brender (2005) found that the fiscal performance was only relevant in the 1998 campaign when the political environment changed.

⁷¹ Akhmedov and Zhuravskaya (2004) also found evidence that the magnitude of the cycles decreases with education, urbanization, level of democracy, transparency and freedom of media and also that cycles have become smaller over time.

regional public expenditure during election years and a contractionary cycle in post-electoral years, but they did not find evidence of a cyclical behavior in infrastructure spending in electoral years.

Nevertheless, Khemani (2004) has found in local governments in India that public expenditure on investment areas rises before elections; Faal (2007) found pre-election manipulation of fiscal instruments, mainly development spending and overall primary expenditure, in Papua New Guinea during 1988-2004; Vega (2004) reports increases in infrastructure projects before elections in Portugal; Medina (2003) concludes that fiscal deficit and capital expenditure increased in election years at provincial level in Argentina during 1985-2001; and Larrain and Assael (1997) found qualitative evidence of increases in fiscal deficits in Chile before elections in the period 1939-1993. For Colombia, the works of Eslava (2006) and Drazen and Eslava (2005) at municipal level, for the period 1987-2000 have shown that the share of votes received by the incumbent party in elections increases with capital expenditures and decreases with fiscal deficits.

In contrast to previous studies we use disaggregated data on the government budget of a single country. This allows us to run a series of regressions using 15 different budget items as dependent variables. Compared to the previous literature our data set is also larger, in the sense that we have homogenized fiscal policy variables for 170 years (from Independence up to today). This data enables us to examine sustainable changes in political budget cycles. The major difference with respect to the previous literature is that we concentrate on the relationship between different types of voters and political budget cycles instead of focusing on the relationship between the latter and political regimes.

2.3 Historical Framework

Since Colombia became a republic and during different state forms that it has had between the 19th century and today (the unitary state of "Gran Colombia" (1819-1830) and "Nueva Granada" (1830-1853), the federal Regime known as "Estados Unidos de Colombia" (1853-1886), and the unitary state of "Republica de Colombia" (1886-today)); elections have been part of the daily life of its citizens. Some estimations calculate more than 200 elections during this period.

Since independence, politics in Colombia has been dominated by two strong, opposing ideologies that became official parties in 1850, with the names of the Conservatives and Liberals.⁷² Although for some short periods these parties had internal

⁷² Before 1850, the traditional parties were not officially founded and named as they are today.

divisions and formed different coalitions, these were not strong enough to persist and were easily reabsorbed into the traditional parties.⁷³ Some politicians also tried to establish new political parties away from the traditional ideologies and more in line with the changes that the world had, but none prospered and they were easily overcome by the traditional parties in elections.⁷⁴ The founding and development of new political parties was not guaranteed until the new Constitution in 1991, and finally in 2002 a candidate who did not belong to the traditional parties won the presidential elections.

Between 1830 and 2000, Colombia had 43 presidential elections and 6 coups, but 5 out of the 6 lasted less than 2 years in power and were the result of struggles by the opposition party. Only the military dictator Gustavo Rojas Pinilla was able to stay in power for a longer period (1953-1958), but he was defeated in the next presidential election by the Liberal candidate.

According to the national constitutions, presidential elections were to take place every four years for most of the period, on the date established by the Constitution. The only exceptions were during the "radical era" (1861-1884), when the liberal constitution established the timing at every 2 years; and during the first years of the "Regeneration era" (1886-1898), when the Conservative constitution changed the timing to every 6 years.

Presidents were elected through indirect vote until 1910, via a system in which voters chose an electoral council which in turn elected the President over the following two weeks. From 1910 until now, Colombian voters have used the direct vote.

The voters were an essential part of the election campaign. The constitution always established who could vote and what the process was, although in some important cases these decrees were renewed or changed.⁷⁵ Until 1936, the constitu-

However, there existed two opposing political groups that are normally associated with the traditional parties in their ideologies: Bolivaristas with the Conservatives and Santanderistas with the Liberals.

⁷³ Among the most important divisions we found: Golgotas and Draconianos within the Liberal party (Jordan Florez, 2000) and *historicos* and *nacionalistas* within the Conservative party.

⁷⁴ These parties include: Unión Patriótica (UP), Partido Nacional Cristiano, Alianza Democrática M-19 (AD M-19), Nueva Fuerza Democrática, Movimiento de Salvación Nacional, Movimiento Unitario Metapolítico, Partido Socialista de los Trabajadores (PST), Partido Comunista de Colombia - Marxista Leninista (PCdeC-ML), Grupo Comunista Revolucionario (GCR), Alianza Nacional Popular (ANAPO), Unión Nacional Izquierdista Revolucionaria, Partido Socialista Revolucionario and Unión Republicana.

⁷⁵ For example, the 1853 constitution established direct voting without income and education restriction, but only one election took place under these conditions before the traditional constraints were re-established.

tion specified that only literate males older than 21 years old who were tax payers, property owners or industry employees could vote.⁷⁶

Each Constitution established the minimum amount of money (in terms of property or rents) required to become a voter. For example, the constitution in 1832 recognized that all men older than 21 years old with property valued at a minimum of \$1.000 pesos or annual income of \$500 pesos, could become voters. This minimum amount changed with the Constitution in 1843 and once again in 1886, when the lower minimum established \$1.500 pesos for property and \$500 pesos for annual rents.

Urrutia's (2010) work on urban wages during the 19th century allows us to make some comparisons with these minimums. The annual nominal wage of a doorkeeper in 1832 was \$200 pesos and a minister earned \$2.400 pesos, whilst in 1886 the doorkeeper earned \$250 pesos annually and the minister \$3.000 pesos. The upgrade threshold was not an issue for the government. Since this minimum was established based on nominal wages, the rigidity that urban wages showed during the entire 19th century meant that there were few big real-terms changes in the threshold of the income needed to vote. Urrutia (2010) showed that public wages changed only once or twice during fifty or sixty years in the 19th century.

Although historians (Posada Carbo, 1997) have argued that these voting requirements were not rigorously enforced, we can observe an important increase in the percentage of voters just after the change in the law in 1936. It has been roughly calculated that during the 19th century only 10% of adult male had the right to vote (Bushnell, 1993).

In 1936, President Lopez Pumarejo introduced universal suffrage for all men over 21 years old, and in 1957 Rojas Pinilla's government introduced suffrage for women over 21 years old⁷⁷.

The importance of President Lopez Pumarejo's government in 1934 and 1938 goes beyond this electoral policy. His government, known as "The Revolution in Motion", promulgated constitutional, agrarian, educational, labor and tax reforms. However, all these reforms, including the electoral one, had begun to be discussed under the previous liberal government of Enrique Olaya Herrera.

In particular, the two most important newspapers in the 1930s ("*El Tiempo*")

⁷⁶ The Constitution of 1853 established universal suffrage, saying that all men older than 25 years old could vote directly to elect the President. In this sense, the requirement of education and income was eliminated. However, only one election took place under these conditions (1856), since the Constitution in 1858 once again stipulated this restriction and the indirect vote.

⁷⁷ Women obtained this right through the Legislative Act no.3 in 1954 and exercised their right for the first time at the presidential elections in 1957.

and "*El Espectador*") had begun to claim the need to extend the electoral suffrage in 1931, long before Lopez Pumarejo's government started. The frequent discussions on this subject in national newspapers and in political speeches make us think that the electoral reform in 1936 was the consequence of a long process of debating that ended in this particular year. In other words, 1936 was not chosen as the year of the electoral reform for a specific reason: on the contrary, the reform could have taken place some years before or after.

To summarize, Colombia has been a country of electoral traditions and elections occurred with constitutional regularity. Although political institutions were weak in some periods, traditional political parties are well established; leading to a high degree of institutionalization of competitive politics.

2.4 Data

The database holds information in standard format between 1831 and 2000. The national annual series of fiscal instruments and outcomes comes from different sources: *Informes del secretario de Hacienda al Congreso* (1841-1844, 1846-1859), *Memoria del Ministro de Hacienda* (1860-1895, 1904), *Liquidaciones de los Presupuestos de Rentas y Gastos* (1831-1848, 1853-1860, 1870-1878, 1884-1892, 1895-1896, 1899-1902), *Informes Especiales del Secretario de Hacienda* (1863-1867, 1874-1875, 1877-1882) and *Boletines de Estadística* (1915-2000). For the years that the information was missing, we used official newspapers as *Gaceta de la Nueva Granada* (1840-1848), *Gaceta Oficial* (1849-1861), *Registro Oficial* (1862-1864) and *Diario Oficial* (1865-1915). We also reviewed the information provided by Soto (1837) and Galindo (1874) for the years prior to 1840.

The database has information on total revenues and expenditure liquidated and their respective disaggregated components. For the years where the expenditure was biannual (1886-1909), we checked the *Diario Oficial* daily and sum up any addition that was included to the original budget.

We aggregate the different categories of revenues and expenditure in order to homogenize them across time. For the revenues, we compress the information into five categories: indirect taxes (customs and consumption taxes), direct taxes (income and land taxes), fees and fines from public services (institutional fees), transfers and contributions from national properties (monopolies and national properties that were sold) and treasury balance resources (revenues left from the previous year). The expenditure was aggregated in six categories: Finance (including spending related to collection of taxes), Institutional (including justice, diplomatic and legislative

spending), Social (including education, health and cultural spending), Infrastructure (including investment and development projects), Defense (military spending) and National Debt (interest). We also include fiscal deficit as a dependent variable .

Once we had all the real variables, we decided to separate the data into two groups in order to test the hypothesis of political budget cycles: real variables and percentage as a fraction of total expenditure and total revenues. For each of these groups we ran exercises taking into account different time periods: 1. The entire period, to study the relationship between the change in the law in 1936 and the elections with the fiscal policy variables and 2. Separately, before and after the law was changed (1936) in order to get the sign and significance of the relationship between elections and fiscal policy for each period.

We check the stationarity of all the variables using the augmented Dickey Fuller Test of unit root. We run this test for each variable in three different time periods: 1830-2000, 1830-1936 and 1937-2000. No variable was I(2). Those that resulted being I(1) were converted to stationary variables using first differences and the unit root test was run again to assure that all the variables were I(0)⁷⁸.

We converted the variables that were in the *reales* currency into *pesos*. According to Camacho Roldan (1871), the conversion was approximately 8 reales to 1 peso. Although the law of June 2, 1846 was the first one regarding currency units and nominated the *real de plata* as the official currency, this conversion was used from 1847. The data appears in this currency until 1853 when the government returned to the currency unit *granadino o peso de 10 reales* (Vergara and Vergara, 1915).

Besides, at the end of the hyperinflation (1903) prices had multiplied by 40 compared to 1899 levels, and to stabilize them a new rate of \$100 for \$1 peso oro was established in 1905 (Ocampo, 1998). Thus, we converted the data for these years into pesos oro.

The Urrutia-Ruiz Price Index for the 19th century was interpolated using a Newton interpolation with the Ocampo Trade Index (1998) for the years that were missing. This was then homogenized to the same year base (1878) for the 20th century with the GRECO (2002) price index and inflation rate.

⁷⁸For the period 1830-2000 the nonstationary variables are: total expenditure, finance expenditure, social expenditure, infrastructure expenditure, defence expenditure, debt expenditure, social percentage, infrastructure percentage, total revenues, direct taxes, indirect taxes, direct taxes percentage, indirect taxes percentage, national properties percentage. For the period 1830-1936 they are: infrastructure expenditure, infrastructure percentage, total revenues, direct taxes, indirect taxes, direct percentages, indirect percentages, fees and fines percentages, national properties percentage. For the period 1936-2000 the nonstationary variables are the same as for the entire period, plus the finance percentage and the treasury balances resources revenues.

The nominal GDP for the 19th century series was taken from Kalmanovitz and Lopez (2009) and that for the 20th century from GRECO (2002). The population series was constructed using census data and GRECO estimations. Once we had the complete series of GDP, we estimated the cyclical component using different filters: Hodrick and Prescott, Baxter and King, Christiano and Fitzgerald and Butterworth, and we generated a new variable that measures the difference between the cyclical component and the trend. This new variable captures time variation in fiscal policy due to shocks to aggregate output and income.

Information about elections, party hegemonies, wars, constitutions and coups were taken from *Gaceta de la Nueva Granada* (1840-1848), *Gaceta Oficial* (1849-1861), *Registro Oficial* (1862-1864) and *Diario Oficial* (1865-2000) and from Urrutia and Arrubla (1970).

2.5 Empirical Strategy

2.5.1 First estimation

As we focus on the manipulation of policy tools instead of the changes in macroeconomic variables, we must test the existence of cycles in spending, revenues and deficit rather than looking directly at the behavior of real variables.

The analysis of the changes in expenditure and revenues in electoral years according to the type of voter begins with a simple specification. This allows us to verify how politicians react in electoral periods to changes in fiscal variables when only a small portion of the population could vote (only educated and high-income men older than 21 years old), compared to periods when a higher proportion of the population can vote and their characteristics are more heterogeneous (all men older than 18 years old)⁷⁹. We are interested in the sign and magnitude of the relationship between electoral and fiscal policy variables. We estimate the following equation for the two periods separated (1830-1936 and 1937-2000):

⁷⁹ For the non-stationary variables, we applied first differences in order to proceed with a dynamic specification in differences. This specification was applied by Levitt (1997) in his work on electoral cycles in police hiring. Thus, we ended up estimating the following equation:

$$\Delta fiscal_policy_t = \beta_0 + \beta_1 t + \beta_2 outputgap_t + \beta_3 \Delta fiscal_policy_{t-1} + \beta_4 election_{t+i} + \beta_5' \gamma_t + \varepsilon_t$$

where we first difference the dependent variable -measured initially in levels or as a percentage-. In this sense, we put more structure on the data for the identification of the election effect.

$$\begin{aligned}
fiscal_policy_t = & \beta_{0i} + \beta_{1i}t + \beta_{2i}outputgap_t + \beta_{3i}fiscal_policy_{t-1} \\
& + \beta_{4i}election_{t+i} + \beta'_{5i}\gamma_t + \varepsilon_{ti}
\end{aligned}$$

where $fiscal_policy_t$ is each component of the expenditures and revenues in real terms or the percentage as a fraction of the total expenditure, t is a trend that measures the effect of time on the dependent variable, $outputgap_t$ is a measure of cyclical deviations from GDP trend in year t , since fiscal instruments tend to be highly cyclical. The variable $election_{t+i}$ takes the value 1 if in the year t a presidential election took place and 0 otherwise and where $i = \epsilon-2, -1, 0, 1$. In the case when $i = -2$ the variable takes the value 1 in the first and second year before elections (not only in the second year), in order to test for the existence of a consistent and longer effect of elections⁸⁰.

γ_t is a matrix that includes others controls: the variable $hegemony_t$ that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable war_t takes the value 1 if in year t there was a civil war and 0 otherwise⁸¹; the variable $constitution_t$ takes the value 1 in the years where a new constitution was established and 0 otherwise⁸², the variable $coup_t$ takes the value 1 in the years where there was a coup and 0 otherwise, the dummy d_1910 takes the value 1 in 1910 and 0 otherwise and measures the change from the indirect to the direct voting system and the variable d_1957 takes the value 1 in 1957 and 0 otherwise and measures the year that women's suffrage was introduced. We are interested in the coefficient β_4 , which measures the relation between elections (including periods before and after) and fiscal policy variables.

⁸⁰This variable was also constructed for the year of the election t and for two years before elections $t - 2$ (this includes $t - 1$ and $t - 2$).

⁸¹ During the 19th century, Colombia had 9 civil wars and just four of them lasted just one year, two lasted two years, two lasted three years and one lasted four years. Hence, we have 18 observations with value 1. The length of the wars was taken from Vergara y Gaitan (1866), Espana (1985) and Pardo (2004).

⁸² In total there were 7 constitutions: 1832, 1843, 1853, 1858, 1863, 1886 and 1991. In years where there was an interim pact (as in 1861) or partial changes to the constitution (as during Reyes' government) we established the value 0, since these changes did not generate important changes in the political, economic or electoral system and their effects and scope were lower than during periods of constitutional change.

2.5.2 Second Estimation

Our hypothesis states that depending on the type of voters politicians choose a different platform to increase their probability of being re-elected. In our approach, we proxy the type of potential voters according to the period of time (before or after 1936). In this sense, the effect of elections may depend on the year. In all the years up to and including 1936, voters can be associated with literate and high-income men, and after 1936 they are associated with a more heterogeneous group, with a majority of illiterate and low- and medium-income voters.

The new specification is:

$$\begin{aligned} fiscal_policy_t = & \alpha_{0i} + \alpha_{1i}t + \alpha_{2i}outputgap_t + \alpha_{3i}(fiscal_policy_{t-1}) \\ & + \alpha_{4i}(d_1936 * election_{t+i}) + \alpha_{5i}election_{t+i} + \alpha_{6i}d_1936 \\ & + \alpha'_{7i}\gamma_t + \varepsilon_{ti} \end{aligned}$$

where $fiscal_policy_t$ is the percentage as a fraction of the total expenditure or revenues or the logarithm of the fiscal policy variables in real terms. The variable d_1936 is a dummy that takes the value 1 for the years between 1937 and 2000 and the value 0 for the years between 1830 and 1936. The rest of the variables are the same.

We are interested in the coefficient α_4 , which measures whether the relationship between elections and fiscal policy variables is different before or after 1936.

2.6 Results

Tables 17 to 23 report OLS estimations and p-values for different dependent variables. Table 17 shows results when the dependent variable is total expenditure, Table 18 when they are infrastructure expenditure and social expenditure, Tables 19 and 20 for the other components of expenditure (finance, institutional, defense and debt) and deficit, Table 21 when the dependent variable is total revenues, and Tables 22 and 23 for each of the revenues' components.

All of the tables have the same structure. For each one, column (1) indicates the period that is included in the estimation (1830-1936, 1937-2000, 1830-2000). Columns (2) to (9) indicate different values of the variable $election_{t+i}$ where $i \in -2, -1, 0, 1$. Columns (2) and (3) reports the results when $i = -2$ ⁸³, columns (4)

⁸³Strictly, column (2) and (3) are a dummy variable which take the value 1 one and two years

and (5) when $i = -1$, columns (6) and (7) when $i = 0$ and columns (8) and (9) when $i = 1$. For each combination of the dependent variable and the election variable we ran two types of regressions: without⁸⁴ controls and with controls.

For each dependent variable we report separate estimates of β_4 in equation (1) for the periods 1830-1936 and 1937-2000 in real terms and as percentage (when is not total expenditure or revenues variable). We also present separate estimates of the interaction coefficient α_4 in equation (2) for the entire period 1830-2000. These estimates are reported in real terms (log) and as percentages. Variables in absolute terms help to understand changes in magnitude, while variables in percentage terms let us study changes in distribution of its components and make comparisons between them.

Equation (2) allows us to estimate the relation between elections and fiscal policy variables before and after the electoral reform. Here, the interaction coefficient, α_4 , shows the difference between electoral and non-electoral years regarding fiscal policy variables for the two periods under study (i.e. before and after 1936). The coefficient α_5 shows the difference in fiscal policy variables between electoral and non-electoral years before 1936. Likewise, the coefficient α_6 shows the difference before and after 1936 for non-electoral years. We only report results for α_4

Hence, each cell in each Table is the β_4 coefficient or α_4 interaction coefficient for the respective combination of fiscal policy variable and election variable (columns). Significant results are highlighted and p-values are in parentheses. We report all the outcomes independently of the significance.

2.6.1 Total Expenditure

Table 17 reports the relationship between electoral years and total expenditure for the three periods of study and with different measures of the dependent variable. Panel a. shows the estimates of β_4 for the two periods of study (1830-1936, 1937-2000) and panel b shows the estimates of α_4 for the entire period (1830-2000).

The estimate results indicates a clear and strong expenditure cycle before 1936 in pre-electoral years. This table indicates that total expenditure increases by around 2,000,000 pesos in pre-election years, but decreases by 1,300,000 pesos in election years. Compared to the sample average, pre-election years can explain a 21% (for one and two years before elections) and a 32% (for just one year before elections)

before elections. We decided to include both years to study persistence in the changes made by the budget.

⁸⁴In the regressions without controls we only included the trend and cyclical component.

increase in total expenditure, and post-election years can explain an 18% decrease in total expenditure. This finding is consistent with the evidence found in developing countries for the recent years (Gonzalez, 2002; Brender and Drazen, 2005; Akhmedov and Zhuravskaya, 2004).

For the second period (1937-2000), results shift considerably. Total expenditure only increases in election years but it does not change significantly before elections. In real terms, during election years total expenditure rises by 17,000,000 pesos on average compared to non-elections years. In terms of the sample average, during these years total expenditure grows by 9.4%.

If we compare the two political budget cycles (before and after 1936) in terms of the sample average, the first effect is twice that of the second one (21% vs 9.4%), showing a strong cycle before 1936. This could be a consequence, amongst other things, of a greater flexibility available to the government when controlling the budget, and of fewer government monitoring agencies before 1936.

Results in panel b. reinforce the findings: a decrease in total expenditure in pre-electoral years and an increase in electoral years after 1936 (smaller and significant only at 10%). This estimation also highlights an important change in terms of the timing and size of the cycle. Before 1936, political cycles start in the pre-election period, but this trend changes to the election year after 1936. Besides, the cycle's size is bigger before 1936 compared to the ones observed after 1936.

We can also follow the theory applied by Brender and Drazen (2005) about new and established democracies and try to study the Colombian case as a process, which started when the country became a republic and then evolved towards an established democracy. In this case, each new election is a further step in consolidating democracy in the country. Thus, according to their results and our findings in panel b., we can expect stronger political budget cycles before 1936 than after.

2.6.2 Infrastructure and Social Expenditure

Table 18 reports OLS estimates and p-values for equations 1 and 2. The Table presents two panels. Panel A. shows different results when the dependent variable is infrastructure expenditure and panel B. when the dependent variable is social expenditure. Within each panel we present estimates with different measures of the dependent variable. Sub-panels a and b report α_4 coefficient in equation (1) for the two periods of study when the dependent variable is measured in real terms and as a percentage of the total expenditure, and sub-panels c. and d. report α_4 interaction coefficient in equation (2) for the entire period when the dependent

variable is measured in real terms (log) and as a percentage of the total expenditure.

As Table 17 showed, there is a clear cycle in total expenditure. The results in Table 18 allow us to distinguish which of the different components this additional expenditure was used for.

As this Table indicates, before 1936 the expenditure excess was used to increase the infrastructure expenditure (panel A.). This component rises in real terms in pre-election years and decreases during election years (sub-panel a.). The result is also consistent with the percentages (sub-panel b.), where is shown that only this expenditure increases its participation before elections.

These findings are first approximations that corroborate our hypothesis about how the fiscal policy instruments in election times depend on the characteristics of voters. Politicians prefer to focus on infrastructure expenditure instead of others expenditures to attract more potential voters. The infrastructure spending was related to investment projects to build roads or railways that help to reduce distances and improve the transportation system and communication between regions. These projects mostly benefited traders and landowners who were interested in increasing their profits and expanding their markets.

According to Valencia (1988) and Perez (1942), during pre-industrial times in Colombia, this expenditure was viewed as the main mechanism to achieve development given the isolation of the regions and their effect on the economy. In this sense *"the promises of more infrastructure expenditure were used as political platforms"* (Valencia, 1988). Besides, the expenditure on investment projects had an immense effect on commercial activities. For example, in 1878 a local newspaper ("El Telegrafo") published the proposal of a group of traders, entrepreneurs, importers-exporters and landowners. In this publication, they criticized the government's use of public resources and proposed building new roads and bridges to connect their region and stimulate trade (Valencia, 1993).

The results before 1936 also show that infrastructure expenditure decreases during election years. We can explain this change by the date of elections. Presidential elections in Colombia have always taken place in the first semester of the year. Then, once an election has occurred, politicians who are then in power try to compensate for the excess of expenditure of the previous years by delaying or eliminating existing or new projects.

For the period 1937-2000, infrastructure spending results non-significant in any of the different election's estimates. This results indicates that this expenditure was not a priority for the government in electoral periods and was not used as a

mechanism to attract new voters.

When we include the entire sample and estimate the interaction coefficient α_4 in equation (2) our hypothesis is reinforced: both measures of infrastructure expenditure decrease in pre-election years for the years after 1936 compared with the years before 1936.

Panel B reports the results when the dependent variable is social expenditure. Before 1936 there are not significant changes in social expenditure for any of the estimations.

This finding is also consistent with the hypothesis about the focus of expenditure according to the types of voter. The main beneficiaries of this expenditure were the illiterate and low-income population, who were **not** potential voters. Hence, politicians did not have any incentives to increase this expenditure in electoral periods nor to include it in their platforms.

This trend changed after 1936, although the cycle is not as strong as the one of regarding infrastructure spending. For the period 1937-2000, social expenditure is the only type of expenditure that increases significantly during elections. The results show an increase of 8,414,090 pesos in real terms and of 14% in terms of the sample average. This is consistent with the hypothesis that politicians prefer to focus on a form of expenditure that benefits the majority of voters, which in this case is social programs (education and health), not investment projects.

Although the definition of social expenditure during the 19th century may seem unclear, disaggregated reports of this expenditure make clear how it was distributed. Social expenditure was divided into two main categories: education and charity. The first category, education, had more than 70% of the total social expenditure, which was distributed mainly amongst primary and secondary schools across the country (paying teachers and rents and building new schools). The second was used to pay the maintenance of public hospitals and charity houses. The existence of a clear social expenditure and its importance could also be observed in the common idea among politicians about the necessity of education as one of the best ways to generate economic growth and better standards of livings. However, despite the usual highlighting of education by politicians, there is no evidence of an increase in this expenditure during electoral years before 1936.

Once again, when we use the entire sample, the results still hold: social expenditure, mainly education and health spending, increases in election times for the years after the new law was established compared with the period when voters were a limited group. This result is significant whether it is measured as a percentage or

as logarithm.

The significance of the results in both panels of the Table 18 reinforces our hypothesis about the change in expenditure composition by the characteristics of potential voters.

With respect to the timing of the cycle, the explanation of the change between the two periods is related to the type of expenditure on which politicians choose to focus. In accordance with the results of Gonzalez (2002) and Block (2002), the increase in investment in infrastructure started relatively early in the pre-election period: meanwhile social expenditure tends only to increase in election years (the months before elections).

2.6.3 Other Expenditures and Deficit.

Tables 19 and 20 report results obtained from equation 1 and 2 for other types of expenditure (finance, institutional, defense and debt) and deficit.

In general, there is not a clear cycle in most of these components or the deficit. This result supports our previous findings, demonstrating that the increase observed during electoral periods in total expenditure was spent mainly on "visible" expenditure: infrastructure before 1936 and on social goals after 1936.

Panel A in Table 19 indicates the absence of a cycle in the finance expenditure in any period or electoral year. Panel B in Table 19 reports the results for institutional expenditure, which is associated with bureaucratic spending. Estimates from equation 1 (sub-panel a. and b.) did not show a clear cycle in the two different periods. However, estimates from equation 2 indicates that one year before elections this expenditure decreases after 1936, compared with the years before 1936. This trend shifts during election years, as institutional expenditure increases after 1936. These results can be interpreted in terms of a change in the timing of payments for political favors. Before 1936, these payments took place before elections (as a prepayment) in order to attract new voters and increase the probability of staying in power. After 1936, they occurred in elections years (often once the election was underway) as a mechanism to pay favors (financing of political campaign) once the candidate got to power.

Panel A in Table 20 shows the results when the dependent variable is defense expenditure. There is no clear cycle in this component. The only interesting result is the decrease before elections after 1936 compared with the period 1830-1936. Panel B in Table 20 presents the results when the dependent variable is debt. This indicates that before elections this component increases, but during election years

after 1936 it decreases compared with the years before the electoral reform. In this component there is also a change in the timing between the two periods. In terms of the importance of the component within the budget (measured by the percentage variable), before 1936 interests payments are less important in the budget during pre-electoral periods but once elections are over, this component reaches almost the weight that it had before. The opposite occurs for the period after 1936: before elections this component becomes more important but during elections years this importance is lost. The size of change between the two periods is also different: while the change before 1936 is around 3%, after 1936 it is only 0.6%. We do not observe significant changes when we estimate equation (1) for the two periods separately but estimates of equation (2) are significant.

Finally, panel E reports the results for deficit. This variable increase in pre-electoral periods before 1936 and decreases in post-electoral periods after 1936. The growth in the variable before 1936 could explain the difference between the increase in total expenditure versus the increase in total revenues before elections. Since not all the increase in expenditure could be compensated for by more revenues (the increase in expenditure was around 25% and that in revenues around 14%), the excess was obtained from other resources despite all the constraints. For example, rich local landowners or local banks that lend small quantities of money to the government. The rise in the public deficit observed during these years is consistent with some of the literature (Shi and Svensson, 2006; Block, 2002).

2.6.4 Revenues

Table 21 shows estimations for each election year variable when the dependent variables are the total revenues in real terms and in logs for different periods (1830-1936, 1937-2000, 1830-2000). The estimation shows the existence of a revenue cycle one year before elections for the period 1830-1936, mainly, as we will see later, due to an increase in the collection of indirect taxes (the most important revenue at that time).

Before 1936, there is an increase in total revenues only one year before elections⁸⁵. In real terms, total revenues increase on average by 727.912 pesos one year before elections. Evaluated at the sample average, the results imply that elections can explain a 14% increase in total revenues during pre-election times.

After 1936, the results indicate that total revenues did not change significantly during electoral periods and the inexistence of a revenue cycle. This result could be a

⁸⁵This increase is also significant two years before elections at a 10.2% significance level.

consequence of major access to credit markets, making it easier for the government to obtain extra resources through debt instead of taxes during electoral periods. This new revenue source is less visible for the voters than higher taxes, and in some instances it is institutionally cheaper and easier to obtain than the traditional revenues.

Estimates when total revenues is the dependent variable from equation (2) are presented in panel b. These outcomes confirm the previous results. There is an important change in the revenue cycle before and after 1936 in the timing of the cycle. Total revenues decrease in pre-electoral periods after 1936 compared with previous years but they increase during electoral periods, although this increase is smaller and only significant at 10% with controls.

Tables 22 and 23 report estimates obtained from equation 1 and 2 for different revenues components. Panel A indicates that the percentage of direct taxes decreased in election years after 1936, and decreased in log terms in pre-election years for the same period. This may be due to the late creation of its main component, i.e income tax (established by law 56 of 1918 but only applied from 1922) which makes the comparison of this variable between the two periods difficult.

Panels B and C show that, before 1936 the extra revenues came mainly from indirect taxes and fees and fines, which increase on average 583,665 pesos and 106,255 pesos respectively. Again, in terms of the sample average, this means that, in these years, indirect taxes and fees and fines augmented 20% and 22% respectively due to the electoral process.

Public revenues have two important characteristics during this period: 1. Highly dependent of customs and non-diversified: until the process of industrialization began in Colombia during the 1920's, more than 70% of total revenues were obtained from customs taxes (Gonzales and Calderon, 2002). 2. Limited access to credit: during the 19th century, Colombia experienced serious problems accessing internal and external credit markets. This restriction translates into greater fiscal instability and fewer options during times of crisis. The constraints started to be overcome during the 1920's when the Kemmerer Commission (Junguito, 2009; López, 1992) organized the national administration and the central bank, carried out a technical revision of the administration and supervision of tax collection, and helped to create a national institution for this purpose.

Thus, if the government wanted more revenues, it had to search for mechanisms other than credit to obtain them⁸⁶. These other resources came from revenues that

⁸⁶The central bank was founded in 1923 and since then, and in particular during the 1930s,

already existed as customs or fees.

Reviewing all the laws in public newspapers such as *La Gaceta Oficial*, *El Registro Oficial*, *El Diario Oficial* y *La Gaceta de la Nueva Granada*, we found few increases in the customs tariffs, reflecting their stability. Most increases occurred one year after a presidential election⁸⁷. In general, we could find only small tariff changes regarding specific types of imported goods. This fact was reinforced by Ocampo (2007), who points out that few laws completely changed the tariffs.

This means that revenues did not increase before elections due to higher tariffs but because of higher collection rates. The means used to collect more revenues was to increase those that were flexible in the collection and were getting less than their potential: in some years, the customs revenues collected only 25% of what they were supposed to collect (*El Tiempo*, May 22th 1855). In this sense, this was a target revenue for the government.

Besides, the principal problem in the collection was smuggling, and the people most affected by this crime were traders, who were also potential voters. According to Laurent (2008), this problem underlines the state's inefficiency at improving controls and taking action, but at the same time it was an example of its flexibility: with low effort and money the collection rate could be increased. This seems a reasonable way to obtain more revenues during electoral periods.

Panel B and C also show the results when the dependent variable is measured as a percentage of total revenues. The results do not show big changes in the composition of revenues in electoral periods before 1936. This may be explained by the increase in the total revenues found before. As total revenues, indirect taxes and fees and fines grew in similar proportions, it was not necessary to redistribute the existing revenues.

Related to the estimates of equation 2, we find that the sign of the coefficient of the log of indirect taxes is consistent with what we found in equation 1 for the two periods, but is not significant. The non-taxable revenue from fees and fines tend to decrease both one and two years before elections for the years after 1936 compared with the previous ones.

For the period 1830-1936, we can observe in panel D a decrease in the participation of "national properties", which is a non-tax revenue, in pre-election and post-election times, but an increase in electoral years. These revenues comprise the state monopolies (mainly salt and tobacco) during the 19th century and the ex-

Colombia started an intense effort, within the international markets, to restore investor confidence.

⁸⁷The years of the main tariff reforms are 1844, 1861, 1873, 1886, 1913 and 1931.

ploitation of mines and oil concessions during the 20th century. They also includes the rents received from the sale of national properties, and transfers. The level of this revenue increases before and after elections for the years after 1936, but decreases in electoral years in the same period. This trend is compared with the other period (1937-2000) when we estimate equation 2. We find an important change in the variable's performance after 1936. This variable increases in pre-electoral and post-electoral years but decreases in electoral years after 1936.

We find almost the opposite performance for the variable Treasury Balance Resources (panel C in Table 23.), although most of the results are not significant.

2.7 Robustness Analysis

Natural concerns with the empirical strategy include potential overestimates arising from spurious relationships or other shifts in the priorities or role of the central government. This section presents some robustness checks that address these concerns.

First, it could be the case that the investment projects were so many and permanent before 1936 that Colombia built a good infrastructure system and then it was not necessary to invest in important and ambitious projects any more; hence the government could change priorities afterwards. At the same time, we might argue that before 1936 the government and politicians did not care about education and health or that the government role in this aspect was not well-defined and they had other priorities.

With respect to the first concern, the answer would be pretty obvious for anyone who travels within the country. Today, Colombia does not have any national rail system and the gap in this regard is huge when we compare statistics with other similar countries in the region. Even when it was clear that the country was falling behind in terms of infrastructure, few initiatives were taken by the central government, and even fewer succeeded.

The deficiencies of the country in this respect could be clearer when we compare it with other countries in the region. Table 24 shows the number of kilometers per capita of roads and the total routes-km of rail lines for most countries in Latin America in the last decade. As the table points out, Colombia has one of the lowest levels of roads per person (only above Brazil) and of routes per km of rail lines. This suggests that the infrastructure expenditure must not have been a concern of the government in the past, and that it is not correct to think that this was a minimal problem after 1936 to the extent that politicians had no need to focus on this type of spending.

With respect to concerns about the importance of social expenditure before 1936, we can focus mainly on the role of the government in the education system. As Ramirez and Salazar (2007) and Jaramillo (1980) have pointed out: although Colombia had one of the lowest education levels in the 19th century (even lower than the Latin American level) and its expansion during this period was low; education in its three levels, primary, intermediate and superior had been one of the principal interests since the first republican government of Bolivar. Table 25 shows the proportion of students enrolled in primary school/population from the beginning of the Republic up to 1905 and indicates that this proportion increased more than twofold during this period. Table 26 shows the difference between public and private schools and indicates the relative importance of the former compared to the latter. Besides, the table clarifies that most of the schools were public instead of private.

The role of the government in education was also observable in their policies to expand higher education in the country, and in the fact that the most important public universities were founded during the 19th century. It was clear to the government how important education was for achieving development. Most of the politicians of that time, independently of their ideology, highlighted in their political speeches the importance of education for the society and the role of the government to boost it. At the time, the huge importance of education for development was clear, and in this sense the discussion focused on the role that the Church should have in it.

Another important concern is the year when the law changed. The 1920s and 1930s were important decades for social movements that claimed a new role for the State and new rights (in terms of labor conditions and equality). Although Colombia was not much of an open country ideologically speaking, many of these ideas arrived in the country and their impact was perceived in the frequency on the newspapers highlights. It is difficult to settle on a particular year to test this effect, since these were two decades of different movements and ideologies. However, we can try to separate the effect of the global movement from the effect of the electoral law, by changing the dummy year variable (varying the year from 1936). If the effect is the same in terms of magnitude when we move the dummy variable a few years earlier or later, we can argue that the main effect was not due to 1936 by itself but instead due to a more general effect that occurred throughout the decade, such as the labor and social movements.

Table 27 shows the results for the main variables of the hypothesis (infrastructure and social expenditure) when we change the dummy year (four years before and after

the change in the law) in order to see if, when we take an additional election or we drop the previous one, the coefficients change in magnitude. If it is true that 1936 was a random year or the result of a bigger change in an ideological trend, we would expect similar results if we include one more or one fewer election, as the estimates will capture a general effect in no particular year. However, if we observe small differences in the magnitude and smaller coefficients in both new estimates, the validity of regarding 1936 as the year of change will be higher. It is important to note that we can only expect small differences in the coefficient because these are associated with an average of many years and we are only increasing or reducing a small portion of the variable (4 years).

As Table 27 indicates, the new estimates for the dummy year in 1932 and 1940 are consistent with the estimates in Table 17 and 18 in terms of the sign of coefficients and significance. However, all the coefficients are strictly smaller than in the original regressions, showing that the strongest effect is concentrated around 1936. This suggests that the change in the target expenditures is not a result of a general change in an ideological trend, but that it is linked specifically to 1936.

To reinforce the results, we also ran the main regressions eliminating the periods with elections every two years (1861-1884). The importance and significance of the main results do not change when we exclude these years. Total expenditure increases in pre-electoral years before 1936 and in electoral years after 1936; social expenditure increases in election years after 1936; and infrastructure expenditure increases in pre-electoral years before 1936.

2.8 Conclusions

The objective of this work is to analyse how the change in electoral legislation in 1936, regarding the characteristics of voters, affects fiscal policy in electoral periods. Using a new Colombian data set (1830-2000) we estimate OLS equations and interpret the size and magnitude of the interaction coefficient. We find the existence of Political Budget Cycles in Colombian history. These cycles are stronger in expenditure than in revenues.

In line with our hypothesis, we also show that before the electoral legislature was reformed in 1936, total expenditure increased in pre-electoral periods and this increase was due mainly to higher infrastructure spending. This pattern changed after 1936, since when total expenditure has increased only in the election year. This pattern was driven by higher social expenditure.

Another important finding is linked to the timing and size of the political budget

cycles in the two periods (before and after 1936). In the first period, the expenditure cycle existed only in pre-electoral years (one year and two years before elections) while in the second period, this cycle only existed during election years. The magnitude of the coefficients also indicate that the cycle was stronger in the first period than in the second one. This could be explained, in part, by the greater flexibility that the government had to control and manipulate the budget and to the existence of fewer government monitoring agencies.

We find the existence of a weaker revenue cycle. Total revenues increased before 1936 in pre-electoral periods, due to an increase in indirect taxes, but this trend disappears after 1936. Hence, the higher expenditure in electoral year in the second period must have been financed with debt. It is not clear if this is due to the change in voters' characteristics or to a greater access to credit markets.

Chapter 3

On the Agrarian Origins of civil conflict in Colombia.

3.1 Introduction

The studies of the causes of civil conflicts have multiplied during the recent decades. Diverse theories and hypotheses have been proposed and tested in order to determine the origins of civil wars. The debate is still alive and conclusions usually depend on the type of data or countries of study. However, most of the literature tends to explain civil conflicts as a result of poverty or low economic performance. This study, in contrast, examines the role of grievances stemming from peasants' land dispossessions as a historical cause of conflict.

Peasants' land dispossessions may occur as a result of the failure of the state to protect and enforce land property rights. Such dispossessions generate grievances that may persist over time and will manifest in a civil conflict when the window of opportunity emerges. We propose that a crucial factor to understand the origin of rural guerrilla groups are land dispossessions generally by large landowners. Peasants are expelled from their lands and lose, in most cases, their only productive asset, are forced to migrate or become landless. This triggers the perception of injustice and lead to the rise of grievances, which will persist while the state does not improve peasant's living conditions or give them access to new lands.

As peasants are at risk of losing their jobs or income or facing repression, they cannot manifest their grievances. The probability that peasants will succeed on their claims by acting without coordination is low. They need resources and political opportunities to organize themselves. Once the opportunity emerge, they will rebel against the government. Thus, our approach reivindicates the role of motive -the persistence of grievances- as the ultimate cause of civil conflict. We use the political economy theory of the peasant society (Popkin 1992) and the resource mobilization theory (Jenkins 1983; McAdam, McCarthy and Zaid 1987) to argue that peasants organize and rebel as a response to new opportunities yet their grievances and claims are endemic to the social structure and persist over time. Our paper contribute to the quantitative literature of the origins of civil wars in two ways. On the one hand, we use a precise measure of subnational historical grievances to explain the origins of conflict. On the other hand, we explore different mechanisms that led to the emergence of conflict.

We propose two mechanisms through which old land dispossessions are likely to determine the origin of guerrilla groups. On the one hand, the military feasibility that is viable during civil war periods when peasants groups had access to weapons and military equipment. On the other hand, the ideological politics of rebellion developed by the guidance and support of the revolutionary parties that may consolidate peasants grievances, generate political awareness among the peasantry and foster the formation of rebel groups.

We apply this reasoning to the rise of the most important Colombian guerrilla movement, the Revolutionary Armed Forces of Colombia (FARC) during the early stage of the civil conflict in Colombia (1974-1985)⁸⁸. The Colombian civil conflict arose in the rural areas, where land conflicts have been visible since the late 19th century. Instead of understanding the rural problems as an issue of distribution, we suggest that the main cause has been a historic problem of weak enforcement of property rights that led to the rise of grievances by the peasants, who were dispossessed of their lands by large landowners, in many cases with the informal approval of the State. Some of these grievances materialized in legal land conflicts, in which the peasant filled a land protection petition or land restitution. The key element of our argument is not only the existence of grievances, but their persistence over time.

The role of land as a main cause of the Colombian conflict has been constantly mentioned by academics, policy makers and guerrilla leaders. For example, the agrarian agreement was the first one out of the six agreed during the recent peace talks between the government and FARC. Since its foundation, this guerrilla has had the land issue at the center of its political agenda. Their leaders often mentioned as the cause of armed conflict the expansion of the latifundio and the violent dispossession of the peasant' lands by the landowners, they demanded the abolition of large properties that, according to them, consolidated through legal fraud and dispossessions. Land dispossessions in the rural areas have also impacted the food's market and production and have led to forced displacement and more poverty of the peasantry (Reyes, 2016).

Weak property rights that facilitate land dispossessions have been at the centre of the political discussion in Colombia since 19th century. Important land reforms, such the law 200 of 1936 or law 135 of 1961, aimed at facilitating the access of public

⁸⁸The boundaries of the period of the study relate to the social foundation of the FARC (1964) and the breakdown of the agreements of 'La Uribe' between Betancourt government and FARC (1985). We exclude the following years since the civil war became more complex and hard to disentangle due to the appearance of drug trafficking and the paramilitaries

land to peasants and settlers but nonetheless failed. A solution of the land issues was also the main claim that the guerrilla group FARC stated in its demands and was at the center of the debate during the Second Guerrilla Conference in 1966 when they decided to name themselves as FARC.

In the Colombian case, peasants' claims have remained mostly unchanged during the 20th century: access to land and higher provision of public goods. But the opportunity to demand them without the use of violence were only possible when a window of political opportunity and the economic resources appeared.

This work argues that the differences in the intensity of armed conflict at municipal level during its early stage (1974-1985) were due to old peasant's land dispossessions by large landowners that led to the rise and persistence of grievances. To test this argument, we use historical data that includes, among others, measures of land dispossessions, FARC rebel activities, exposure to the civil war and support to revolutionary parties. We show, first, that there is a strong link between FARC rebel activity (1974-1985) and land dispossessions during the export coffee expansion (1916-1946). And second, that the link is mediated by the exposure to the previous civil war "La Violencia", facilitating that small peasant groups had access to weapons and military experience (Molano 2015, Collier Collier, Hoeffler and Rohner 2009), and by an ideological cohesion led by the communist party.

We follow the methodology used by Acemoglu et al (2012) and use an identification strategy that combines a matching methodology with an instrumental variable approach. We compare municipalities that experienced land dispossession during the coffee expansion 1916-1948 and neighboring municipalities that did not. In order to deal with the plausible endogeneity problems and measurement error, we use as instrumental variable for land dispossessions floods during the export boom. Floods can generate damages on land plots by eroding the boundaries of properties, destroying crops, reducing their value and, in some cases, forcing peasants to migrate. Landowners can easily cope with floods shocks since they can rely on multiple sources of income or have easy access to credit. On the contrary, peasants, have limited access to markets and credits and rely entirely on their lands to survive. This vulnerability of peasants to climate shocks can be exploited by landowners who can dispossess the peasants from their lands.

By using the methodology proposed by Dipe et al (2017) we test different mechanisms through which land dispossessions led to the rise of guerrilla groups. The mechanisms tested are the exposure to the previous civil war "La Violencia" and political support to rebellion. We find that the mediators strongly associated to the

rise of FARC.

This paper is organized as follows. In section 2 we briefly discuss the literature related to the origins of civil conflicts. Section 3 provides a historical discussion of Agrarian Reform, "La Violencia" and the Communist ideology and of the Origin and expansion of FARC. Section 4 presents the data collected and used in this study. Section 5 describes the process of land dispossession and their relation with natural disasters, the identification strategy and results. Section 6 discusses the effects of land dispossessions on rebel activity. Section 7 documents the methodology and present the results of the effect of the plausible mechanisms on rebel activity. Section 8 concludes.

4 Literature Review

During the last decades, researchers have attempted to understand the origins of civil wars. Causes, costs, duration and consequences are some of the issues that have been addressed in theoretical and empirical works. This study contributes to a vast literature on the origins and causes of conflict from a quantitative and historical approach. This is the first study that, to the best of our knowledge, uses subnational historical data to explain the variation in presence and intensity of armed conflict.

A prolific body of work has explored the causes of conflict and have suggested that civil war are caused by "greed" rather than "grievance". The seminal paper by Collier and Hoeffler (2004) proposes an econometric model of civil war that predicts the probability that a civil war will occur and test different hypothesis. This probability depends on the motivations of rebellions. They use as proxies for grievance inequality, political rights, ethnic polarisation and religious fractionalisation, yet these authors did not find enough empirical evidence that support the grievance hypothesis. One alternative, proposed initially by a small economic theory literature (Grossman, 1999) is that civil wars might be motivated purely by greed -income that can be obtained either during rebellion or from state revenues after victory.

On the contrary, Collier and Hoeffler (2004) support the idea that wars are more likely where low opportunity costs of fighting exist and high presence of natural resources facilitates looting and rent-seeking. Their quantitative indicators of this "opportunity" view are: financial viability, military viability and history. Rebel groups require important financial resources to build their organizations and purchase armaments. They also need to meet a "survival constraint" determined by relative size of their forces compare to the government ones and other given factors

such as geography and population density. Finally, history matters: in a country with previous conflict experience, a legacy of hatred could have been created that may trigger further conflict. Empirically, all these variables of opportunities explain to some extent the origin of conflicts, and are consistent with the economic theory of rebellion as greed-motivated.

Similar to this approach, Fearon and Laitin (2003) find evidence that supports the idea that the main factors determining civil wars are conditions that favour insurgency, not ethnic or religious differences or grievances per se. These conditions are mainly state weakness characterised by poverty, large population and instability.

More recently, Collier, Hoeffler and Rohner (2009) have stressed on greed-driven arguments and have proposed a broader definition of opportunities, so called the "feasibility hypothesis", which states that where civil war is feasible, it will occur.

Other alternative, presented by political scientists, offers an account of conflict in terms of purely grievance -the opposition to perceived or actual injustice. Our paper builds on and contributes to the literature on grievances as a cause of civil conflicts. Although the most influential studies give little attention to the grievance-motivation theory, works by Stewart (2008) and Cederman, Weidmann and Gleditsch (2011) have brought up the debate its pertinence. Stewart (2008) conceptualizes horizontal inequality by considering political, economic, social, and cultural dimensions explicitly⁸⁹. Cederman, Weidman and Gleditsch (2011) use a new geocoded data on politically relevant ethnic group's settlement areas and find that both political and economic horizontal inequalities contribute to civil war. Their findings indicate that countries where some ethnic groups with wealth levels far from the country average are more likely to experience civil war. Ostby (2008) finds evidence that social horizontal inequality causes civil war and that economic dimensions are less important. Using data from sub-Saharan Africa Ostby, Nordas and Rod (2009) show that both economic and social group-level differences are the main drivers of domestic conflict.

There are some other explanations consistent with rational behaviour of why conflict occurs. Most of them appeal to a problem of asymmetric information. Brito and Intriligator (1985) suggest that war emerge as a costly means of communications. Fearon (1995) also suggests that, in settings of asymmetric information, war could be chosen, in a preemptive and costly move, as a signal of strength in front of others. Sanchez-Pages (2004) uses this line of analysis and supposes that information about

⁸⁹Political horizontal inequality refers to limited access to central decision-making authority within the state, the economic refers to the distribution of wealth among households. The social measures groups' uneven social access. The cultural captures group-level inequalities with respect to cultural policies and symbols.

the adversaries can be transmitted on the battlefield before and during negotiations until a final settlement is reached or negotiations breakdown. Finally, Azam and Mesnard (2003) and Bester and Warneryd (2006) identify some conditions under the scenario of asymmetric information to show that the end of conflict is not possible. Its defining feature is large scale organised violence on the part of a rebel army, establishment is prohibitively expensive and extremely dangerous regardless of its agenda (Collier, Hoeffler and Rohner, 2009).

Finally, in terms of the instrument, this paper also contributes to the literature that relates natural disasters or climate variables and conflict. Some papers have studied the relationship between rainfall and conflict, suggesting that rainfall affects conflict only through its impact on income (Miguel et al 2004 and Bohlken and Sergenti 2010). Sarsons (2015) suggests that rainfall affects conflict through other channel, especially in those places where the existence of irrigation technology reduces the dependency of agriculture on rainfall. This paper proposes a different channel between rainfall shocks that lead to floods and conflict: land dispossessions that lead to the rise and persistence of peasant's grievances.

5 Historical Framework

Scholars agree with the statement that "appropriation, use and possession of lands have been the base of the origin and persistence of the armed conflict in Colombia" (Centro Nacional de Memoria Historica, 2013). Conflicts over land can be traced back as early as when land became a valuable and coveted asset during the first coffee expansion in the late 19th and early 20th century (Saffon, 2015)⁹⁰. In response to the increasing international demands for agricultural products, public lands increasingly started to be allocated to private individuals and been exchanged in the land markets (Sanchez, Lopez-Uribe and Fazio, 2010).

The combination of high land values and low enforcement of property rights during coffee expansion (1920s) encouraged landowners to invade land occupied by squatters and peasant settlers, to extend their borders by encroaching upon occupied neighbouring lands. As a result, conflicts related to land dispossessions intensified during the 1920s.

The law 200 of 1936 -Colombia's first land reform-, intended to increase the bargaining power of peasants and reduce the number of conflicts. The law made

⁹⁰The export boom was mainly driven by coffee exports, which share rose from 12% in 1885 to 79% in 1929 (LeGrand, 1986).

harder to expel the settlers. The law made tenants and sharecroppers more likely to contest the ownership rights of the landowners and claim the status of settler (Hirschman, 1963)⁹¹.

However, the law did not foresee the cost of judicial procedures for settlers to reclaim their lands and did not protect them against future dispossessions⁹². Colombian historians (Fajardo 2015; Molano 2015; LeGrand 1986; Berry 2002; Kalmanovitz and Lopez 2006) have suggested that the failure of the Law 200 to protect the settlers from the large landowners encroachment was a key factor for explaining the beginning of "La Violencia".

From 1948 to 1958, "La Violencia", the rural civil war in which the Liberals, with the assistance of the Communist Party, organized and armed themselves to fight the Conservative-led government, extended across Colombia and touched every social institution. Though its intensity varied among regions, violence was intense in Colombia. The number of casualties yet difficult to determine reached 135.000 deaths (Guzman et al 1980).

"La Violencia" was a rural conflict in which the lines of confrontation were defined by loyalties to multi-class parties. It confronted liberals against conservatives and did not seem to have had a class motivation. Rather than rich and poor fighting to each other, Conservatives attacked Liberals. The lack of a class basis or of any other pattern such as land tenure or level of education was an important characteristic of this type of civil conflict. Instead, traditional party loyalties underlay "La Violencia" (Oquist 1980; Hartlyn 1993).

Due to the weakness of the Conservative government, their leaders decided to initiate violence against liberals. Conservative Ospina Perez won the presidency in 1946 after liberals split their votes in two candidates. However, liberals retained their electoral majority in congressional and local elections and would likely regain the presidency in 1950. In addition, liberals were increasing their urban vote more rapidly than were conservatives and consolidated a powerful opposition of national level led by Gaitan, who was the front-runner in the next presidential elections (Weinert, 1966).

In order to offset the liberal urban majorities and retain power, conservatives appealed to rural political repression and exploited the political resentments from

⁹¹The law established the state's ownership for the lands which alleged owners could not exhibit titles and recognised the right of settlers to claim the ownership of land that they had possessed in good faith for more than five years (LeGrand, 1986).

⁹²It did not ensure that the titles obtained by peasants would be immediately and gratuitously authenticated and registered, nor did it confer inalienable rights (Saffon and Sanchez, 2017)

previous conflicts. Conservatives were forced to use rural mobilisation to counter liberal urban mobilisation. The spurring of rural violence by the conservatives attempted to achieve two goals: more conservative votes in rural areas and justify stronger national measures in the countryside that facilitated repression of liberals in urban areas (Weinert,1966).

However, rather than representing purely a partisan violence, this civil war can also be seen as the representation of a fundamental struggle -and ultimately failure- to impose a hegemonic regional project of rule predicated on notions of cultural, ethnic, and racial difference (Roldan, 2002). Between 1953 and 1955 the civil war gradually started changing its character, transforming from politically to economically motivated and from guerrilla to bandit in character (Bailey 1967; Dugas 2009). Moreover, "soviet republics" -areas governed by rebellious peasants- were formed and by 1960, communists succeeded in ideologizing these "republics" and turning them into Catroite strongholds (Bailey 1967).

Armed groups successfully established enclaves in which communist peasant guerrillas were located, once the civil war ended. One of these groups, led by the Communist leader Manuel Marulanda Velez, established the Marquetalia Republic. This was the first of the guerrilla controlled territories known as "Independent Republics"⁹³. According to Molano (2000), such "republics" were communities based on "economic self-management and military self-defense" and were "independent" of the state control. These areas experienced widespread land conflicts in the 1920s and 1930s, intensive mobilisation efforts by liberals and Communists in the 1930s and 1940s and conservative repression during the 1950s⁹⁴.

During the dictatorship of Rojas Pinilla (1953), the Communist party (PCC) was banned and the peasants enclaves were attacked, displacing peasants from their lands and homes who had to resettle in regions such as Meta, Caqueta and Tolima. These regions would become later the traditional strongholds of the FARC (Leech, 2011).

The PCC responded to the government attacks in a contradictory way. On one hand, the party publicly denounced armed struggle being waged by peasants as a way to support the guidelines of the twentieth congress of the Communist party of the Soviet Union that urged its party affiliates to seek non-violent roads to

⁹³Others include Sumapaz, Rio Chiquito, El Pato, Guayabero, Viota

⁹⁴During the 1930s, the Colombian Communist Party (PCC) organise and politize peasants, especially in the Andean region in the departments of Tolima and Cundinamarca. Since its foundation, the party made organising the rural population a priority. The PCC played an important role at organising the peasant self-defence movement during the 1950s.

revolution. On the other hand, the party kept its support to the self-defense groups in the rural areas and in 1961, during its ninth congress, adopted a different position supporting armed struggle as a way to revolution.

In May of 1964, the Colombian military attacked the Marquetalia Republic in order to subject it under the control of the national government. This attack was also part of the Latin American Security Operation, known as Plan LASO, a US-backed initiative to combat growing communist influence in Colombia by using both military operations and civic action programs in the violent areas. After the attack, the guerrilla dispersed to other enclaves and months later re-organized as the "Southern Bloc", officially renamed as the Revolutionary Armed Forces of Colombia -FARC-, which was considered the military wing of the Communist party.

At the end of May 1964, the leaders Manuel Marulanda and Jacobo Arenas and their followers drafted and signed what is considered the founding document of FARC: "The agrarian program of the guerrillas", a document in which leaders from different communist guerrilla groups agreed upon a collective strategy of the political-militar organization and formulated an agrarian reform programme. The document also created a more formal insurgent organization with the main goal of seizing power from capitalists and transform the Colombian society according to the Marxist doctrine.

The following year, the first guerrilla conference agreed to expand their field of operations and moved from the Andean highlands to the eastern part of the country to regions as Meta and Caqueta. In these areas, the peasants had colonized the land and had established small farms, while the Southern Bloc defended the community from both the military and the encroachment of large landowners who sought to expropriate their new landholdings (Molano, 2015).

At their origins, the guerilla's goals were strictly related to an agrarian reform that would transform the social structure in the rural areas, in particular giving legal rights to the peasants that work the land. However, after the second conference in 1966, the group turned from a peasant self-defense group to a revolutionary guerrilla force that sought to expand operations over the whole country in order to overthrow the government (Leech, 2011).

In the 1970s, the arrival of the Conservative government of Misael Pastrana (1970-1974) meant the adoption of a rural development model that aimed to eliminate all obstacles to free investment in the rural areas of the country. This program worsened the economic conditions of the peasants, increased land concentration, undermined the small-scale peasant producers and increased peasant proletarianization.

At the same time, the repression of the national peasant movement (ANUC) and the expel of small tenants from their lands, brought near peasants that initially were outside the political-militar strife to the newborn guerrilla group FARC. During these years, FARC consolidated its influence, expanded to new areas and intensified the military training of its leaders.

According to Molano (2000), between 1970 and 1982, an "early conflict" stage, the FARC grew from a movement of 500 people to a small army of 3000, with a centralised hierarchical structure, military code, training school and political program. Later on, during the seventh conference in May 1982, the guerrilla changed its name to The Revolutionary Armed Forces of Colombia-People's Army (FARC-EP).

During the presidency of Belisario Betancurt (1982-1986), the FARC-EP embarked in a peace negotiation process started with the government. The initial goal of the government was to legalize the guerrilla's political activity and to transform their military force into a political party (Molano, 2000). This led to the foundation of the Patriotic Union (UP) in May 1985, a legal political party originally affiliated with the FARC and the communist party. The new party obtained significant parliamentary representation during the 1986 elections. However, from 1986 to mid 1990s, 5000 activists, elected officials, candidates and community organisers belonging to UP were assassinated (Pizarro, 2011).

Since the foundation of UP in 1985 and the Betancur's peace negotiations, a second stage of conflict started. This stage was characterised by an exacerbation of the conflict and the strengthened military capacity of FARC, financed with drug trafficking, extortion and kidnapping.

6 Data

The unit of observation in this analysis is the Colombian municipality. We use a data set of the 1120 municipalities which aggregates information for the period 1974-1985 mainly. Table 38 provides descriptive statistics.

We measure rebel activity as the number of violent events by the FARC and ELN guerrilla groups between 1964-1985. It includes the number of threats to civilians, attacks, assaults and extortions by these rural guerrilla groups. We add up the number of events to calculate a cumulative indicator of the rebel activity at municipal level.

The variable land dispossessions measures the number of land disputes or land dispossessions between 1890 and 1946. Land disputes are defined as dispossessions

of targeted settlers of public lands who had weak titles over them. Between 1827 and 1930, there are records of 600 land protection petitions. These petitions referred to public lands susceptible of privatization and were made by settlers. In general, these conflicts did not occur in the open agrarian frontier where most of the lands were not only public but also vacant, but rather in the latifundia frontier where large tracts of public lands were not so far away from old settlements, facilitating the encroachment by nearby *haciendas*. Each event is defined as a peasant petition of land protection or land restitution to a local, state or national authority. We aggregate the number of grievances from 1918 to 1946, since after this year a civil war, known as "La Violencia", began and other type of dispossessions occurred, for example, when partisan guerrillas grabbed the lands of their opponents, making more difficult to us to disentangle the real cause of the dispossession -agrarian problem or partisan disputes-. Although this is the most complete source of land dispossessions for this time period, underreporting is likely due to information costs and/or threats by dispossessors or local authorities.

The variable floods is measured as the number of events between 1914 and 1946. We give each of these events the same weight and calculate our variable by adding up these events. In the sample, 28% of the municipalities experienced a flood during this period. We also include as a control the number of floods between 1947 and 1985.

The variable land reform is an indicator of the intensity of the previous agrarian reforms (1946-1964) and it is measured as the number of public lands allocated to peasants (less than 20 has). The variable "La Violencia" is the measure of the military feasibility and indicates the presence of the partisan guerrillas during the partisan and rural civil war between 1948 and 1958.

The revolutionary political support is measured as the political support to the radical left-wing parties. The variable is measure as the share of votes that the revolutionary liberal leader Jorge Eliecer Gaitan got during the presidential elections in 1946. We use this year's election since was the last presidential election before the civil war started and also because it was an election in which all radical left-wing parties -Communist, Socialist, Maoist and radical liberals- supported one candidate. As Green (2013) mentioned, it was clear that those regions where the Communist part was strong and had support where the same regions were the was a high presence of the liberals leftists.

We also include as controls proxies of coffee potential which are measured as the presence of coffee plantations and the number of coffee trees in a municipality in

1925. Other control variables are mainly geographical variables collected by Sanchez and Nunez (2000) and include measures of altitude, rain precipitation, erosion index, aptitude index, area and distance to the departmental capital.

7 Floods and Land Dispossessions

The variable land dispossessions suffers from measurement error as we only observe those petitions of land protections submitted to the authorities. In order to examine the impact of land dispossessions in 1914-1946 on subsequent rebel activities, we use floods to instrument for land dispossessions. Floods damage and destroy land and have a sizeable effects on production. These impacts include destruction of land records, physical damage on crops and animals and deletion of boundaries (United Nations 2010). Additional impacts include the loss of potential production due to disturbed flow of goods and services, loss of production capacities and the increased costs of production. Floods, for instance, make land unsuitable for agricultural production until the waters receded.

Floods may also prompt displacement. Floods increase the vulnerability of rural population and compel people to leave their homes and livelihoods just to survive (Brown and Crawford 2006). The displaced people in rural areas, mainly poor peasants, have to leave their communities in exchange for uncertainty in an attempt to survive. People displaced by floods are usually the most vulnerable and their survival depend upon leaving their home, facing uncertain future and often depended on assistance (United Nations, 2010).

The greater peasant's vulnerability during periods of floods facilitates the expansion of large properties that are more resilient to this type of shocks. Large landowners usually do not rely entirely on one income source, have better knowledge of the government benefits and programs and more access to credits (Work and Woods 2015). The unequal impact of floods on peasants and landowners makes easier for the latter to use these shocks to take advantage of the vulnerability of the peasants. Landlords would extend the boundaries of their properties through encroaching peasant to increase their potential revenues, but also as a mechanism to reduce market competition and increase labor supply and political power.

Thus, we maintain that during periods of higher peasant vulnerability, such as floods, the weak enforcement of property rights facilitates the land dispossession by large landowners. We will test this hypothesis empirically. In this section, we explore the first stage relationship between floods and land dispossessions, conditional on

neighbors-pair fixed effects. We also test whether floods are correlated with a number of important pre-characteristics and examine whether the size of the first stage relationship differs across sub-groups.

7.1 Explaining the instrument

There is an extensive literature that relates weather shocks and conflict. Most of it assumes that the main channel is income. Given that income is endogenous, most of these works use rainfall measures as a source of exogenous variation for income. Rainfall is a plausible instrument if the country is economically dependent on rain-fed agriculture. Changes in rainfall have effects on crops, thereby affecting rural incomes.

However, the principal assumption behind this instrument is that weather shocks such as rainfall only affect conflict through its impact on income. For example, Miguel et al (2004) use rainfall as an instrument of GDP in sub-Saharan Africa and their result show that lower income increases the probability of a civil war. Bohlken and Sergenti (2010) use a similar approach by instrumenting state-level GDP with rainfall and finding that relatively low level of rainfall increases the number of riots in a state in a particular year.

Other authors have used different channels to explain the relationship between weather shocks and conflict. Couttenier and Soubeyran (2014) propose global climate shocks as the main driver in the relationship between rainfall and civil war. In the case of India, Sarsons (2015) finds that the effect of rain shocks on conflict is stronger in areas downstream of dams where agriculture is more dependent on rainfall. Her results suggest that rainfall might affect conflict through other channels and caution about the use of rainfall as an instrument for income in regions that have irrigation technology and hence are less dependent on agriculture.

Our paper proposes a different mechanism that relates weather shocks and conflict: land dispossessions that lead to the rise of grievances that persist over time. First, we argue that floods are positive correlated with land dispossessions. These shocks have direct and indirect effects. One of them is the displacement of rural poor peasants who are vulnerable since they lack the proper infrastructure and good access to markets. The vulnerability of this group facilitates land encroachments by landowners who are more resilient to these shocks. This unequal impact of weather shocks on peasants and landowners result of the differences in vulnerability, facilitating the dispossession of the former lands by the latter.

Peasants' land dispossessions by landlords prompt the rise of grievances. During

1914-1946 there were more than 400 land protection petitions filled by peasants. Most of these dispossessions did not occur in the open agrarian frontier but near the latifundia frontier. In these petitions, peasants claimed that landlords dispossessed illegally from their land and subsequently legalize the dispossession. Most of these disputes took place through the illegal use of legal procedure or abuse of the law. We argue that both land dispossessions and the failure of the state to protect the peasants and to enforce their rights over their lands strongly contributed to the rise of peasants' grievances. The low capacity of the state to enforce the law promoted the recurrence of these disputes during decades contributing to the persistence of the peasant's grievances over time.

7.2 Identification Strategy

We test whether floods in the years leading up the organisation of guerrilla movements affected land dispossessions by running a municipality-pair regression. From the total number of municipalities in Colombia (1122), our analysis takes just the municipalities that experienced land dispossessions between 1914-1946 (192 municipalities) and all their directly adjacent neighbours (529 municipalities). We use a neighbor pair fixed-effect strategy, which allow to compare municipalities that are expected to share economic, political, social and institutional characteristics but that differ in having or not experienced land dispossessions.

We index the presence of land dispossession by d and non-land dispossessed municipalities by nd . This estimation compares pairs of adjacent municipalities of which one member had at least one land dispossession and the other member did not.

In order to examine the impact of land dispossessions (1914-1946) on subsequent rebel activity (1974-1985), we use floods presence to instrument for land dispossessions. The first stage relationship for each pair $\tau = (d, nd)$, $nd \in I(d)$ estimates whether the presence of floods during 1914-1946 affected land dispossessions:

$$\text{Land_disposse}_d = \chi_1 D_d + \chi_2 x_d + \lambda_{d,nd} + \epsilon_d$$

$$\text{Land_disposse}_{nd} = \chi_1 D_{nd} + \chi_2 x_{nd} + \lambda_{d,nd} + \epsilon_{nd}$$

where $\lambda_{d,nd}$ are the neighbour-pair fixed effects, which capture unobservables common for the neighbor pair (d, nd) . ϵ_τ are τ -specific unobservables. L_τ is a dummy

for land dispossession and D_τ is a dummy of floods between 1914 and 1946 in municipality d .

We then use floods as an instrument for land dispossessions. We estimate the following linear probabilistic model for each pair (d, nd) :

$$\text{Rebel_act}_d = \beta_1 \text{Land_disposse}_d + \beta_2 x_d + \zeta_{d,nd} + \nu_d$$

$$\text{Rebel_act}_{nd} = \beta_1 \text{Land_disposse}_{nd} + \beta_2 x_{nd} + \zeta_{d,nd} + \nu_{nd}$$

where Rebel_act_τ is a dummy of the rebel activity of the FARC during the early stage of conflict (1974-1985), L_τ is our dummy of land dispossession, x_τ is a vector of covariates that include geographical variables, land reform measures and number of floods in the current period. $\zeta_{d,nd}$ are the neighbour-pair fixed effects, ν_τ are τ -specific unobservables.

Even after controlling for common unobservables across the pair of municipalities and their neighbors and control for some geographical and political variables, it is possible that $\text{cov}(\text{Land_disposse}, \nu) \neq 0$. In this case, land dispossession Land_disposse can be conditionally correlated with municipality-specific unobservables. If this is the case, our identification strategy must assume that conditional on the common unobservables for a pair of neighboring municipalities, the difference in land dispossession between each pair is due to exogenous shocks such as the experience of a natural disaster in one of them.

The instrumental variables approach requires the following two assumptions (Angrist, 2009). First, floods must be correlated with land dispossessions. If this correlation is only marginally different from zero, the estimates of the instrumental variable are unlikely to be informative. Second, the exclusion restriction states that floods must be uncorrelated with any other determinants of interest: in other words, $\text{corr}(\text{flood}_i, \nu_i) = 0$. It will obtain if floods is randomly assigned, conditional on neighbors-pair fixed effects, and if floods during 1914-1946 has no effect on rebel activity during 1970s and 1980s other than through the land dispossessions channel.

We use the extensive and intensive margins of the endogenous variable, land dispossessions. Although, the extensive margin might better capture sources of variation in the long-run that might affect the development of the rebel activity, the intensive margin of land dispossession gives the intensity of the effect of land dispossession on conflict.

7.3 Similarity of neighbours

Our strategy compares municipalities that experienced land dispossession with municipalities without land dispossessions. Following the matching methodologies that create pairs based on the observables characteristics, we need to show that the pairs of neighbours do not differ significantly on the relevant observable characteristics. We estimate a standards OLS neighbour-pair fixed effect regression to show the relationship of different observables characteristics on land dispossession. In our case, presence of floods could be determined by geographical conditions.

$$G_d = \phi + \beta_2 F_d + \delta_{d,nd} + \epsilon_d$$

$$G_{nd} = \phi + \beta_2 F_{nd} + \delta_{d,nd} + \epsilon_{nd}$$

In equation (X), $G_{g,i}$ is any geographical variable such as altitude, soil fertility, land flatness or erosion. Table 32 shows no difference between the different pairs of neighbors when we take into account observable characteristics such as altitude and land flatness index. The only geographical variable that seems to differ between neighbors is soil fertility index.

7.4 Results

Table 29 documents the first stage relationship between 1914-1946 floods and land dispossessions. Robust standard errors are in parentheses and all columns include neighbors-pair fixed effects. Column 1 and 2 uses a dummy and column 3 and 4 uses the log of of land dispossessions. In both cases, the correlation between floods and land dispossessions between 1914-1946 is statistically significant at the one percent level, with a somewhat stronger relationship in the log case without controls (first stage F-statistic of 201.78) than when we include controls (first stage F-statistic of 23.01).

The introduction of geographical controls reduces the magnitude of the correlation from 0.61 to 0.23 in the dummy case and from 0.32 to 0.13 in the log case, but the estimates remain highly significant. Column 2 indicates that municipalities that experienced floods during 1914-1946 have a 17% higher probability of experiencing land dispossessions during the same period. Overall, the first stage results show that the presence of floods is associated with a 15-17% higher likelihood of having land dispossessions during the same period (1890-1946).

The instrumental variable approach will estimate the impact of land dispossessions on rebel activities for those municipalities that were induced by a flood to experience land dispossessions. We can not observe whether landlords in a given municipality grabbed a peasant's land in response to floods, Table 30 sheds light on which sorts of municipalities were influenced by the floods by examining the size of the first stage for different sub-samples.

Column 1 reports the baseline first stage relationship from the full sample, reproducing column 2 of Table 29. Column 2 limits the sample to municipalities in which the share of land owners working the land is higher than the median share, and column 3 limits the sample to municipalities that are below the median. The coefficient on floods in the full sample is 0.399 (s.e = 0.054). This coefficient is 0.453 for places above the median and 0.338 below the median. Both are statistically different than zero, and they are not statistically distinguishable from each other.

Columns 4 and 5 divide the sample by whether a municipality had a higher number of land credits during the years 1958-1962 than the median municipality (which is equal to 0). The correlation between floods and land dispossessions is statistically significant in both sample and the size of coefficients are very similar. Next, column 6 and 7 divide the sample by whether the municipality had a higher daily wage in 1968 relative to the median municipality. The relationship between floods and land dispossessions is large and highly statistically significant for both samples. Finally, column 8 and 9 divide the sample by whether the municipality had a higher number of public land allocations to peasants between 1930-1960 than in the median municipality. The correlation between land dispossessions and floods is statistically significant in both sample but is substantially larger in the municipalities the higher land reform, at 0.185, than in the lower land reform.

Overall, these results indicate that floods led to land dispossessions in municipalities with a wide variety of initial characteristics, and that this relationship was particularly pronounced in municipalities where peasants received more public lands.

Identification requires floods between 1914 and 1946 to be as if randomly assigned. In this sense, in the absence of differences in floods during these years, municipalities that suffered floods would not have been different on average from municipalities that experienced floods. To shed light on the plausibility of this assumption, table 40 regresses a variety of outcomes from the agricultural census in 1960, the Population census in 1964 and the agricultural census in 1970 on floods, measured as a binary variable during 1914-1946. The sample sizes are different across outcomes, as there is no information for all municipalities in the different

census.

For comparison purposes, column 1 reports the first stage relationship between floods and land dispossessions from table 29. The dependent variable in column 2 is the percentage of the municipal population that read and write in 1964. The dependent variable in column 3 is the log of the total number of houses in 1960. The dependent variable in column 4 is the log of the total number of properties that had irrigation in 1960. The dependent variables in column 5 and 6 are the km of roads and railroads in 1970.

The correlations between these outcomes and floods are all statistically insignificant. The magnitudes of these relationships also tend to be smaller, relative to the sample mean, than the magnitude of the relationship between floods and land dispossessions.

8 Rebel activity

This section uses an instrumental variable approach to test whether land dispossessions affected the consolidation of guerrilla groups in the years following the Cuban revolution and the civil war "La Violencia". The most important guerrilla movement in Colombia, FARC, formed in 1964 as the military wing of the Colombian Communist Party. In the late 1960s, the FARC was a relative marginal force with internal divisions but by the end of 1970s, social and political support for the guerrillas peaked, nourished by the lack of space for political participation. By 1983, the FARC had more than eighteen fronts and added the title of "the people's army" to their name. We find that land dispossessions were concentrated in municipalities where FARC was stronger.

The estimates we have presented so far assume that any difference in the presence of historical land dispossession (1914-1946) across municipalities is conditionally uncorrelated with unobservables that vary within the pairs land dispossession/non land dispossession pair. We exploit the exogenous variation in the presence of natural disasters during the export boom (1914-1946) as an instrument for the presence of historical land dispossession during this period. Table 33 tests whether land dispossessions between 1914-1946 influenced the rebel activity of FARC during the years that the movement consolidated (1974-1985), using both the dummy and the log of FARC rebel activities as the dependent variable. Column 2 and 4 report the IV estimates, and for comparison column 1 and 3 report the OLS estimates. The presence of floods during 1914-1946 is used as the instrument. All the estimates

control for geographical variables and the presence of floods during the following decades (1947-1985).

Overall, Table 33 provides evidence that land dispossessions during the export boom (1914-1946) led to increased FARC rebel activities during the early stage of conflict. The IV estimates in column 2 indicate that the presence of land dispossession produced a 61% percentage point (s.e=0.122) change in the probability that a rebel activity occurs, relative to the sample mean of 26.5 percent. Similarly, column 4 document that the presence of land dispossession produced a 81% change in the number of rebel activities.

Table 34 documents the results when we divide the sample depending on the land reform intensity. Column 1 reports the baseline second stage relationship from the full sample. When we focus attention on municipalities where land reform - number of public lands allocated to peasants- between 1961 to 1970 was above the median, the estimated effect is 96.5 percentage points, and this effect is statistically significant at the one percent level. In contrast, the impact of land dispossession is smaller and not statistically different from zero in the sample below the median land reform.

The process of claiming the titles for the lands the settlers occupied was not easy, since it was costly and landowners used their local influences to prevent them from doing so. Cultivated lands were targeted because lands were only valuable and ready for production after they had been cleaned from shrubs and tilled, and because seizing them from cultivators was the only way of ensuring their labor. The strategy used by landowners was to wait until the settlers prepared the land for cultivation and thereby increased its value; then claim it and force settlers to become hacienda tenants under the threat that they would otherwise be evicted without compensation.

The IV estimates are larger than the OLS estimates. There are different reasons to explain this result. First, because of measurement error in the land dispossession variable. This reason is plausible since we only have information about the reported cases of land dispossessions that peasants reported during 1914-1946. It is likely that some cases were not reported by peasants since this could be an expensive process in terms of money and time.

Second, because of omitted variables bias in the OLS specification. This is also likely since we are mainly controlling for geographical variables and some political or land-related variables but there might other variables that could explain the land dispossessions that we are not capturing in our OLS specification.

Third, because the IV is measuring a local average treatment effect on municipalities induced to land dispossession by floods whereas the OLS is just measuring a correlation between the FARC rebel activity and the land dispossession across the entire sample. When we examine the estimates across different sub-samples (see Table 30), the land dispossession coefficient is not substantially different in the different sub-samples. We do not find any significant difference across subsamples. Finally, because floods violates the IV exclusion restriction. This is unlikely since the instrument is uncorrelated with different pre-determined characteristics.

9 Mechanisms

Using the analysis of mediation methodology proposed by Dippel et al 2017, we decompose the total effect of land dispossessions (estimated through the instrumental variable) into the effect produced by those dispossessions in isolation, on one hand, and the indirect effect produced through the mediating variable, on the other hand.

For the mediators we focus on the military feasibility and the political support to rebellion. The military feasibility has been previously proposed by Collier, Hoeffler and Rohner (2009) as a factor that might trigger conflict. Rebel groups need to have military training and capacity in order to counteract the state actions and consolidate their territory. We use as a proxy of military feasibility being exposure to the civil war "La Violencia" during 1948-1958. The civil war was a result of discord between Colombia's two political parties, Conservative and Liberals, that triggered a breakdown of existing institutional structures and a partial collapse of the state. As a result of the chaotic environment and of the provisional access to military weaponry, liberal and conservative peasants organize self-defense groups leading to the formation of different guerrilla movements. The variable "La Violencia" is a binary variable that takes value 1 if the municipality experienced a violent event during the civil war and 0 otherwise.

The political support to rebellion is based on the guidance and support that the Communist Party gave to movements and peasants leagues in rural areas in Colombia. In particular, after the Cuban Revolution the political approval of the rebel groups by the Communist Party was indispensable. Although the influence of this party seems unobservable nationwide since it coincides with a period of apparent political exclusion (the National Front); the impact and penetration of the communist ideology was higher in rural areas and it was latent in particular after the revolution in the island ended. For instance, FARC was considered the military wing

of the Colombian Communist Party. We then use as a proxy of the political support to rebellion the share votes that the radical left-wing parties obtained during the presidential election in 1946, when all radical parties (Communist, Maoist, Socialist and radical liberal) supported one candidate.

We divide the estimation of the mediation effect in two steps. First, we estimate the effect on land dispossessions on the mediators, M : La Violencia and Communist support, our two proxies for military feasibility and political support to rebellion using the instrumental variable approach. We then estimate the following equation:

$$M_d = \theta_1 Land_disposse_d + \theta_2 x_d + \delta_{d,nd} + \mu_d$$

$$M_{nd} = \theta_1 Land_disposse_{nd} + \theta_2 x_{nd} + \delta_{d,nd} + \mu_{nd}$$

where M is either a dummy for the exposure to the civil war La Violencia or the share of votes that the Communist parties obtained during the presidential elections in 1946. θ_1 is our estimator for the effect of land dispossessions on these mediators. Land dispossessions $Land_disposse$, control variables x and instrument $Floods$ are the same as the ones used to estimate the effect of land dispossessions on rebel activity in the original equation. We just replace the rebel activity with the mediators as dependent variable.

The OLS results are displayed in column 1 and the IV results in column 2 of Table 35. Panel A reports the estimates when the mediator is the Communist vote share in 1946 and Panel B when the mediator is the binary variable of exposure to civil war (1948-1958). Each panel also presents the first stage results.

Land dispossession during the export boom (1914-1946) has a significantly positive effect on the Communist support and on the exposure to civil war. The presence of land dispossessions generates an increase of 23 percentage points in vote share that communists obtained in 1946. Similarly, the presence of land dispossessions between 1914-1946 produce a 41 percentage point change in the probability of participating in the civil war during 1948-1958. These results are consistent with the qualitative literature that has highlighted the role of peasant grievances as a mechanism to capture support for revolutionary causes in the rural areas.

We also decompose the effect of land dispossessions on the mediators by intensity of land reform during 1961-1970. Table 36 reports the IV results for different samples. Column 1 documents the results for the full sample, column 2 for the sub-sample that includes only municipalities that experienced higher land reform during

the years 1961-1970 than the median and column 3 for the pairs that had low land reform on the same years. The impact of land dispossessions is not statistically different from zero in both sub-samples. However, when we focus only on those municipalities that experienced high land reform intensity, the estimated effect is 30 percentage points, and this effect is statistically significant at the one percent level. In contrast, the impact of land dispossessions on the communist support on those municipalities that experienced low intensity of land reform is negative and not statistically significant.

We are interested in understanding to what extent the communist support and the participation in civil war mediate the causal relationship between land dispossessions and FARC rebel activity. The next step is to identify the causal mechanism underlying the effect of land dispossessions on FARC rebel activities. For this purpose, we need to decompose the total effect of land dispossessions on FARC rebel activities (estimated by β_1), into an "indirect" effect that works through the two mediators -military feasibility and political support to rebellion- and a residual "direct" effect.

To decompose β_1 into a direct and an indirect effect of land dispossessions on FARC rebel activity, we also need to estimate the effect of the mediators (γ_2) and land dispossessions (γ_1) on the rebel activities when we include as controls the mediators. We run two different instrumental variable regressions. The first stage now uses as dependent variable the mediators and the original independent variable is instrumented and takes the following form:

$$M_d = \alpha_1 Floods_d + \alpha_2 Land_disposse_d + \alpha_3 x_d + \delta_{d,nd} + \eta_d$$

$$M_{nd} = \alpha_1 Floods_{nd} + \alpha_2 Land_disposse_{nd} + \alpha_3 x_{nd} + \delta_{d,nd} + \eta_{nd}$$

where M is any of the both mediators: dummy of La Violencia or Communist support in 1946. These equations differ from the preliminary first stage equation in that land dispossession is now included.

The second stage equation uses as dependent variable the outcome of interest, *Rebel_act*, the mediator is instrumented and the original independent variable is included as a control. We estimate the following equation:

$$Rebel_act_d = \gamma_1 Land_disposse_d + \gamma_2 M_d + \gamma_3 x_d + \zeta_{d,nd} + \xi_d$$

$$\text{Rebel_act}_{nd} = \gamma_1 \text{Land_disposse}_{nd} + \gamma_2 M_{nd} + \gamma_3 x_{nd} + \zeta_{d,nd} + \xi_{nd}$$

We are now interested in the casual effect of the mediators M on the rebel activity instead of the effect of land dispossessions on the rebel activity. Table 37 reports the estimates of the second stage. Estimate γ_2 gives the effect of the mediators military feasibility and political support to rebellion on rebel activity over the period 1974-1985. The variable M is either the communist vote share in 1946 or a dummy for exposure to the civil war "La Violencia". Results indicate that increases in the communist vote share or having participated in the civil war produce a positive change in the probability that a municipality experience a FARC rebel event.

The indirect effect of the independent variable on the outcome produced through the mediator is obtained by multiplying the IV estimator of the independent variable on the outcomes in the second regression. The direct effect produced by the independent variable is the estimator of that variable (used as control) in the second regression. The total effect should be equal to the sum of the indirect and the direct effects. This implies that the effect of land dispossessions-military feasibility and land dispossessions-political support to rebellion on rebel activity, that is the mediated effect of Land_disposse on Rebel_act , can be derived by multiplying $\hat{\gamma}_2$ by $\hat{\theta}_1$. This is equivalent to combine table 37 with column 2 in Table 35. The implied magnitude of the indirect effect $\hat{\gamma}_2 * \hat{\theta}_1$ is 0.773 ($3.318 * 0.233$) in the case of the communist support and 0.683 ($3.318 * 0.233$) in the case of presence of La Violencia.

The direct effect of land dispossession on FARC rebel activities that is unrelated to communist support or participation in the civil war is given by $\hat{\gamma}_1$ and is equal to -0.155 and -0.065 respectively in table 37. This direct effect on rebel activity is in fact moderating. Disregarding the communist support or the presence of civil war, increasing in land dispossessions decreases the presence of rebel activities. This estimate is significant in the case of the Communist support (Panel A) and not statistically significant in the case of the La Violencia (Panel B). The estimated effects of -0.155 and -0.065 implies that direct effect is almost null compared to the total effect of 0.617 reported in table 33.

The mediation analysis shows that the total effect of land dispossessions on FARC rebel activities in the early stage of conflict consists of a large effect that runs through the communist support and La Violencia mechanisms. However, we should be cautious about the interpretation on the size of the coefficients since the endogenous variable (land dispossession) has measurement error. These results also indicate that $\hat{\gamma}_2 * \hat{\theta}_1$ is larger than β_1 , which means that the communists and

exposure to violence have stronger implications for the consolidation of FARC during the following decades than just a simple study of the land dispossession on FARC activities.

10 Concluding remarks

This study identifies how peasants' land dispossessions during the export boom 1914-1946 affected subsequent guerrilla movement organization and consolidation by using floods as an instrument for land dispossessions, conditional on municipality-pair fixed effects and geographical controls. Instrumental variables estimates document that municipalities that had land dispossessions experienced substantially more FARC rebel activities in the years following the civil war La Violencia.

Based on quantitative and historical evidence, we hypothesize that the rise of peasant grievances after experiencing land dispossessions during the export boom period facilitated the consolidation of the rural guerrilla movement FARC. But the manifestation of grievances in a guerrilla could only be manifested after peasants had access to military armies and with the support of a revolutionary political party.

This study highlights the potential agrarian causes of the civil war that Colombia lived for more than 30 years and supports a view of history in which grievances persist over time and manifest when there is a window of opportunity to organize and transform these grievances into a material revolutionary representation that will challenge the status quo.

Conclusion

A number of conclusions on the two topics of democratization and redistribution and on the causes of civil conflict in Colombia emerge from the three essays presented in this thesis. In chapter one and two, the thesis investigates two forms of democratization -defined as a continuous process- and their relationship with redistribution and politicians' behavior. Chapter one estimates the effect of a type of democratic reform -organization and political participation of a peasant movement- on broad and targeted redistribution in Colombian municipalities during the years of a potential threat of a Communist revolution (1957-1985). It shows that in those municipalities where the peasants were empowered -an association getting legal entitlement- broad redistributive variables decrease during the years that the government supported the peasant movement (1967-1972), while simultaneously targeted redistribution increased. The chapter proposes the drivers of the increase in targeted redistribution: more public jobs in municipalities empowered and more public lands for the peasant leaders. It also provides suggestive evidence of the negative correlation between the co-optation of the peasant leaders and the public disorders events that Colombia experienced during the 1970s and 1980s.

These results are consistent with previous findings in the autocracy case that have suggested the strategies of the government to co-opt leaders of opposite groups by providing them with rent-seeking opportunities. The findings of this paper, insofar as they provide evidence on the effects of democratization on targeted redistribution and the effectiveness of this strategy during times of a threat of revolution, have important implications for theories of conflict, democratization and redistribution. If governments recognize that to avoid public disorder, targeted redistribution to well-connected social movements leaders can be more successful than reforms aimed at increasing broad redistribution, particularistic benefits to the leaders become more likely despite increases in inequality with the threatening group.

Chapter two explores how the change in electoral legislation in 1936, regarding the characteristics of voters in terms of income and literacy, affects fiscal policy in electoral periods. The results suggest that before the electoral legislature was reformed in 1936, total expenditure increased in pre-electoral periods and this increase was due mainly to higher infrastructure spending. This pattern changed after 1936, since when total expenditure has increased only in the election year. This pattern was driven by higher social expenditure. Another important conclusion is in terms of the timing and the size of the political budget cycles. In the first period, the

expenditure cycle existed only in pre-electoral years (one year and two years before elections) while in the second period, this cycle only existed during election years. The magnitude of the coefficients also indicates that the cycle was stronger in the first period than in the second one. This could be explained, in part, by the greater flexibility that the government had to control and manipulate the budget and to the existence of fewer government monitoring agencies. The chapter also has some findings in terms of the revenues cycle. Total revenues increased before 1936 in pre-electoral periods, due to an increase in indirect taxes, but this trend disappears after 1936. Hence, the higher expenditure in electoral year in the second period must have been financed with debt. These findings are consistent with the literature.

Finally, chapter 3 studies how peasants' land dispossessions during the export boom (1914-1946) affected subsequent guerrilla movement organization and consolidation by using floods as an instrument for land dispossessions, conditional on municipality-pair fixed effects and geographical controls. Instrumental variables estimates indicate that municipalities that had land dispossessions experienced substantially more FARC rebel activities in the years following the civil war La Violencia (1974-1985). In this chapter, we propose two mechanisms through which old land dispossessions are likely to determine the origin of guerrilla groups. On the one hand, the military feasibility that is viable during civil war periods when peasants groups had access to weapons and military equipment. On the other hand, the ideological political of rebellion developed by the guidance and support of the revolutionary parties that may trigger peasants grievances, generate political awareness among the peasantry and foster the formation of rebel groups. Using a mediation analysis, we decompose the total effect of land dispossessions on the conflict into the direct and indirect effect. Results indicate that a large part of this effect runs through the communist support and La Violencia mechanism.

Table 1: Franchise extension, Peasant movements, Land reforms and Guerrilla movements.

	Communist Party foundation	Franchise extension	Land reform I	Peasant Movement foundation	Land reform II	Guerrilla movements
Argentina	1918	1916				1970(ERP)
Ecuador	1925	1924		1968	1965-1975	
Peru	1928	1931		1960	1964-1968	1964(APRA)
Brazil	1922	1932		1960	1962-1964	
Chile	1922	1934		1967	1962-1967	
Colombia	1930	1936	1936	1967	1961-1971	1964 (FARC/ELN)
Venezuela	1931	1945	1945-1948	1959	1958-1968	1963(FALN)
Costa Rica	1931	1949		1969	1961	
Bolivia	1950	1952	1953	1952	1953	
Uruguay	1920	1927				
Mexico	1919	1947	1934			
Panama	1930	1941		1961	1962	
El Salvador	1930	1950		1961		
Nicaragua	1967	1955			1979	1961(FSLN)
Guatemala	1922	1946		1950	1952-1954	1962(FAR)
Dominican Republic	1939	1942		1962	1962	
Cuba	1925	1940				

Chile: Confederacion Triunfo.

Colombia: Asociacion Nacional de Usuarios Campesinos (ANUC).

Venezuela: National Peasant Federation.

Costa Rica: Federacion Nacional Unitaria de trabajadores agricolas y de campesinos.

Panama: 1 Liga campesina en Carrizal (congreso campesino).

Guatemala: National confederation of Guatemala.

Ecuador: Federacion Nacional de Organizacion Campesina (FENAC).

Peru: Rural workers federation of Peru (FENCAP).

Brazil: Parana peasant league and National Confederation of Agricultural workers.

El Salvador: Organizacion Democratica Nacionalista (ORDEN).

Table 2: Legal Status and Legal Entitlement

Year	Municipal Peasant Associations	
	Legal Status	Legal Entitlement
1961	0	0
1962	0	0
1963	0	0
1964	0	0
1965	0	0
1966	0	0
1967	0	0
1968	48	0
1969	225	1
1970	246	408
1971	95	123
1972	30	20
1973	0	0
1974	0	0
1975	0	0
Total	644	552

Notes: The full sample includes 1088 municipalities and the data includes the years 1957-1975.

Table 3: Descriptive Statistics

Variable	Obs	Mean	Std.Dev
<i>A. Public Finance (in real terms and logs)</i>			
Total Revenue	16994	13.5	1.61
Land Tax revenue	16870	12.2	1.59
Sales Tax revenue	16868	10.7	1.93
Capital revenue	13428	11.0	2.24
Central Transfers	16486	11.2	1.88
Total Expenditure	16774	12.8	1.57
Social Expenditure	15697	10.3	2.01
Tax Collection Expenditure	16302	10.4	1.92
Bureaucratic Expenditure	16493	11.7	1.69
Economic Promotion Expenditure	10334	11.2	1.92
Debt	2582	11.2	2.19
<i>B. Peasant Municipal Associations</i>			
Legal Status (dummy)	1088	0.62	0.49
Legal Entitlement (dummy)	1088	0.54	0.42
<i>C. Public Land allocated to Peasants</i>			
Public Lands (Plots)	20596	5.16	25.34
Public Lands Has (in thousands and logs)	20596	0.02	0.14
<i>D. Co-optation Variables</i>			
Peasant Leaders (dummy)	1094	0.20	0.40
Peasant Leaders	1094	0.55	1.27
Land Share- Peasant Leaders	1094	0.02	0.07
<i>E. Other Variables</i>			
Income Shocks	20520	9.16	9.02
Vote Share Leftist Parties (1946)	1085	0.30	0.30
Peasant Campaign Budget (in thousands, real terms)	19	30342	44365
Peasant Leagues (1914-1947)	1090	0.76	6.25
Union Members (1914-1947)	1090	152.4	1449.2
Peasant Union Members (1914-1947)	1090	13.75	78.5
Slaves Palenques (1650-1851, dummy)	1097	0.03	0.21
Indigenous Resguardos (1531-1851, dummy)	1097	0.18	0.38
Daily Wage (1968, log)	877	2.71	0.30
Tractors (1960)	871	18.33	93.88
No land owners (% , number, 1960)	808	0.27	0.17
No land owners (% , area, 1960)	807	0.15	0.14
<i>F. Threat of Revolution</i>			
La Violencia (dummy)	1047	0.18	0.38
Land Invasions (1971-1978)	1095	0.99	3.22
Rebel Activity (1974-1985)	1046	1.28	12.36
Peasant Protests (1974-1995)	1094	2.75	3.97

Table 4: The Effect of Legal Entitlement on Broad redistribution 1957-1975 (in log).

	Land Tax Revenues			Central transfers			Social expenditure		
	Restricted Sample (1)	Restricted Sample (2)	Full Sample (3)	Restricted Sample (4)	Restricted Sample (5)	Full Sample (6)	Restricted Sample (7)	Restricted Sample (8)	Full Sample (9)
<i>Dependent Variable Mean</i>	12.0	12.0	12.4	11.1	11.1	11.2	10.4	10.4	10.3
Legal Entitlement.	-0.136*** (0.054)	-0.233*** (0.036)	-0.241*** (0.047)	0.083 (0.093)	0.008 (0.063)	0.203* (0.062)	-0.151** (0.097)	-0.198* (0.116)	-0.196*** (0.059)
Income Shock	-0.004 (0.004)	0.002 (0.003)	0.026*** (0.007)	-0.018** (0.009)	-0.015* (0.008)	-0.009 (0.010)	-0.002 (0.012)	-0.014* (0.008)	-0.014 (0.011)
Observations	11.368	11.368	17.866	11.074	11.074	16.467	10.738	10.738	15.598
Clusters	625	625	1080	621	621	924	616	616	909
Municip. FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
State-time trend	✓		✓	✓		✓	✓		✓
Municip-time trend		✓			✓			✓	
Controls	✓		✓	✓		✓	✓		✓

Notes: All regressions control for year and municipality fixed effects. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. The restricted sample is a municipality-level panel of 644 municipalities for the years 1957-1975. The number of observations vary because of missing values in the dependent variable. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had State support (1967-1972) and control group is just receiving legal status during the same period in the restricted sample. ***p<0.01, **p<0.05, *p<0.1.

Table 5: Legal Entitlement and land tax base, 1957-1972

	Rural		Rural and Urban	
	Number Taxable Plots (1)	Cadastral Value (2)	Number Taxable Plots (3)	Cadastral Value (4)
Legal Entitlement	0.172*** (0.031)	0.143*** (0.049)	0.103*** (0.024)	0.133*** (0.048)
Income shock	0.001 (0.001)	0.000 (0.002)	-0.000 (0.001)	0.002 (0.002)
Observations	6676	6676	6669	6669
Clusters	595	595	593	593
Municip. FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓
Controls	✓	✓	✓	✓

Notes: All regressions control for year, municipality and region-year fixed effects. Robust standard errors, clustered at municipality level, are presented in parentheses. Dependent Variables: log of the number of taxable plots in both rural and urban areas and log of total payable tax in 1957 COP millions.***p<0.01, **p<0.05, *p<0.1.

Table 6: The Effect of Legal Entitlement on Targeted redistribution 1957-1975
(in log).

	Bureaucratic Expenditure			Public Land Allocations		
	Restricted Sample (1)	Restricted Sample (2)	Full Sample (3)	Restricted Sample (4)	Restricted Sample (5)	Full Sample (6)
<i>Dependent Variable Mean</i>	11.4	11.4	11.7	0.04	0.04	0.02
Legal Entitlement	0.252*** (0.058)	0.376*** (0.067)	0.173*** (0.037)	0.013*** (0.005)	0.009* (0.005)	0.013*** (0.003)
Income shock	-0.000 (0.006)	-0.004 (0.004)	-0.002 (0.005)	-0.000 (0.000)	-0.000 (0.000)	-0.001*** (0.000)
Observations	11.242	11.242	16.493	12.216	12.216	20.520
Clusters	620	620	918	644	644	1080
Municip. FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
State-time trend	✓		✓	✓		✓
Municip-time trend		✓			✓	
Controls	✓		✓	✓		✓

Notes: All regressions control for year and municipality fixed effects. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. The restricted sample is a municipality-level panel of 644 municipalities for the years 1957-1975. The number of observations vary because of missing values in the dependent variable. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had State support (1968-1972) and control group is just receiving legal status during the same period. ***p<0.01, **p<0.05, *p<0.1.

Table 7: Legal Entitlement and the number of municipal employees, 1957-1972

	General Direction (1)	Judicial System (2)	Tax Collection (3)	Education and Health (4)	Total (5)
Municipalities	0.084*	-0.041*	-0.052**	-0.000	-0.018
Legal entitlement (%)	(0.051)	(0.024)	(0.025)	(0.072)	(0.032)
Observations	380	380	364	380	364
Clusters	32	32	32	32	32
State Fixed Effect	✓	✓	✓	✓	✓
Year Fixed Effect	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

Notes: Dependent variable: number of employees in each section of the municipality (in logs). Explanatory variable: percentage of municipalities that have legal entitlement in a state relative to the municipalities with legal status. All regressions control for year and state fixed effects. Robust standard errors, clustered at state level, are presented in parentheses. The sample is a state-level panel of 32 states for the years 1957-1972. ***p<0.01, **p<0.05, *p<0.1.

Table 8: Matching names of peasant leaders and peasant beneficiaries of the agrarian reform, 1957-1972 (1088 municipalities)

Allocated land to peasants	Association Legal Entitlement	Peasant leader beneficiaries	Number of Municipalities
x			462 (=42%)
x	x		295 (=63%)
x	x	x	210 (=71%)

Table 9: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution (restricted sample).

	Broad Redistribution (in log)			Targeted Redistribution (in log)	
	Land Tax Revenues	Central Transfers	Social Expenditure	Bureaucratic Expenditure	Public Land allocations
	(1)	(2)	(3)	(4)	(5)
Legal Entitlement (Baseline)	-0.114** (0.052)	0.096 (0.099)	-0.195** (0.095)	0.255*** (0.056)	0.014*** (0.005)
A: Communist Support (dummy around the median)					
Legal Entitlement	-0.073 (0.060)	-0.006 (0.102)	-0.130 (0.112)	0.135*** (0.067)	0.017*** (0.006)
Legal Entitlement * Communist	-0.075* (0.045)	0.123 (0.093)	-0.103 (0.085)	0.191** (0.054)	0.005 (0.006)
Income shock	0.004 (0.005)	-0.020* (0.010)	-0.015* (0.008)	-0.000 (0.007)	-0.000 (0.000)
Observations	11.387	11.074	10.738	11.242	12.216
Clusters	625	620	616	620	643
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
B: "La Violencia" (dummy)					
Legal Entitlement	-0.068 (0.050)	0.285*** (0.087)	-0.185*** (0.067)	0.240*** (0.059)	0.008* (0.005)
Legal Entitlement * "La Violencia"	-0.137*** (0.052)	-0.022 (0.101)	-0.271*** (0.061)	0.098* (0.058)	0.023** (0.010)
Income shock	0.005 (0.005)	-0.017* (0.010)	-0.020** (0.008)	-0.010 (0.007)	-0.000 (0.000)
Observations	11.348	11.019	10.718	11.242	12.102
Clusters	622	616	613	620	637
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

All regressions control for year and municipality fixed effects and state-time trends. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. The sample is a municipality-level panel for the years 1957-1975. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had state support (1967-1972) and the interaction of this variable with Communist support in 1946 or the exposure to the civil war "La Violencia". ***p<0.01, **p<0.05, *p<0.1.

Table 10: Leaders co-opted

OLS		
	Leaders Co-opted (1967-1972)	
	Number (1)	Land Share (2)
<i>A. Geographical Variables</i>		
Rainfall (log)	-0.065 (0.169)	0.010 (0.012)
Altitude (log)	0.031 (0.083)	0.003 (0.006)
Temperature	0.026 (0.021)	0.000 (0.001)
Area(log)	0.351 (0.076)	-0.011* (0.006)
Distance to Capital	0.141* (0.084)	-0.000 (0.006)
<i>B. Economic and Social Variables</i>		
Population (1970) (in log)	-0.120 (0.116)	0.005 (0.008)
No owners Land (% ,1960)	0.504 (0.364)	-0.001 (0.026)
Tractors (1960)	-0.000 (0.000)	0.000 (0.000)
Railroads (1960)	0.000 (0.000)	0.000 (0.000)
Irrigated lands (1960)	-0.000 (0.000)	-0.000 (0.000)
Daily Wage (log, 1968)	0.626*** (0.229)	0.001 (0.001)
<i>C. Historical and Political Variables</i>		
Peasant Leagues (1945)	-0.099* (0.060)	0.002 (0.004)
"La Violencia" (dummy)	0.791*** (0.164)	0.019* (0.011)
Left-wing support (% , elections 1946)	0.547*** (0.214)	0.036** (0.015)
Land Conflicts (1878-1964)	0.099** (0.041)	0.003 (0.003)
Share votes winner elections (1966)	-0.312 (0.320)	-0.000 (0.023)
Observations	716	716
R-squared	0.221	0.056

Notes: The dependent variable is either the number of peasant leaders co-opted or the share of land these leaders received during 1967-1972. The variables are in levels unless otherwise stated. The variable "Land Reform (1930-1960)" measures the number of plots given to peasants during these years. The variable "No owners Land" is the share of farmers that work on a land that is not owned by themselves out of the total number of farmers (tenants, sharecroppers, settlers, agricultural workers). The variable "Peasant leagues" measures the number of legal peasant leagues between 1918-1945. The variable "Tractors" is the number of machines and agricultural workers in a municipality. The variable d_ "La Violencia" takes value 1 if that municipality was affected by this civil war and 0 otherwise. The variable "Left-wing support" is the share of votes that the left-wing candidate obtained during the presidential elections in 1946 and the variable "Share votes winner elections" is the share of votes that the winner obtained in the presidential elections in 1966". Robust standard errors in brackets.***p<0.01, **p<0.05, *p<0.1.

Table 11: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution.

	Broad Redistribution (in log)			Targeted Redistribution (in log)	
	Land Tax Revenues (1)	Central Transfers (2)	Social Expenditure (3)	Bureaucratic Expenditure (4)	Public Land allocations (5)
Legal Entitlement (Baseline)	-0.114** (0.052)	0.096 (0.099)	-0.195** (0.095)	0.255*** (0.056)	0.014*** (0.005)
A: Peasant Leagues (Number of peasant leagues legally recognized, 1918-1947)					
Legal Entitlement	-0.111* (0.059)	0.109 (0.101)	-0.186* (0.109)	0.238*** (0.061)	0.013*** (0.005)
Legal Entitlement * Peasant Leagues	-0.043 (0.038)	-0.139** (0.071)	-0.162** (0.073)	0.062 (0.044)	0.002 (0.007)
Income shock	0.004 (0.005)	-0.021** (0.010)	-0.015 (0.013)	0.009 (0.007)	-0.000 (0.000)
Observations	11.387	11.074	10.738	11.242	12.216
Clusters	625	620	616	620	643
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
B: Colonial Collective Organizations (Slave palenques and Indigenous Resguardos, 1550-1851)					
Legal Entitlement	-0.124* (0.058)	0.076 (0.102)	-0.237*** (0.068)	0.260*** (0.061)	0.011*** (0.005)
Legal Entitlement * Colonial Collective Organization	-0.011 (0.048)	-0.062 (0.097)	-0.037 (0.055)	0.008 (0.052)	0.005 (0.007)
Income shock	0.004 (0.005)	-0.021** (0.010)	-0.014* (0.008)	0.009 (0.007)	-0.000 (0.000)
Observations	11.387	11.074	10.738	11.242	12.216
Clusters	625	620	616	620	643
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

All regressions control for year and municipality fixed effects and state-time trends. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. The sample is a municipality-level panel for the years 1957-1975. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had state support (1967-1972). The variable *peasantleagues* is the number of peasant leagues that were legally recognized between 1918-1947. The variable *ColonialCollectiveOrganization* takes value 1 if the municipality had a slave palenque or an indigenous resguardo between 1550-1851 and 0 otherwise. ***p<0.01, **p<0.05, *p<0.1.

Table 12: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution.

	Broad Redistribution(in log)			Targeted Redistribution (in log)	
	Land Tax Revenues	Central Transfers	Social Expenditure	Bureaucratic Expenditure	Public Land allocations
	(1)	(2)	(3)	(4)	(5)
Legal Entitlement (Baseline)	-0.114** (0.052)	0.096 (0.099)	-0.195** (0.095)	0.255*** (0.056)	0.014*** (0.005)
A: Wages (dummy around the median, log, 1968)					
Legal Entitlement	-0.099* (0.059)	-0.024 (0.109)	-0.269*** (0.104)	0.222*** (0.064)	0.015*** (0.006)
Legal Entitlement *wages (1968)	-0.022 (0.044)	0.167* (0.095)	0.085 (0.086)	0.075 (0.054)	0.002 (0.008)
Income shock	-0.003 (0.004)	-0.017* (0.009)	-0.000 (0.012)	-0.003 (0.006)	-0.000 (0.000)
Observations	11.110	10.834	10.452	10.880	11.361
Clusters	598	595	591	593	598
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
B: Tractors (dummy around the median, 1960)					
Legal Entitlement	-0.096 (0.080)	0.073 (0.130)	-0.163 (0.135)	0.278*** (0.061)	0.030*** (0.004)
Legal Entitlement *Tractors	-0.014 (0.069)	0.020 (0.115)	0.011 (0.113)	0.013 (0.076)	-0.019** (0.008)
Income shock	0.006 (0.005)	-0.023** (0.010)	-0.014 (0.007)	0.009 (0.007)	-0.000 (0.000)
Observations	10.976	10.695	10.504	10.905	11.285
Clusters	593	590	591	593	594
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

All regressions control for year and municipality fixed effects and state-time trends. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. Panel B only includes as a control Population (1964) interacted with a time trend. The sample is a municipality-level panel for the years 1957-1975. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had state support (1967-1972). The dummy variable *wages* takes value 1 if the log daily wage in 1968 is above the median and 0 otherwise. The dummy variable *tractors* takes value 1 if the number of tractors in 1960 is above the median and 0 otherwise. ***p<0.01, **p<0.05, *p<0.1.

Table 13: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution.

	Broad Redistribution(in log)			Targeted Redistribution (in log)	
	Land Tax	Central	Social	Bureaucratic	Public Land
	Revenues	Transfers	Expenditure	Expenditure	allocations
	(1)	(2)	(3)	(4)	(5)
Legal Entitlement (Baseline)	-0.114** (0.052)	0.096 (0.099)	-0.195** (0.095)	0.255*** (0.056)	0.014*** (0.005)
A: No owners (dummy number of properties around median, 1960)					
Legal Entitlement	-0.040 (0.058)	0.000 (0.099)	-0.160 (0.114)	0.362*** (0.063)	0.019*** (0.006)
Legal Entitlement * % no owners	-0.063 (0.040)	0.085 (0.084)	-0.017 (0.087)	-0.128*** (0.052)	-0.017** (0.009)
Income shock	0.002 (0.004)	-0.014 (0.009)	-0.002 (0.012)	0.005 (0.006)	-0.000 (0.000)
Observations	10.390	10.165	10.041	10.355	10.449
Clusters	550	549	550	550	550
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
B: No owners (dummy area around median, 1960)					
Legal Entitlement	-0.076 (0.055)	0.050 (0.101)	-0.174 (0.111)	0.299*** (0.061)	0.007 (0.005)
Legal Entitlement * % no owners	0.005 (0.040)	-0.011 (0.085)	0.009 (0.089)	-0.007 (0.051)	0.006 (0.007)
Income shock	-0.002 (0.004)	-0.015* (0.009)	-0.002 (0.012)	-0.004 (0.006)	-0.000 (0.000)
Observations	10.390	10.165	10.041	10.335	10.449
Clusters	550	549	550	550	550
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

All regressions control for year and municipality fixed effects and state-time trends. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. The sample is a municipality-level panel for the years 1957-1975. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had state support (1967-1972). In panel A, the dummy variable *noowner* takes value 1 if the share of the total number of properties that are worked by no land owners in 1960 is above the median and 0 otherwise. In panel B, the dummy variable *noowner* takes value 1 if the share of the total area of properties that are worked by no land owners in 1960 is above the median and 0 otherwise. ***p<0.01, **p<0.05, *p<0.1.

Table 14: OLS: Peasant Empowerment, co-optation (1967-1972) and Revolutionary activities (1972-1985).

	Land invasions			FARC Rebel activity			Peasant Protests		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Legal Entitlement	0.767* (0.045)	0.810** (0.392)	0.761** (0.392)	0.387 (0.438)	0.694 (0.494)	0.608 (0.350)	0.141 (0.464)	0.069 (0.471)	-0.081 (0.466)
Peasant leaders co-opted (dummy)	-1.066*** (0.359)			-1.625*** (0.372)			-1.062*** (0.381)		
Peasant leaders co-opted (number)		-0.291*** (0.074)			-0.418** (0.137)			-0.272*** (0.114)	
Share land peasant leaders			-2.868*** (0.859)			-3.726*** (1.979)			-2.384 (1.648)
Peasant Leagues (1947)	-0.081 (0.161)	-0.100 (0.161)	-0.051 (0.162)	0.688*** (0.167)	0.676*** (0.168)	0.731*** (0.169)	-0.172 (0.171)	-0.228 (0.178)	-0.200 (0.178)
Observations	591	591	591	590	590	590	591	591	591
State Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓

All regressions control for state fixed effects, geographical variables (area, distance to capital, altitude, precipitation), population (1964), Communist Support (1946), peasant leagues (1931-1947) and land conflicts (1878-1964). The variable land invasions is measured as the number of land invasions between 1972-1978 and FARC rebel actions is measured as the number of rebel actions executed between 1974-1985. The variable legal entitlement is a dummy that takes value 1 if municipality got legal entitlement between 1967-1972 and 0 otherwise. The variable peasant leaders co-opted takes value between 0 and 5. Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 15: Negative Binomial: Peasant Empowerment, co-optation (1967-1972) and Revolutionary activities (1972-1985).

	Land invasions			FARC Rebel activity			Peasant Protests		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Legal Entitlement	0.227 (0.300)	0.327 (0.285)	0.120 (0.299)	0.018 (0.289)	0.025 (0.290)	0.066 (0.290)	0.197* (0.101)	0.182* (0.100)	0.163 (0.127)
Peasant leaders co-opted (dummy)	-0.534*** (0.218)			-0.640*** (0.261)			-0.136 (0.107)		
Peasant leaders co-opted (number)		-0.385*** (0.076)			-0.145** (0.077)			-0.028 (0.031)	
Share land peasant leaders			-3.295*** (1.754)			-1.323 (1.461)			-0.305 (0.505)
Peasant Leagues (1947)	0.075 (0.079)	0.057 (0.078)	0.086 (0.080)	0.423*** (0.085)	0.427*** (0.085)	0.431*** (0.081)	0.095** (0.042)	0.096** (0.042)	0.099*** (0.041)
Observations	591	591	591	590	590	590	591	591	591
State Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓

All regressions control for state fixed effects, geographical variables (area, distance to capital, altitude, precipitation), population (1964), Communist Support (1946), peasant leagues (1931-1947) and land conflicts (1878-1964). The variable land invasions is measured as the number of land invasions between 1972-1978 and FARC rebel actions is measured as the number of rebel actions executed between 1974-1985. The variable legal entitlement is a dummy that takes value 1 if municipality got legal entitlement between 1967-1972 and 0 otherwise. The variable peasant leaders co-opted takes value between 0 and 5. Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 16: Negative Binomial-IRR: Peasant Empowerment, co-optation (1967-1972) and Revolutionary activities (1972-1985).

	Land invasions			FARC Rebel activity			Peasant Protests		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Legal Entitlement	1.256 (0.76)	1.387 (1.15)	1.159 (0.50)	0.981 (0.06)	0.974 (0.09)	0.935 (0.23)	1.236* (1.66)	1.200* (1.75)	1.177 (1.28)
Peasant leaders co-opted (dummy)	0.586*** (-2.48)			0.526*** (-2.45)			0.845 (-1.58)		
Peasant leaders co-opted (number)		0.683*** (-4.99)			0.864** (-1.86)			0.9718 (-0.91)	
Share land peasant leaders			0.035*** (-2.02)			0.266 (-0.91)			0.736 (-0.60)
Peasant Leagues (1947)	1.078 (0.085)	1.058 (0.082)	1.090 (0.087)	1.527*** (0.131)	1.533*** (0.130)	1.539*** (0.125)	1.073** (2.19)	1.101** (2.28)	1.104*** (2.36)
Observations	591	591	591	590	590	590	591	591	591
State Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓

Z-statistics in parenthesis. All regressions control for state fixed effects, geographical variables (area, distance to capital, altitude, precipitation), population (1964), Communist Support (1946), peasant leagues (1931-1947) and land conflicts (1878-1964). The variable land invasions is measured as the number of land invasions between 1972-1978 and FARC rebel actions is measured as the number of rebel actions executed between 1974-1985. The variable legal entitlement is a dummy that takes value 1 if municipality got legal entitlement between 1967-1972 and 0 otherwise. The variable peasant leaders co-opted takes value between 0 and 5. ***p<0.01, **p<0.05, *p<0.1.

Table 17: Total Expenditure.

	One and two Years before Elections		One year before Elections		Election Year		One year after Elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent Variable: Total Expenditure in real terms- β_4 coefficient - Equation 1.							
1830-1936	1.360e+06*	1.637e+06**	2.392e+06**	2.453e+06**	-1372000*	-1.367e+06**	619,072	614,679
	(0.079)	(0.049)	(0.036)	(0.040)	(0.036)	(0.039)	(0.392)	(0.394)
1937-2000	-1.007e+07	-1.005e+07	-9.842e+06	-9.800e+06	1.64e+07*	1.70e+07*	-7.389e+06	-7.659e+06
	(0.177)	(0.196)	(0.163)	(0.181)	(0.083)	(0.079)	(0.339)	(0.333)
	Dependent Variable: Total Expenditure in log- α_4 coefficient - Equation 2.							
1830-2000	-0.215**	-0.215**	-0.282***	-0.275**	0.183*	0.195*	-0.087	-0.089
	(0.028)	(0.027)	(0.008)	(0.012)	(0.095)	(0.077)	(0.437)	(0.427)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Notes: The table reports OLS estimates and p-values of equation 1 and 2. Each cell is a different regression. In a) is reported β_4 coefficient and the dependent variable is Total expenditure in real terms. In b) is reported α_4 coefficient and the dependent variable is Total Expenditure in log. Columns (1) to (8) indicates the timing of the variable " $election_{t+i}$ " where $i \in -2, -1, 0, 1$. Columns (1) and (2) reports the results when $i = -2$, columns (3) and (4) when $i = -1$, columns (5) and (6) when $i = 0$ and columns (7) and (8) when $i = 1$. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the " $trend$ " and the " $cyclicalcomponent$ ". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable " war " takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise; the variable " $coup$ " takes the value 1 in the years where there was a coup and 0 otherwise; the dummy " d_{1910} " takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable " d_{1957} " takes the value 1 in 1957 and 0 otherwise and measure the year that the women's suffrage was implemented. P-values are reported for the respective tests. *** Denotes significance at 1% level. ** Denotes significance at 5% level. * Denotes significance at 10% level.

Table 18: Infrastructure and Social Expenditure.

	One and two Years before Elections		One year before Elections		Election Year		One year after Elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Infrastructure Expenditure								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	786339*** (0.000)	1081e+06*** (0.000)	849408*** (0.003)	925953*** (0.004)	-652603** (0.025)	-591673** (0.027)	44191 (0.851)	119712 (0.630)
1937-2000	2044e+06 (0.192)	1664e+06 (0.275)	2643e+06 (0.124)	2381e+06 (0.160)	-2192e+06 (0.270)	-2275e+06 (0.254)	-1151e+06 (0.612)	-47016 (0.982)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	0.047*** (0.007)	0.053** (0.018)	0.039* (0.054)	0.038* (0.092)	-0.025 (0.236)	-0.025 (0.210)	0.003 (0.844)	0.005 (0.780)
1937-2000	0.020 (0.103)	0.020 (0.110)	-0.002 (0.809)	-0.001 (0.865)	-0.017 (0.137)	-0.016 (0.183)	-0.004 (0.745)	-0.002 (0.887)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.584*** (0.000)	-0.568*** (0.000)	-0.697*** (0.000)	-0.680*** (0.000)	0.313 (0.101)	0.369 (0.159)	-0.002 (0.988)	0.060 (0.754)
Dependent Variable: Total Expenditure in percentage- α_4 coefficient - Equation 2.								
1830-2000	-0.055** (0.005)	-0.057** (0.009)	-0.052** (0.018)	-0.051** (0.027)	0.017 (0.466)	0.019 (0.399)	0.020 (0.291)	0.024 (0.216)
B. Social Expenditure								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	68477 (0.241)	57865 (0.300)	93877 (0.148)	79355 (0.262)	-86877 (0.100)	-90439 (0.136)	53058 (0.133)	24812 (0.530)
1937-2000	-4991e+06* (0.080)	-5786e+06* (0.051)	-203050 (0.933)	-807854 (0.738)	9527e+06** (0.018)	8473e+06** (0.026)	-859472 (0.794)	-526477 (0.861)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	0.003 (0.521)	0.000 (0.925)	-0.004 (0.322)	-0.006 (0.155)	-0.004 (0.369)	-0.004 (0.389)	0.002 (0.589)	0.002 (0.674)
1937-2000	0.000 (0.980)	-0.002 (0.817)	0.005 (0.489)	0.004 (0.636)	0.025 (0.182)	0.023 (0.241)	-0.006 (0.532)	-0.002 (0.790)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.382*** (0.005)	-0.298** (0.037)	-0.262 (0.130)	-0.255 (0.154)	0.436*** (0.002)	0.414*** (0.003)	-0.217 (0.114)	-0.176 (0.167)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	-0.007 (0.674)	-0.004 (0.827)	0.012 (0.547)	0.015 (0.465)	0.031* (0.052)	0.029* (0.068)	-0.017 (0.363)	-0.014 (0.439)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Notes: The table reports OLS estimates and p-values of equation 1 and 2. Each cell is a different regression. In a) is reported β_4 coefficient and the dependent variable is Total expenditure in real terms. In b) is reported α_4 coefficient and the dependent variable is Total Expenditure in log. Columns (1) to (8) indicates the timing of the variable " $election_{t+i}$ " where $i \in -2, -1, 0, 1$. Columns (1) and (2) reports the results when $i = -2$, columns (3) and (4) when $i = -1$, columns (5) and (6) when $i = 0$ and columns (7) and (8) when $i = 1$. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "*trend*" and the "*cyclicalcomponent*". The estimation with controls also include the variable "*hegemony*" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "*war*" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "*constitution*" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "*coup*" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy " d_{1910} " takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable " d_{1957} " takes the value 1 in 1957 and 0 otherwise and measure the year that the women's suffrage was implemented. P-values are reported for the respective tests. *** Denotes significance at 1% level. ** Denotes significance at 5% level. * Denotes significance at 10% level.

Table 19: Other Expenditures: Finance and Institutional Expenditure.

	One and two Years before Elections		One year before Elections		Election Year		One year after Elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Finance Expenditure								
	Dependent Variable in real terms- β_4 coefficient - Equation 1.							
1830-1936	42700 (0.730)	83771 (0.482)	6928 (0.949)	12386 (0.910)	-54310 (0.738)	-47484 (0.790)	-91434 (0.527)	-90769 (0.557)
1937-2000	-2.614e+06 (0.568)	-508160 (0.8965)	-1.039e+07 (0.152)	-9.143e+06 (0.202)	93841 (0.974)	951089 (0.736)	1929327 (0.765)	-1.621e+06 (0.754)
	Dependent Variable in percentage- β_4 coefficient - Equation 1.							
1830-1936	-0.009 (0.509)	-0.008 (0.599)	-0.025 (0.142)	-0.023 (0.177)	0.003 (0.857)	0.000 (0.972)	-0.016 (0.297)	-0.014 (0.359)
1937-2000	-0.023 (0.156)	-0.021 (0.223)	-0.025 (0.239)	-0.024 (0.283)	-0.015 (0.137)	-0.013 (0.188)	0.013 (0.478)	0.006 (0.742)
	Dependent Variable in log- α_4 coefficient - Equation 2.							
1830-2000	-0.063 (0.662)	-0.071 (0.622)	-0.081 (0.582)	-0.074 (0.614)	0.061 (0.677)	0.091 (0.547)	-0.015 (0.935)	-0.026 (0.887)
	Dependent Variable in percentage- α_4 coefficient - Equation 2.							
1830-2000	0.020 (0.304)	0.017 (0.389)	0.023 (0.258)	0.022 (0.289)	-0.009 (0.653)	-0.006 (0.772)	0.018 (0.422)	0.014 (0.507)
B. Institutional Expenditure								
	Dependent Variable in real terms- β_4 coefficient - Equation 1.							
1830-1936	62442 (0.780)	92133 (0.714)	327465 (0.408)	337281 (0.412)	-347450** (0.042)	-288100* (0.068)	-65174 (0.606)	-54561 (0.670)
1937-2000	-3.127e+06 (0.505)	-3.130e+06 (0.532)	-1.963e+06 (0.593)	-1.991e+06 (0.602)	1.054e+07 (0.235)	1.076e+07 (0.242)	-3.082e+06 (0.400)	-3.084e+06 (0.431)
	Dependent Variable in percentage- β_4 coefficient - Equation 1.							
1830-1936	-0.010 (0.442)	-0.008 (0.542)	-0.000 (0.962)	-0.000 (0.990)	-0.022 (0.134)	-0.016 (0.261)	-0.001 (0.900)	0.001 (0.933)
1937-2000	-2.84e+05 (0.998)	-0.000 (0.929)	0.002 (0.778)	0.001 (0.850)	0.016 (0.294)	0.016 (0.331)	-0.003 (0.693)	-0.005 (0.564)
	Dependent Variable in log- α_4 coefficient - Equation 2.							
1830-2000	-0.117 (0.345)	-0.123 (0.303)	-0.257** (0.032)	-0.257** (0.031)	0.444*** (0.004)	0.456*** (0.003)	-0.184 (0.124)	-0.191 (0.114)
	Dependent Variable in percentage- α_4 coefficient - Equation 2.							
1830-2000	0.004 (0.800)	0.000 (0.958)	-0.004 (0.765)	-0.007 (0.636)	0.049** (0.038)	0.041* (0.086)	-0.013 (0.459)	-0.013 (0.447)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p-values of equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. The table presents five panels. Panel A) shows results when dependent variable is Finance Expenditure, panel B) when is Institutional Expenditure, panel C) when is Defense Expenditure, panel D) when is Debt Expenditure, panel E) when is Deficit. In each panel: a) reports β_1 coefficient when the dependent variable is in real terms. b) reports β_4 coefficient when the dependent variable is in percentage. In c) reports α_4 when the dependent variable is in log and in d) reports α_4 when the dependent variable is in percentage. Columns (2) to (9) indicates the timing of the variable "election_{t+i}" where i = -2, -1, 0, 1. Columns (2) and (3) reports the results when i = -2, columns (4) and (5) when i = -1, columns (6) and (7) when i = 0 and columns (8) and (9) when i = 1. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes significance at 1% level. ** Denotes significance at 5% level. * Denotes significance at 10% level.

Table 20: Other Expenditures: Defence and Debt Expenditure and Deficit.

	One and two Years before Elections		One year before Elections		Election Year		One year after Elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
C. Defence Expenditure								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	68477 (0.241)	57865 (0.300)	93877 (0.148)	79355 (0.262)	-86877 (0.100)	-90439.5 (0.136)	53058 (0.133)	24812 (0.530)
1937-2000	-464221 (0.704)	-540081 (0.671)	-1.011e+06 (0.546)	-1.107e+06 (0.520)	-1.595e+06 (0.134)	-1.590e+06 (0.164)	1.864e+06 (0.140)	2.485e+06* (0.061)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	-0.027 (0.291)	-0.012 (0.614)	0.024 (0.410)	0.035 (0.223)	-0.010 (0.678)	-0.011 (0.672)	0.018 (0.524)	0.029 (0.265)
1937-2000	-0.000 (0.972)	0.002 (0.826)	-0.009 (0.351)	-0.007 (0.461)	-0.019** (0.012)	-0.018** (0.014)	0.018** (0.049)	0.021** (0.017)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.113 (0.481)	-0.126 (0.410)	-0.391** (0.033)	-0.393** (0.025)	0.067 (0.656)	0.094 (0.533)	-0.000 (0.997)	-0.038 (0.830)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	0.029 (0.262)	0.004 (0.341)	-0.026 (0.358)	-0.031 (0.244)	-0.012 (0.636)	-0.008 (0.732)	-0.004 (0.882)	-0.013 (0.631)
B. Debt Expenditure								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	147296 (0.337)	123245 (0.363)	105878 (0.454)	83549 (0.550)	185081 (0.340)	127748 (0.462)	-14657 (0.926)	-72184 (0.640)
1937-2000	1.031e+06 (0.597)	1.042e+06 (0.609)	71254 (0.970)	56988 (0.977)	-881411 (0.639)	-881593 (0.651)	-2.799e+06 (0.147)	-2.958e+06 (0.139)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	0.003 (0.862)	-0.004 (0.832)	-0.025 (0.152)	-0.030* (0.099)	0.040 (0.105)	0.036 (0.111)	-0.018 (0.354)	-0.027 (0.189)
1937-2000	0.001 (0.873)	0.001 (0.910)	0.005 (0.637)	0.005 (0.656)	-0.008 (0.495)	-0.009 (0.465)	-0.009 (0.317)	-0.011 (0.292)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.113 (0.456)	-0.118 (0.500)	0.026 (0.880)	0.049 (0.783)	-0.190 (0.334)	-0.167 (0.382)	0.025 (0.879)	0.043 (0.794)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	-0.001 (0.940)	0.001 (0.944)	0.037* (0.082)	0.040* (0.068)	-0.052* (0.061)	-0.049* (0.062)	0.008 (0.682)	0.014 (0.528)
C. Deficit								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	902455 (0.231)	1298273 (0.105)	1684460** (0.044)	1802758** (0.034)	-929364 (0.247)	-851650 (0.321)	550605 (0.508)	712609 (0.410)
1937-2000	1.15e+07 (0.475)	1.24e+07 (0.456)	5515193 (0.769)	6329632 (0.744)	2.15e+07 (0.251)	2.20e+07 (0.254)	-3.79e+07** (0.041)	-4.24e+07** (0.029)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p-values of equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. The table presents five panels. Panel A) shows results when dependent variable is Defense Expenditure, panel B) when is Debt Expenditure, panel C) when is Deficit. In each panel: a) reports β_4 coefficient when the dependent variable is in real terms. b) reports β_4 coefficient when the dependent variable is in percentage. In c) reports α_4 when the dependent variable is in log and in d) reports α_4 when the dependent variable is in percentage. Columns (2) to (9) indicates the timing of the variable "election_{t+i}" where $i \in -2, -1, 0, 1$. Columns (2) and (3) reports the results when $i=-2$, columns (4) and (5) when $i=-1$, columns (6) and (7) when $i=0$ and columns (8) and (9) when $i=1$. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes significance at 1% level. ** Denotes significance at 5% level. * Denotes significance at 10% level.

Table 21: Total Revenues.

	One and two Years before Elections		One year before Elections		Election Year		One year after Elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent Variable: Total Revenues in real terms- β_4 coefficient - Equation 1.							
1830-1936	406928 (0.139)	449910 (0.102)	697983* (0.051)	727912** (0.040)	-238855 (0.473)	-242599 (0.453)	-123216 (0.693)	-127846 (0.702)
1937-2000	-1985e+07 (0.286)	-2061e+07 (0.304)	-1016e+07 (0.457)	-1119e+07 (0.447)	3112e+06 (0.840)	4779e+06 (0.763)	2249e+07 (0.536)	2373e+07 (0.560)
	Dependent Variable: Total Revenues in log- α_4 coefficient - Equation 2.							
1830-2000	-0.174**** (0.017)	-0.164** (0.022)	-0.171** (0.046)	-0.169** (0.047)	0.105 (0.175)	0.128* (0.088)	-0.016 (0.857)	-0.030 (0.742)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p-values of equation 1 and 2. Each cell is a different regression. In a) is reported β_4 coefficient and the dependent variable is Total expenditure in real terms. In b) is reported α_4 coefficient and the dependent variable is Total Expenditure in log. Columns (1) to (8) indicates the timing of the variable " $election_{t+i}$ " where $i = -2, -1, 0, 1$. Columns (1) and (2) reports the results when $i = -2$, columns (3) and (4) when $i = -1$, columns (5) and (6) when $i = 0$ and columns (7) and (8) when $i = 1$. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the " $trend$ " and the " $cyclicalcomponent$ ". The estimation with controls also include the variable " $hegemony$ " that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable " war " takes the value 1 if in year t there was a civil war and 0 otherwise; the variable " $constitution$ " takes the value 1 in the years where a new constitution was established and 0 otherwise; the variable " $coup$ " takes the value 1 in the years where there was a coup and 0 otherwise; the dummy " d_{1910} " takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable 1 in the years where there was a coup and 0 otherwise, the dummy " d_{1957} " takes the value 1 in 1957 and 0 otherwise and measure the year that the women's suffrage was implemented. P-values are reported for the respective tests. ** Denotes significance at 5% level. * Denotes significance at 10% level. *** Denotes significance at 1% level.

Table 22: Revenues: Direct and Indirect taxes.

	One and two Years before Elections		One year before Elections		Election Year		One year after Elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Direct Taxes								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	29165 (0.391)	16697 (0.634)	-832.9 (0.967)	-10065 (0.664)	-23805 (0.417)	-29077 (0.377)	-10207 (0.756)	-25365 (0.454)
1937-2000	-3247e+06 (0.289)	-1594e+06 (0.532)	-4453e+06 (0.126)	-3427e+06 (0.202)	905584 (0.721)	2087e+06 (0.362)	2275e+06 (0.651)	-1694e+06 (0.610)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	-0.003 (0.634)	-0.005 (0.440)	-0.003 (0.467)	-0.005 (0.321)	0.005 (0.454)	0.006 (0.432)	-0.004 (0.422)	-0.007 (0.268)
1937-2000	0.020 (0.183)	0.023 (0.130)	0.003 (0.812)	0.005 (0.738)	-0.025** (0.040)	-0.024* (0.051)	0.002 (0.907)	-0.008 (0.699)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.327* (0.087)	-0.380** (0.039)	-0.286* (0.093)	-0.292 (0.133)	0.272 (0.442)	0.285 (0.417)	-0.033 (0.863)	-0.060 (0.759)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	0.026 (0.111)	0.024 (0.154)	0.004 (0.780)	0.003 (0.822)	-0.029** (0.049)	-0.030** (0.045)	0.007 (0.727)	0.004 (0.831)
B. Indirect Taxes								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	380343** (0.017)	400812** (0.010)	573000*** (0.000)	583665*** (0.000)	-230931 (0.250)	-236192 (0.241)	31238 (0.857)	19279 (0.920)
1937-2000	2258e+06 (0.505)	1005e+06 (0.771)	7267e+06 (0.112)	6310e+06 (0.149)	-3118e+06 (0.467)	-2685e+06 (0.518)	-3531e+06 (0.328)	-1993e+06 (0.573)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	0.014 (0.500)	0.007 (0.745)	0.010 (0.663)	0.004 (0.857)	-0.017 (0.504)	-0.015 (0.558)	0.020 (0.369)	0.022 (0.320)
1937-2000	0.028 (0.114)	0.027 (0.156)	0.036** (0.040)	0.035* (0.052)	-0.014 (0.458)	-0.015 (0.449)	-0.017 (0.447)	-0.013 (0.590)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.102 (0.156)	-0.094 (0.182)	-0.108 (0.189)	-0.105 (0.195)	0.048 (0.609)	0.066 (0.489)	-0.071 (0.385)	-0.055 (0.515)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	0.014 (0.605)	0.017 (0.522)	0.020 (0.507)	0.024 (0.436)	0.000 (0.975)	-0.002 (0.937)	-0.041 (0.175)	-0.037 (0.245)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Notes: The table reports OLS estimates and p-values for equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. The table presents five panels. Panel A) shows results when dependent variable is Direct Taxes, panel B) when is Indirect Taxes, panel C) when is Fees and Fines, panel D) when is National Properties, panel E) when is Treasury Balance Resources. In each panel: a) reports β_4 coefficient when the dependent variable is in real terms. b) reports β_4 coefficient when the dependent variable is in percentage. In c) reports α_5 when the dependent variable is in log and d) reports α_5 when the dependent variable is in percentage. Columns (2) to (9) indicates the timing of the variable "election_t+i" where $i \in -2, -1, 0, 1$. Columns (2) and (3) reports the results when $i = -2$, columns (4) and (5) when $i = -1$, columns (6) and (7) when $i = 0$ and columns (8) and (9) when $i = 1$. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d_1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d_1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes significance at 1% level. ** Denotes significance at 5% level. * Denotes significance at 10% level. Denotes significance at 5% level. * Denotes significance at 10% level.

Table 23: Revenues: Other Revenues

	One and two Years before Elections		One year before Elections		Election Year		One year after Elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Fees and Fines								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	19425 (0.681)	2572 (0.963)	105388* (0.057)	106255* (0.060)	31973 (0.606)	29836 (0.640)	39630 (0.525)	34864 (0.581)
1937-2000	-1791e+06** (0.047)	-1621e+06* (0.090)	-160890 (0.820)	-207111 (0.770)	593046 (0.599)	737082 (0.512)	1262e+06 (0.307)	990449 (0.464)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	0.000 (0.908)	0.000 (0.994)	0.014 (0.134)	0.016* (0.098)	0.001 (0.812)	0.000 (0.991)	0.000 (0.944)	0.002 (0.800)
1937-2000	-0.026** (0.010)	-0.025** (0.013)	0.000 (0.973)	0.001 (0.929)	0.010 (0.221)	0.010 (0.214)	0.013 (0.190)	0.013 (0.209)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.459** (0.010)	-0.400** (0.027)	-0.203 (0.312)	-0.191 (0.313)	0.154 (0.396)	0.207 (0.255)	0.053 (0.793)	0.110 (0.571)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	-0.026* (0.055)	-0.025* (0.068)	-0.007 (0.641)	-0.008 (0.612)	0.006 (0.595)	0.007 (0.553)	0.011 (0.415)	0.010 (0.433)
B. National Properties								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	24735 (0.784)	2501 (0.971)	-19363 (0.851)	-14991 (0.884)	213768 (0.144)	151894 (0.239)	-77263 (0.459)	-95992 (0.398)
1937-2000	-1796e+06* (0.064)	-1863e+06* (0.071)	-455630 (0.660)	-455453 (0.678)	708826 (0.642)	644188 (0.683)	1770e+06 (0.284)	1914e+06 (0.268)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	-0.031** (0.018)	-0.023** (0.021)	-0.034** (0.032)	-0.027* (0.055)	0.045** (0.011)	0.046*** (0.002)	-0.029** (0.028)	-0.029* (0.081)
1937-2000	0.000 (0.787)	0.000 (0.807)	0.0006 (0.117)	0.006 (0.110)	0.001 (0.702)	0.000 (0.832)	-0.001 (0.745)	-0.000 (0.912)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.134 (0.515)	-0.125 (0.528)	0.100 (0.636)	0.098 (0.640)	-0.363 (0.188)	-0.326 (0.244)	0.411 (0.140)	0.423 (0.155)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	0.033** (0.013)	0.029** (0.013)	0.046*** (0.004)	0.042*** (0.004)	-0.047** (0.011)	-0.047*** (0.003)	0.032** (0.017)	0.025* (0.089)
C. Treasury Balance Resources								
Dependent Variable in real terms- β_4 coefficient - Equation 1.								
1830-1936	48624 (0.501)	66534 (0.460)	95392 (0.421)	104242 (0.413)	-137391** (0.042)	-124265** (0.037)	-86112 (0.174)	-75495 (0.153)
1937-2000	-2281e+06** (0.043)	-2339e+06** (0.046)	-1559e+06* (0.086)	-1658e+06* (0.077)	-712433 (0.557)	-568370 (0.645)	3860e+06*** (0.009)	4014e+06** (0.011)
Dependent Variable in percentage- β_4 coefficient - Equation 1.								
1830-1936	0.008 (0.524)	0.009 (0.547)	0.014 (0.493)	0.015 (0.490)	-0.021 (0.110)	-0.022 (0.103)	-0.016 (0.121)	-0.015* (0.099)
1937-2000	-0.004 (0.520)	-0.004 (0.534)	-0.011* (0.051)	-0.012* (0.056)	-0.003 (0.649)	-0.002 (0.739)	0.011 (0.155)	0.011 (0.160)
Dependent Variable in log- α_4 coefficient - Equation 2.								
1830-2000	-0.332 (0.497)	-0.294 (0.562)	-0.663 (0.275)	-0.631 (0.308)	0.497 (0.347)	0.507 (0.334)	0.626 (0.223)	0.727 (0.163)
Dependent Variable in percentage- α_4 coefficient - Equation 2.								
1830-2000	-0.011 (0.439)	-0.011 (0.457)	-0.024 (0.262)	-0.025 (0.270)	0.021 (0.139)	0.022 (0.120)	0.027** (0.029)	0.028** (0.024)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Notes: The table reports OLS estimates and p-values for equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. The table presents five panels. Panel A) shows results when dependent variable is Direct Taxes, panel B) when is Indirect Taxes, panel C) when is Fees and Fines, panel D) when is National Properties, panel E) when is Treasury Balance Resources. In each panel: a) reports β_4 coefficient when the dependent variable is in real terms, b) reports β_4 coefficient when the dependent variable is in percentage. In c) reports α_5 when the dependent variable is in log and in d) reports α_5 when the dependent variable is in percentage. Columns (2) to (9) indicates the timing of the variable "election_t+i" where $i \in -2, -1, 0, 1$. Columns (2) and (3) reports the results when $i = -2$, columns (4) and (5) when $i = -1$, columns (6) and (7) when $i = 0$ and columns (8) and (9) when $i = 1$. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d_1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d_1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes significance at 1% level. ** Denotes significance at 5% level. * Denotes significance at 10% level. Denotes significance at 5% level. * Denotes significance at 10% level.

Table 24: Road and Rail Lines in Latin America

Country	Year	Roads, Total Network (Km per person)	Year	Rail Lines (Total Route-Km)
Colombia	2009	0.284	2009	1672
Argentina	2003	0.609	2010	25.023
Bolivia	2009	0.822	2009	2.866
Chile	2009	0.474	2010	5.352
Brazil	2004	0.096	2010	29.817
Costa Rica	2009	0.850		
Ecuador	2007	0.315		
Jamaica	2009	0.821		
Mexico	2009	0.327	2010	26.704
Nicaragua	2009	0.385		
Paraguay	2008	0.506		
Peru	2009	0.440	2010	2.020
Puerto Rico	2008	0.709		
Uruguay	2004	2.354	2008	2.993
Venezuela		2008	336	

Source: World Bank

Table 25: Students Enrollment in Primary School/Population

Year	Enrollment Primary School
1827	150
1835	119
1837	152
1838	160
1843	139
1844	138
1845	134
1847	137
1848	137
1850	131
1851	125
1874	269
1882	221
1887	215
1890	206
1891	220
1893	217
1894	211
1896	226
1898	256
1903	259
1905	480

Source: Ramirez and Salazar (2007)

Table 26: Number of Students enrolled in Primary School

Year	Public Schools	Private Schools
1837	21.168	4.903
1838	22.343	6.015
1843	18.359	7.933
1844	19.361	7.763
1845	19.418	7.401
1848	21.511	7.631
1850	21.678	7.143
...		
1916	329.573	18.412
...		
1950	758.156	50.338

Source: Ramirez and Salazar (2007)

Table 27: Robustness Checks

	(1)	(2)	(3)	(4)	(5)	(6)
A: 1932						
	One and two Years before Elections		One year before Elections	Elections		Election Year
Total Expenditure (log)	-0.194* (0.052)	-0.195** (0.046)	-0.258** (0.017)	-0.252** (0.023)	0.169 (0.138)	0.178 (0.126)
Social Expenditure (log)	-0.422** (0.001)	-0.404*** (0.003)	-0.307** (0.047)	-0.283* (0.069)	0.367** (0.012)	0.381** (0.012)
Social Expenditure (%)	-0.012 (0.448)	-0.009 (0.584)	0.007 (0.691)	0.010 (0.587)	0.031* (0.055)	0.028* (0.088)
Infrastructure Expenditure (log)	-0.542*** (0.000)	-0.519*** (0.000)	-0.680*** (0.000)	-0.659*** (0.000)	0.211 (0.310)	0.270 (0.208)
Infrastructure Expenditure (%)	-0.052*** (0.008)	-0.051** (0.019)	-0.050** (0.026)	-0.049** (0.038)	-0.004 (0.857)	-0.002 (0.913)
A: 1940						
	One and two Years before Elections		One year before Elections	Elections		Election Year
Total Expenditure (log)	-0.227** (0.020)	-0.226** (0.019)	-0.291*** (0.007)	-0.284*** (0.009)	0.181 (0.101)	0.195* (0.079)
Social Expenditure (log)	-0.387*** (0.005)	-0.363*** (0.009)	-0.284* (0.074)	-0.260 (0.104)	0.415*** (0.003)	0.427*** (0.002)
Social Expenditure (%)	-0.009 (0.614)	-0.005 (0.756)	0.011 (0.592)	0.013 (0.507)	0.035** (0.032)	0.032* (0.051)
Infrastructure Expenditure (log)	-0.570*** (0.000)	-0.554*** (0.000)	-0.689*** (0.000)	-0.673*** (0.000)	0.319* (0.092)	0.365* (0.059)
Infrastructure Expenditure (%)	-0.051*** (0.008)	-0.052** (0.014)	-0.050** (0.023)	-0.049** (0.032)	0.018 (0.435)	0.019 (0.394)
Controls Included	No	Yes	No	Yes	No	Yes

Notes: P-values are reported for the respective tests. *** Denotes significance at 1

Table 28: Descriptive Statistics

	All municipalities			With Land Disposition			Land Disposition neighbors			
	Obs	Mean	Std.Dev	Obs	Mean	Std.Dev	Obs	Mean	Std.Dev	p-value for t-test
Floods										
Floods 1914-1946 (dummy)	1120	0.28	0.45	192	0.39	0.49	529	0.25	0.43	0.00
Floods 1947-1985 (dummy)	1120	0.79	0.41	192	0.90	0.76	529	0.79	0.41	0.00
Geographic Characteristics										
Distance to Capital	1120	81.52	60.57	192	88.34	65.84	529	80.28	58.23	0.10
Altitude (log)	1120	6.22	1.73	192	5.60	2.00	529	6.07	1.78	0.00
Area (log)	1120	5.83	1.27	192	6.28	1.13	529	5.90	1.17	0.00
Soil Fertility Index	1120	2.76	1.16	192	2.94	1.03	529	2.84	1.19	0.26
Land Flatness Index	1120	5.71	2.04	192	6.02	1.98	529	5.88	2.04	0.35
Erosion Index	1120	4.06	1.04	192	4.21	0.94	529	4.10	1.03	0.25
Average rainfall 1980-2010 (log)	1120	7.50	0.53	192	7.54	0.51	529	7.53	0.54	0.82
Population 1960 (thousands)	1120	10.49	36.53	192	25.54	83.47	529	7.82	11.34	0.00
Other controls										
Gaitanista Majority (dummy)	1120	0.22	0.42	192	0.41	0.49	529	0.19	0.40	0.00
Land Reform 1946-1964 (plots)	1120	4.68	29.5	192	25.10	66.6	529	0.46	4.40	0.00

Notes: test shows the t-statistic of the mean test.

Table 29: Effects of Land dispossession (1914-1946) on Rebel Activity (1974-1985): First Stage IV Estimation

	Land Dispossession (1914-1946)			
	Dummy		Log	
	(1)	(2)	(3)	(4)
Floods (1914-1946)	0.617*** (0.048)	0.399*** (0.054)	0.600*** (0.042)	0.326*** (0.068)
Floods (1947-1985)		0.137** (0.054)		0.188*** (0.029)
Distance to Capital		-0.001 (0.001)		-0.001 (0.001)
Altitude		-0.022 (0.024)		-0.039 (0.026)
Area		0.228*** (0.031)		0.205*** (0.033)
Soil Fertility Index		0.033 (0.030)		0.006 (0.032)
Land Flatness Index		-0.001 (0.013)		-0.014 (0.017)
Erosion Index		-0.009 (0.031)		-0.025 (0.032)
Population 1960		0.000* (0.000)		0.000 (0.000)
Land Reform 1946-1964		0.002*** (0.000)		0.005*** (0.000)
F-test	161.9	53.69	201.78	23.01
Observations	1758	1758	1758	1758
Number of pairs	879	879	879	879

Notes: ***p<0.01, **p<0.05, *p<0.1.

Table 30: Compliers

	Dependent Variable is land dispossession. Sample is:										
	Land Dispositions		Land Owners		Credit		Wage		Land reform		
	High	Low	High	Low	High	Low	High	Low	High	Low	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Floods (1914-1946)	0.399*** (0.054)	0.453*** (0.130)	0.338*** (0.112)	0.490*** (0.091)	0.435* (0.230)	0.497*** (0.082)	0.442*** (0.147)	0.497*** (0.104)	0.312*** (0.114)		
Observations	1758	344	342	416	416	590	268	500	524		
Number of pairs	879	172	171	208	208	295	134	250	262		

Floods is a binary variable that takes value 1 if between 1914-1946 a municipality experienced a flood. All columns include geographical control variables and neighbors-pair fixed effect. The dependent variable in column 1 is land dispossession, a dummy equal 1 if the municipality experienced land dispossession during 1914-1946 and 0 otherwise. The sample are defined in the column headings. Column 1 examines the full sample. Municipalities in which the share of land owners working on the land is above the median is examined in column 2, whereas municipalities that are below the median are examined in column 3. Municipalities that had a higher number of bank credits (1958-1962) than the median municipality are examined in column 4, whereas those that are below the median are examined in column 5. Municipalities that had a higher wage in 1968 are examined in column 6, whereas municipalities that had lower wage than the median are examined in column 7. Municipalities in which the number of public land allocation to peasants were above the median between 1930-1960 are examined in column 8, whereas those below the median are examined in column 9. ***p<0.01, **p<0.05, *p<0.1.

Table 31: Placebo Tests

	Land Dispossessions	Literate Rate	Housing	Irrigated Lands	Roads	Railroads
	(1)	(2)	(3)	(4)	(5)	(6)
Floods (1914-1946)	0.399*** (0.054)	0.019 (0.037)	0.010 (0.048)	0.171 (0.230)	0.024 (0.180)	0.211 (0.196)
F-test	112.9					
Observations	1758	1166	1131	775	873	344
Number of pairs	879	786	696	552	661	257
Mean Dep.Var	0.28	0.71	7.29	2.35	9.32	9.35

Floods is a binary variable that takes value 1 if between 1914-1946 a municipality experienced a flood. All columns include geographical control variables and neighbors-pair fixed effect. The dependent variable in column 1 is land dispossessions, a dummy equal 1 if the municipality experienced land dispossessions during 1914-1946 and 0 otherwise. The dependent variable in column 2 is the literate rate in 1964 (in percentage), in column 3 is the log of number of housing in 1960, in column 4 is the log of the number of irrigated lands in 1960, in column 5 is the log of km of roads in 1970 and in column 6 is the log of the km of railroads in 1970. ***p<0.01, **p<0.05, *p<0.1.

Table 32: Similarity of neighbors

	Altitude (log)	Land Flatness Index	Soil fertility index
Floods 1914-1946 (log)	-0.081 (0.055)	0.027 (0.085)	0.156*** (0.047)
Observations	1758	1758	1758
R-squared	0.000	0.000	0.012
Number of pairs	879	879	879

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

Table 33: Effects of Land dispossession (1914-1946) on FARC Rebel Activity (1974-1985)

	Dummy		Log	
	OLS (1)	IV (2)	OLS (3)	IV (4)
Land Dispossession	0.074*** (0.018)	0.617*** (0.122)	0.003 (0.034)	0.820*** (0.240)
Floods (1947-1985)	0.147*** (0.031)	0.058 (0.049)	0.192*** (0.025)	0.022 (0.066)
Observations	1758	1758	1758	1758
Number of pairs	879	879	879	879

Table 34: Effects of Land dispossession (1914-1946) on FARC Rebel Activity (1974-1985)

	Dummy		
	Full Sample (1)	More Land Reform (2)	Less 1961-1970 (3)
Land Dispossession	0.617*** (0.122)	0.965*** (0.281)	0.790 (0.965)
Floods (1947-1985)	0.058 (0.049)	0.026 (0.126)	0.037 (0.171)
Observations	1758	620	378
Number of pairs	879	310	189

Table 35: Effects of Land dispossession (1914-1946) on Communist Support and Exposure to "La Violencia"

	OLS (1)	IV (2)
Panel A: Communist vote share 1946 (%)		
Land dispossessions (dummy)	0.069*** (0.009)	0.233*** (0.050)
First Stage		
Floods 1914-1946 (dummy)		0.399*** (0.061)
F-test of excluded instruments		42.27
Panel B: La Violencia (dummy)		
Land dispossessions (dummy)	0.085*** (0.019)	0.416*** (0.104)
First Stage		
Floods 1914-1946 (dummy)		0.399*** (0.061)
F-test of excluded instruments		42.27
Observations	1758	1758
Geographical controls	Yes	Yes
Number of Pairs	879	879

Notes: ***p<0.01, **p<0.05, *p<0.1.

Table 36: Effects of Land dispossession (1914-1946) on Communist Support and Exposure to "La Violencia" -Sub sample

	Full Sample (1)	More Land Reform (2)	Less 1961-1970 (3)
Panel A: Communist vote share 1946 (%)			
Land dispossessions (dummy)	0.233*** (0.050)	0.306*** (0.102)	-0.189 (0.321)
First Stage			
Floods 1914-1946 (dummy)	0.399*** (0.061)	0.370*** (0.098)	0.150 (0.151)
F-test of excluded instruments	42.27	14.19	0.98
Panel B: La Violencia (dummy)			
Land dispossessions (dummy)	0.416*** (0.104)	0.091 (0.181)	0.546 (0.708)
First Stage			
Floods 1914-1946 (dummy)	0.399*** (0.061)	0.370*** (0.098)	0.150 (0.151)
F-test of excluded instruments	42.27	14.19	0.98
Observations	1758	620	378
Geographical controls	Yes	Yes	Yes
Number of Pairs	879	310	189

Notes: ***p<0.01, **p<0.05, *p<0.1.

Table 37: Effects of Land dispossession (1914-1946) and Communist Support and Exposure to "La Violencia" on FARC Rebel Activity

	Rebel Activity 1974-1985 (dummy)
	IV
	(1)
Panel A: Communist vote share 1946 (%)	
Communist vote share 1946 (%)	3.318*** (0.979)
Land dispossessions (dummy)	-0.155** (0.076)
First Stage	
Floods 1914-1946 (dummy)	0.069*** (0.017)
Land dispossessions (dummy)	0.061*** (0.009)
F-test of excluded instruments	18.27
Panel B: La Violencia (dummy)	
La Violencia (dummy)	1.642*** (0.476)
Land dispossessions (dummy)	-0.065 (0.053)
First Stage	
Floods 1914-1946 (dummy)	0.139*** (0.037)
Land dispossessions (dummy)	0.069*** (0.020)
F-test of excluded instruments	14.22
Observations	1758
Geographical controls	Yes
Number of Pairs	879

Notes: ***p<0.01, **p<0.05, *p<0.1.

Figure 1: Months between Legal Status and Legal Entitlement

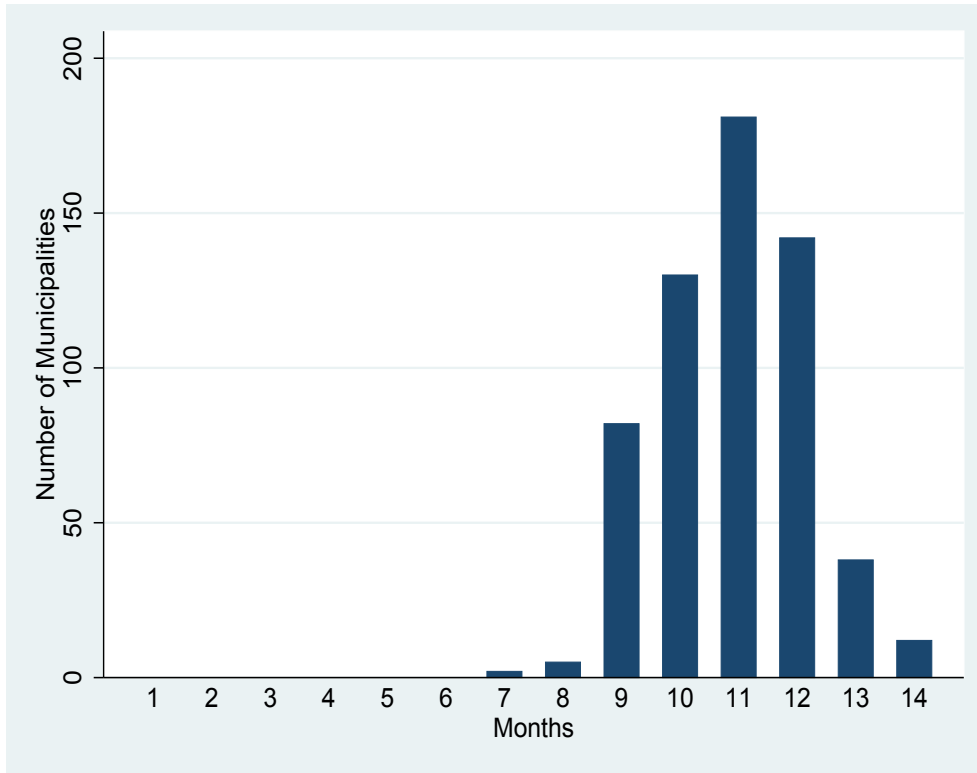
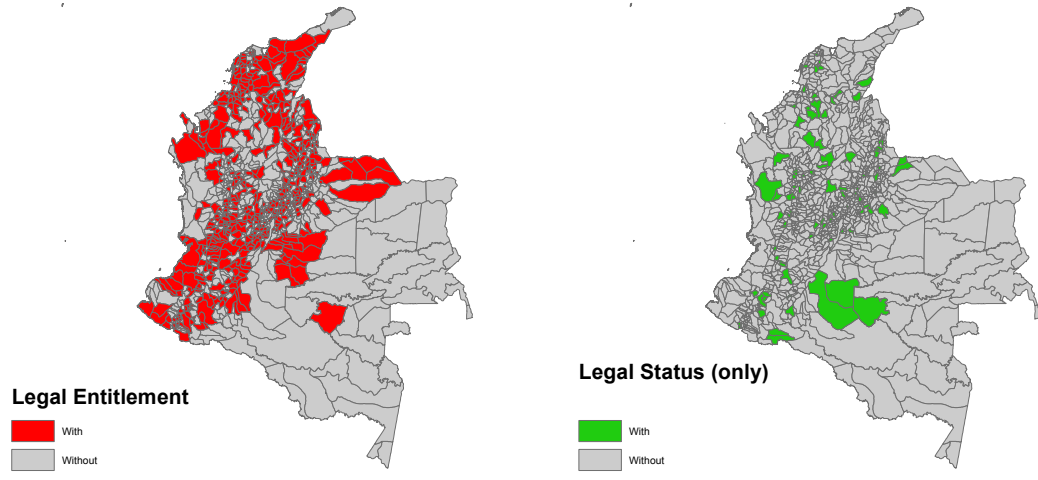


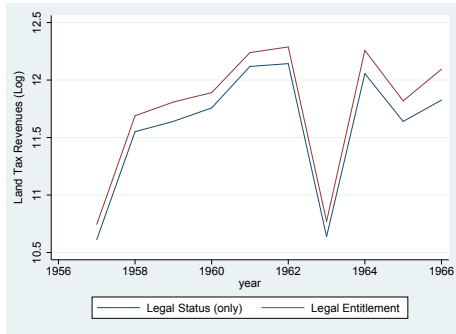
Figure 2: Municipalities with legal entitlement and legal status (only), 1967-1972



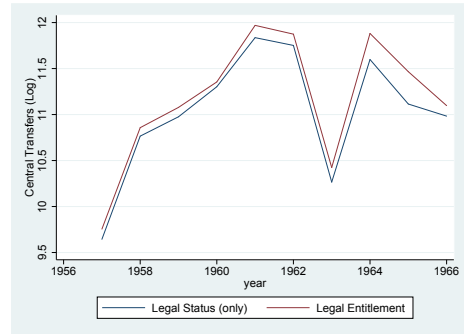
(a) Legal Entitlement

(b) Legal Status (only)

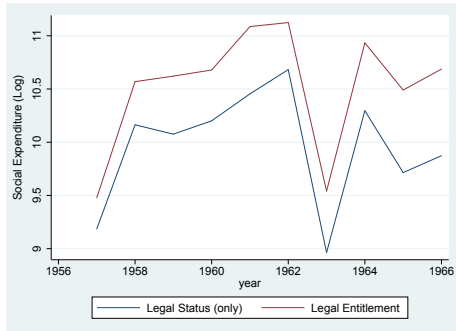
Figure 3: Pre-trends of broad and targeted redistribution, 1957-1966



(a) Land Tax Revenues



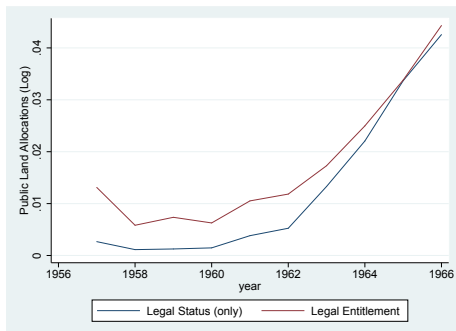
(b) Central Transfers



(c) Social Expenditure

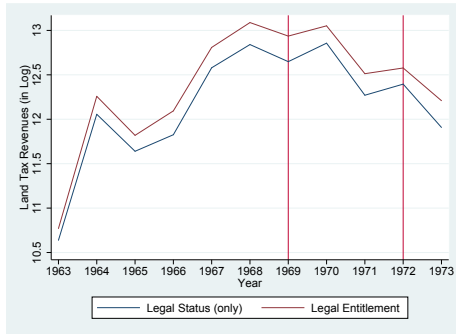


(d) Bureaucratic Expenditure



(e) Public Land Allocations

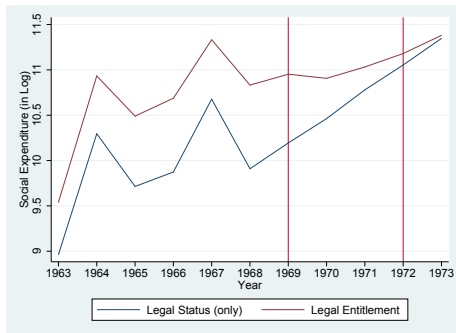
Figure 4: Evolution of broad and targeted redistribution, 1963-1973



(a) Land Tax Revenues



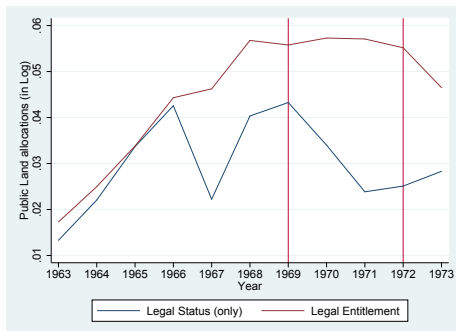
(b) Central Transfers



(c) Social Expenditure

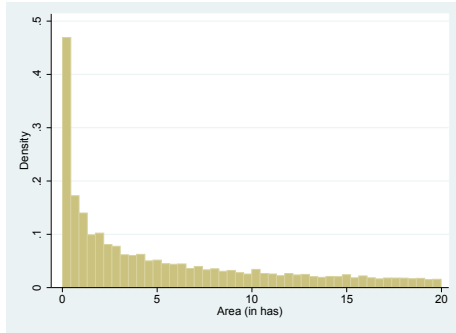


(d) Bureaucratic Expenditure

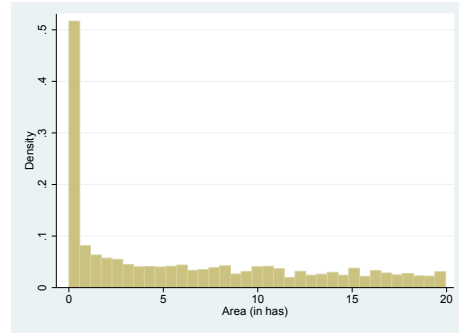


(e) Public Land Allocations

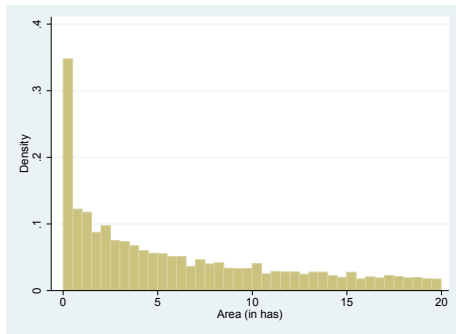
Figure 5: Distribution of Individual Public land allocations by area, 1967-1972



(a) Municipalities with Legal Entitlement



(b) Municipalities with Legal Status



(c) Municipalities without Legal Entitlement or Status

Figure 6: Land share of peasant leaders and Communist support (1946)

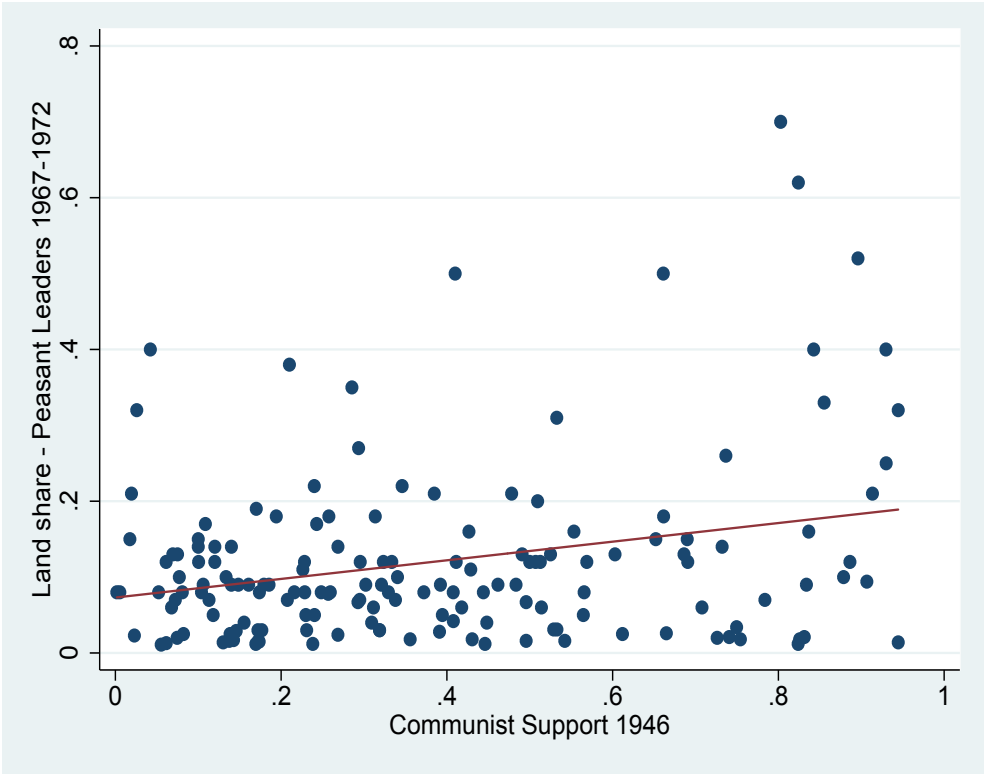


Figure 7: Land Invasions 1971-1978

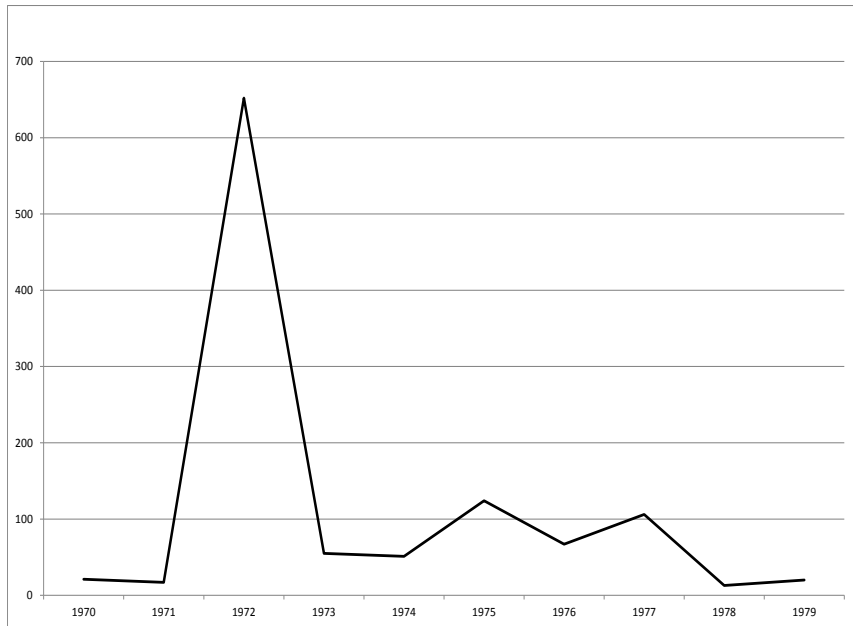


Figure 8: Land Dispossession 1914-1946 by year

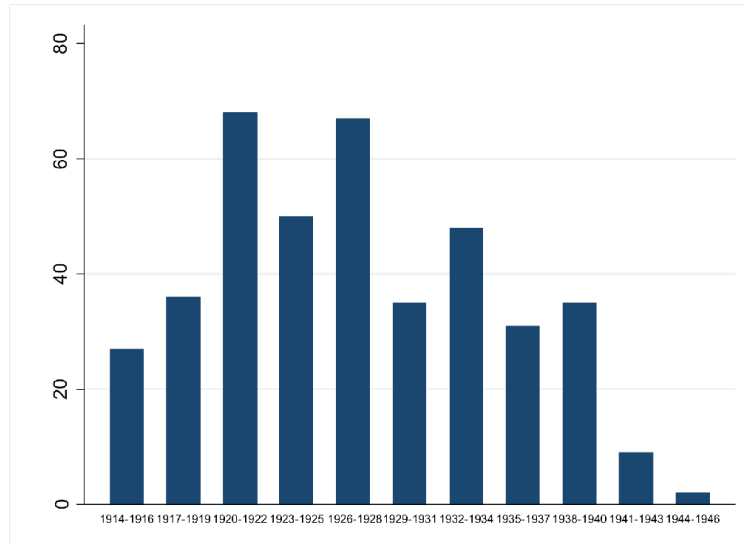
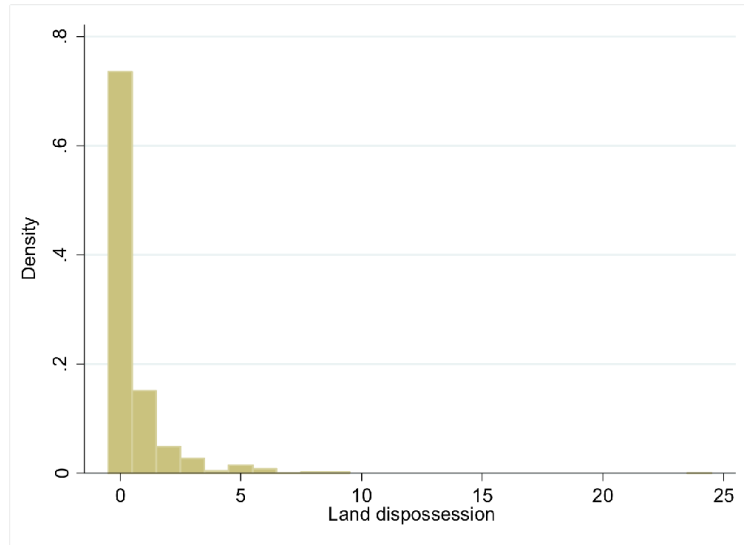


Figure 9: Land Dispossessions 1914-1946 Intensity Distribution



11 Appendix A: Empirical Appendix

Table 38: Descriptive Statistics for treatment (legal entitlement) and control groups before treatment (1957-1966).

	Treatment 532 municipalities		Control-Full sample 556 municipalities		Control-Restricted sample 92 municipalities	
	Mean	Std.Dev	Mean	Std.Dev	Mean	Std.Dev
Land Tax revenues (logs)	12.4	1.31	12.0	1.59	12.1	1.46
Central Transfers (logs)	11.2	0.69	11.0	1.98	11.1	1.66
Social Expenditure (logs)	10.3	1.6	10.5	1.92	10.4	1.56
Bureaucratic Expenditure (logs)	11.7	1.31	11.6	1.69	11.3	1.36
Public Lands Has (in thousands and logs)	0.02	0.09	0.03	0.04	0.02	0.08

Notes: All revenues and expenditure are in log. Variable on Public Land allocations are expressed in thousands of has and logs.

Table 39: Pre-treatment: The Effect of Legal Entitlement on Redistribution
1957-1966

	Broad Redistribution (in log)						Targeted Redistribution (in log)			
	Land Tax Revenues		Central Transfers		Social Expenditure		Bureaucratic Expenditure		Public Land Allocations	
	Restricted Sample	Full Sample	Restricted Sample	Full Sample	Restricted Sample	Full Sample	Restricted Sample	Full Sample	Restricted Sample	Full Sample
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dummy Legal Entitlement	-0.017 (0.146)	0.115 (0.109)	0.157 (0.165)	0.198 (0.092)	0.013 (0.166)	0.044 (0.049)	0.015 (0.167)	0.029 (0.022)	0.003 (0.007)	0.317 (0.194)
Income shock	-0.000 (0.002)	0.026*** (0.007)	-0.004 (0.004)	-0.004 (0.004)	-0.003 (0.003)	0.006 (0.004)	0.003 (0.002)	-0.000 (0.007)	-0.000 (0.000)	0.005 (0.009)
Observations	5.347	8.151	5.293	8.643	5.122	7.994	5.280	8.185	5.560	10.800
Clusters	545	859	541	886	533	858	538	864	556	1080
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: All regressions control for year fixed effect and state specific-time trend. Regressions include geographical, economic and social variables. Robust standard errors, clustered at municipality level, are presented in parentheses. The full sample is a municipality-level panel of 1080 municipalities and the restricted sample is a municipality-level of 644 municipalities for the years 1957-1966. The number of observations vary because of missing values in the dependent variable. The dummy explanatory variable takes value 1 if the municipal association received legal entitlement during the years that the peasant movement had state support (1967-1972) and 0 if only got legal status. ***p<0.01, **p<0.05, *p<0.1.

Table 40: Placebo test: The Effect of Legal Entitlement on Redistribution
1957-1966

	Broad Redistribution (in log)						Targeted Redistribution (in log)			
	Land Tax Revenues		Central Transfers		Social Expenditure		Bureaucratic Expenditure		Public Land Allocations	
	Restricted Sample (1)	Full Sample (2)	Restricted Sample (3)	Full Sample (4)	Restricted Sample (5)	Full Sample (6)	Restricted Sample (7)	Full Sample (8)	Restricted Sample (9)	Full Sample (10)
Dummy Legal Entitlement	0.020 (0.030)	0.094*** (0.024)	0.052 (0.056)	0.065 (0.043)	-0.007 (0.039)	0.001 (0.031)	0.025 (0.026)	0.028 (0.190)	-0.000 (0.003)	0.008*** (0.002)
Income shock	0.004 (0.003)	-0.003 (0.003)	-0.017** (0.008)	-0.014** (0.006)	-0.009 (0.007)	-0.006 (0.006)	0.003 (0.003)	0.002 (0.002)	-0.000 (0.000)	-0.000 (0.000)
Observations	5.854	8.658	5.811	8.643	5.507	8.006	5.707	8.322	6.430	10.800
Clusters	603	891	596	886	582	858	591	873	643	1.080
Municip. FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: All regressions control for year and municipality fixed effect and state specific-time trend. Regressions include geographical, economic and social variables. Robust standard errors, clustered at municipality level, are presented in parentheses. The legal entitlement years are shifted from 1969-1972 to 1960-1963. The full sample is a municipality-level panel of 1080 municipalities and the restricted sample is a municipality-level of 644 municipalities for the years 1957-1966. The number of observations vary because of missing values in the dependent variable. ***p<0.01, **p<0.05, *p<0.1.

Table 41: Legal Entitlement (1967-1972)

	OLS		Probit	
	Full Sample (1)	Restricted Sample (2)	Full Sample (3)	Restricted Sample (4)
<i>A. Geographical Variables</i>				
Rainfall (log)	-0.084* (0.048)	0.007 (0.036)	-0.268* (0.164)	0.057 (0.216)
Altitude (log)	-0.069*** (0.017)	-0.005 (0.017)	-0.297*** (0.099)	-0.029 (0.096)
Temperature	-0.007 (0.006)	-0.004 (0.005)	-0.049** (0.024)	-0.034 (0.033)
Area(log)	0.005 (0.024)	0.011 (0.016)	-0.003 (0.074)	0.070 (0.093)
Distance to Capital	-0.000** (0.000)	-0.007 (0.017)	-0.086 (0.083)	-0.036 (0.110)
<i>B. Economic and Social Variables</i>				
Population (log, 1964)	0.135*** (0.035)	0.034 (0.026)	0.431*** (0.126)	0.207 (0.163)
Land reform (1930-1960) (plots)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.001)
No owners Land (%1960)	-0.071 (0.104)	0.026 (0.092)	-0.284 (0.348)	0.135 (0.506)
Tenants (%1960)	0.059 (0.103)	0.065 (0.084)	0.262 (0.382)	0.352 (0.432)
Tractors (log, 1960)	0.034*** (0.011)	0.006 (0.008)	0.097*** (0.039)	0.048 (0.051)
Workers (log, 1960)	0.002 (0.022)	-0.004 (0.013)	-0.005 (0.067)	-0.031 (0.078)
Daily Wage (1968)	0.006 (0.004)	0.005 (0.004)	0.017 (0.014)	0.028 (0.023)
Coffee Lands (1960)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Banana Lands (1960)	0.000 (0.000)	-0.000 (0.000)	0.000** (0.000)	0.000 (0.000)
Railroads (log, 1960)	0.000 (0.000)	0.000 (0.000)	0.026 (0.016)	-0.007 (0.021)
Roads (log, 1960)	0.007 (0.004)	0.002 (0.004)	0.022 (0.018)	0.016 (0.023)
Housing (log, 1960)	-0.028*** (0.006)	-0.007 (0.005)	-0.130*** (0.038)	-0.077 (0.055)
Irrigated lands (1960)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Literacy rate(1964)	0.003 (0.022)	0.014 (0.088)	0.002 (0.016)	0.010 (0.078)
<i>C. Historical and Political Variables</i>				
Peasant Leagues (1945)	0.022 (0.019)	0.011 (0.012)	0.073 (0.067)	0.012 (0.090)
d_ "La Violencia"	0.050 (0.044)	0.068** (0.038)	0.182 (0.141)	0.478* (0.262)
Left-wing support (% elections 1946)	0.219*** (0.057)	-0.061 (0.054)	0.701*** (0.182)	-0.321 (0.277)
Share votes winner elections (1966)	0.123 (0.092)	-0.013 (0.075)	0.340 (0.283)	-0.015 (0.421)
Observations	745	507	745	507
R-squared	0.172	0.037	0.165	0.062

Note: In the full sample the dependent variable takes value 1 if the municipality got legal entitlement between 1967-1972 and 0 otherwise. In the restricted sample the dependent variable takes value 1 if the municipality got legal entitlement between 1967-1972 and 0 if only got legal status. The variables are in levels unless otherwise stated. The variable "Land Reform (1930-1960) measures the number of plots given to peasants during these years. The variable "No owners Land" is the share of farmers that work on a land that is not owned by themselves out of the total number of farmers (tenants, sharecroppers, settlers, agricultural workers). The variable "Tenants" is the share of tenants out of the total number of farmers. The variables "Tractors" and "workers" are the log of number of machines and agricultural workers in a municipality. The variables "Coffee Lands" and "Banana Lands" are the number of plots that cultivated these crops. The variable "Housing" measures the number of houses in a municipality. The variable d_ "La Violencia" takes value 1 if that municipality was affected by this civil war and 0 otherwise. The variable "Left-wing support" is the share of votes that the left-wing candidate obtained during the presidential elections in 1946 and the variable "Share votes winner elections" is the share of votes that the winner obtained in the presidential elections in 1966". Robust standard errors in brackets.***p<0.01, **p<0.05, *p<0.1.

Table 42: Legal Entitlement Timing (1967-1972)

	Ordered Response Model	
	Full Sample (1)	Restricted Sample (2)
<i>A. Geographical Variables</i>		
Rainfall (log)	-0.249* (0.149)	-0.060 (0.176)
Altitude (log)	-0.203*** (0.086)	-0.106 (0.099)
Temperature	-0.052*** (0.022)	-0.051* (0.027)
Area(log)	0.092 (0.062)	0.058 (0.072)
Distance to Capital	-0.061 (0.070)	-0.054 (0.087)
<i>B. Economic and Social Variables</i>		
Population (log, 1964)	0.322*** (0.097)	0.114 (0.126)
Land reform (1930-1960) (plots)	0.000 (0.000)	-0.000 (0.000)
No owners Land (% ,1960)	0.017 (0.298)	0.0156 (0.373)
Tenants (% ,1960)	0.454 (0.295)	0.407 (0.351)
Tractors (log, 1960)	0.074** (0.031)	0.019 (0.035)
Workers (log, 1960)	0.054 (0.058)	0.044 (0.070)
Daily Wage (log, 1968)	0.330* (0.195)	0.610** (0.247)
Coffee Lands (log,1960)	-0.004 (0.048)	-0.017 (0.058)
Banana Lands (log, 1960)	0.012 (0.051)	0.030 (0.057)
Railroads (log, 1960)	0.022 (0.013)	0.020 (0.016)
Roads (log, 1960)	0.012 (0.015)	0.013 (0.018)
Housing (log, 1960)	-0.135*** (0.028)	-0.110*** (0.033)
Irrigated lands (1960)	-0.000 (0.000)	0.000 (0.000)
Literacy rate(1964)	0.002 (0.022)	0.010 (0.088)
<i>C. Historical and Political Variables</i>		
Peasant Leagues (1945)	0.325*** (0.126)	0.262* (0.142)
"La Violencia" (dummy)	0.129 (0.125)	0.206 (0.158)
Left-wing support (% , elections 1946)	0.571*** (0.163)	0.265 (0.206)
Share votes winner elections (1966)	0.150 (0.092)	0.256 (0.322)
Observations	745	498
R-squared	0.105	0.049

Note: In the full sample the dependent variable takes value 3 if the municipality got legal entitlement in 1970, 2 if it got it in 1971, 1 if it got it in 1972 and 0 otherwise. In the restricted sample the dependent variable takes value 3 if the municipality got legal entitlement in 1970, 2 if it got it in 1971, 1 if it got it in 1972 and 0 if only got legal status. The variables are in levels unless otherwise stated. The variable "Land Reform (1930-1960) measures the number of plots given to peasants during these years. The variable "No owners Land" is the share of farmers that work on a land that is not owned by themselves out of the total number of farmers (tenants, sharecroppers, settlers, agricultural workers). The variable "Tenants" is the share of tenants out of the total number of farmers. The variables "Tractors" and "workers" are the log of number of machines and agricultural workers in a municipality. The variables "Coffee Lands" and "Banana Lands" are the number of plots that cultivated these crops. The variable "Housing" measures the number of houses in a municipality. The variable d_ "La Violencia" takes value 1 if that municipality was affected by this civil war and 0 otherwise. The variable "Left-wing support" is the share of votes that the left-wing candidate obtained during the presidential elections in 1946 and the variable "Share votes winner elections" is the share of votes that the winner obtained in the presidential elections in 1966". Robust standard errors in brackets.***p<0.01, **p<0.05, *p<0.1.

Table 43: Restricted Sample-Without Controls: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution 1957-1975

	Broad Redistribution (in log)			Targeted Redistribution (in log)	
	Land Tax Revenues (1)	Central Transfers (2)	Social Expenditure (3)	Bureaucratic Expenditure (4)	Public Land allocations (5)
Dummy Legal Entitlement	-0.115* (0.059)	0.086 (0.105)	-0.270*** (0.107)	0.259*** (0.064)	0.011** (0.005)
Observations	11.368	11.074	10.738	11.242	12.235
Clusters	625	620	616	620	644
Municipality Fixed Effects	✓	✓	✓	✓	✓
Year Fixed Effect	✓	✓	✓	✓	✓
Controls					

Notes: All regressions control for year and municipality fixed effects. Robust standard errors, clustered at municipality level, are presented in parentheses. The sample is a municipality-level panel of 1080 municipalities for the years 1957-1975. The number of observations vary because of missing values in the dependent variable. The dummy explanatory variable takes value 1 if the municipal association received legal entitlement during the years that the peasant movement had state support (1967-1972) and 0 otherwise. ***p<0.01, **p<0.05, *p<0.1.

Table 44: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution (Control group: Municipalities that got just legal status).

	Total Revenues (in log)	Total Expenditure (in log)
	(1)	(2)
Legal Entitlement	0.019 (0.031)	-0.078 (0.065)
Income shock	-0.002 (0.004)	-0.001 (0.004)
Observations	11.445	10.995
Clusters	625	620
Municipality Fixed Effect	✓	✓
Year Fixed Effect	✓	✓
State-time trend	✓	✓
Municip-time trend	✓	✓

All regressions control for year and municipality fixed effect and state-time trend. Robust standard errors, clustered at municipality level, are presented in parentheses. The restricted sample is a municipality-level panel of 644 municipalities for the years 1957-1975. The number of observations vary because of missing values in the dependent variable. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had state support (1967-1972) and control group is just receiving legal status during the same period. ***p<0.01, **p<0.05, *p<0.1.

Table 45: The Effect of Legal Entitlement on Indirect Tax Revenues 1957-1975
(in log).

	Indirect Taxes Revenues		
	Restricted Sample (1)	Restricted Sample (2)	Full Sample (3)
Legal Entitlement.	0.069 (0.075)	0.025 (0.092)	0.234*** (0.047)
Income Shock	0.032*** (0.008)	0.025*** (0.006)	0.027*** (0.007)
Observations	11.374	11.387	17.917
Clusters	625	625	1080
Municip. FE	✓	✓	✓
Year FE	✓	✓	✓
State-time trend	✓		✓
Municip-time trend		✓	

Notes: All regressions control for year and municipality fixed effects. Robust standard errors, clustered at municipality level, are presented in parentheses. The restricted sample is a municipality-level panel of 644 municipalities for the years 1957-1975. The number of observations vary because of missing values in the dependent variable. The explanatory variable is the treatment effect of a municipal association receiving legal entitlement during the years that the peasant movement had State support (1967-1972) and control group is just receiving legal status during the same period in the restricted sample. ***p<0.01, **p<0.05, *p<0.1.

Table 46: Full Sample: Legal entitlement and the land tax base, 1957-1972

	Rural		Rural and Urban	
	Number Taxable Plots (1)	Cadastral Value (2)	Number Taxable Plots (3)	Cadastral Value (4)
Legal Status	144.35 (151.981)	0.209*** (0.060)	-1105.8 (976.92)	0.162*** (0.056)
Legal Entitlement	35.76 (122.94)	0.149*** (0.053)	-1174.7 (790.6)	0.098** (0.050)
Observations	13792	13792	13792	13792
Clusters	862	862	862	862
Municipality Fixed Effects	✓	✓	✓	✓
Year Fixed Effect	✓	✓	✓	✓
Controls	✓	✓	✓	✓

Notes: All regressions control for year, municipality and region-year fixed effects. Robust standard errors, clustered at municipality level, are presented in parentheses. Dependent Variables: number of taxable plots in rural and both rural and urban areas and Total payable tax in 1957 COP millions. The sample is a municipal-level panel of 862 municipalities for the years 1957-1973. ***p<0.01, **p<0.05, *p<0.1.

Table 47: Full Sample: Legal entitlement and the number of municipal employees, 1957-1972

	General Direction	Judicial System	Tax Collection	Education and Health	Total
	(1)	(2)	(3)	(4)	(5)
Municipalities	0.463**	-0.047	-0.025	-0.322	0.038
Legal entitlement (%)	(0.221)	(0.150)	(0.125)	(0.277)	(0.104)
Observations	364	364	364	364	364
Clusters	31	31	31	31	31
State Fixed Effect	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

Notes: Dependent variable: log of the number of employees in each section of the municipality. Explanatory variable: percentage of municipalities that have legal entitlement in a state relative to the total number of municipalities. All regressions control for year and state fixed effects.

Robust standard errors, clustered at state level, are presented in parentheses. The sample is a state-level panel of 31 states for the years 1957-1972.***p<0.01, **p<0.05, *p<0.1.

Table 48: 1971 Municipalities: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution 1957-1975 (Restricted Sample)

	Broad Redistribution (in log)			Targeted Redistribution (in log)	
	Land Tax	Central	Social	Institutional	Public Land
	Revenues	Transfers	Expenditure	Expenditure	allocations
	(1)	(2)	(3)	(4)	(5)
Dummy Legal Entitlement	-0.001 (0.120)	0.338 (0.220)	-0.280 (0.198)	0.142 (0.161)	0.007 (0.014)
Income shock	-0.000 (0.011)	0.032 (0.027)	-0.007 (0.034)	0.010 (0.017)	-0.002 (0.001)
Observations	1617	1595	1520	1621	1783
Clusters	92	91	91	90	96
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

Notes: All regressions control for municipality and year fixed effects and state fixed effects-time trend. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. The sample is a municipality-level panel of 95 municipalities for the years 1957-1975. The number of observations vary because of missing values in the dependent variable. The dummy explanatory variable takes value 1 if the municipal association received legal entitlement during 1971 and 1972 and 0 if only got legal status. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 49: Leads and Lags: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution 1957-1975 (Restricted Sample)

	Broad Redistribution (in log)			Targeted Redistribution (in log)	
	Land Tax Revenues	Central Transfers	Social Expenditure	Institutional Expenditure	Public Land allocations
	(1)	(2)	(3)	(4)	(5)
Legal Entitlement leads and lags					
Legal Entitlement _{t+2}	0.048 (0.035)	0.130** (0.061)	-0.088 (0.060)	0.030 (0.039)	-0.002 (0.006)
Legal Entitlement _{t+1}	0.061** (0.026)	0.055 (0.044)	-0.070* (0.041)	0.030 (0.032)	0.000 (0.005)
Legal Entitlement _{t0}	-0.239*** (0.031)	0.031 (0.038)	-0.220*** (0.046)	0.311*** (0.043)	0.009 (0.006)
Legal Entitlement _{t-1}	0.038** (0.018)	0.027 (0.039)	-0.007 (0.071)	-0.038 (0.031)	0.006 (0.006)
Legal Entitlement _{t-2}	0.055** (0.027)	0.018 (0.060)	0.239 (0.176)	-0.172** (0.076)	0.003 (0.006)
Income shock	-0.003 (0.004)	-0.022** (0.009)	-0.002 (0.014)	0.000 (0.007)	0.000 (0.000)
Observations	10.132	9.956	9.575	10.006	10.930
Clusters	625	620	616	620	643
Municip. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

Notes: All regressions control for municipality and year fixed effects and state fixed effects-time trend. Robust standard errors, clustered at municipality level, are presented in parentheses. Controls include number of tractors (1960) and population (1964) interacted with a time trend. The sample is a municipality-level panel of 1088 municipalities for the years 1957-1975. The number of observations vary because of missing values in the dependent variable. The dummy explanatory variable takes value 1 if the municipal association received legal entitlement during 1967 and 1972 and 0 if only got legal status. ***p<0.01, **p<0.05, *p<0.1.

Table 50: Restricted Sample-Seemingly Unrelated Regression: The Effect of Legal Entitlement of Municipal Peasant Associations on Redistribution 1957-1975

	Broad Redistribution (in log)			Targeted Redistribution (in log)
	Land Tax Revenues (1)	Central Transfers (2)	Social Expenditure (3)	Bureaucratic Expenditure (4)
Legal Entitlement	-0.088* (0.047)	0.193*** (0.064)	-0.051 (0.080)	0.226*** (0.047)
Observations	10.376	10.376	10.376	10.376
Municipality Fixed Effects	✓	✓	✓	✓
Year Fixed Effect	✓	✓	✓	✓
State-time trend	✓	✓	✓	✓
Controls	✓	✓	✓	✓

Notes: Seemingly unrelated regressions allow error terms in the equations separately to be correlated. The regression perform the joint test that the coefficients on the legal entitlement for the four regressions are equal to zero. Results indicate that, for the same municipalities, the hypothesis that the correlation of the residuals in the four redistributive variables is zero is rejected. All regressions control for year and municipality fixed effects and state specific time trends. Robust standard errors, clustered at municipality level, are presented in parentheses. The sample is a municipality-level panel of 1080 municipalities for the years 1957-1975. The dummy explanatory variable takes value 1 if the municipal association received legal entitlement during the years that the peasant movement had state support (1967-1972) and 0 if just got legal status. ***p<0.01, **p<0.05, *p<0.1.

Table 51: Correlation across municipalities of the share of votes of Communist
1946,1962,1966.

Share of votes left-wing parties	
	Departmental assembly elections 1966
Departmental assembly elections 1962	0.405***
Presidential elections 1946	0.236***

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

Table 52: OLS-Extensive Margin: Peasant Empowerment, co-optation (1967-1972) and Revolutionary activities (1972-1985).

	Land invasions (1)	FARC Rebel activity (2)	Peasant Protests (3)
Legal Entitlement	0.439 (0.438)	-0.721 (0.458)	0.761** (0.392)
1 peasant leader co-opted	-0.129 (0.543)	-1.011* (0.567)	-1.041* (0.580)
2 peasant leaders co-opted	-0.509 (0.679)	-1.928*** (0.707)	-0.878 (0.724)
3 peasant leaders co-opted	-2.041** (0.995)	-2.140** (1.037)	-0.793 (1.062)
4 peasant leaders co-opted	-1.732*** (0.472)	-1.777*** (0.494)	-1.153** (0.504)
5 peasant leaders co-opted	-1.432 (1.043)	-2.096** (1.086)	-1.373 (1.112)
Peasant Leagues (1947)	-0.094 (0.094)	0.668*** (0.169)	-0.172 (0.173)
Observations	591	590	591
State Fixed Effects	✓	✓	✓
Controls	✓	✓	✓

All regressions control for state fixed effects, geographical variables (area, distance to capital, altitude, precipitation), population (1964), Communist Support (1946), peasant leagues (1931-1947) and land conflicts (1878-1964). The variable land invasions is measured as the number of land invasions between 1972-1978 and FARC rebel actions is measured as the number of rebel actions executed between 1974-1985. The variable legal entitlement is a dummy that takes value 1 if municipality got legal entitlement between 1967-1972 and 0 otherwise. The base group of the variable *peasant_leaders_coopted* is 0. Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 53: OLS-Full Sample: The Effect of Peasant Empowerment and Co-optation between 1967-1972 on the potential threat of revolution between 1972-1985.

	Land invasions			FARC Rebel activity			Peasant Protests		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Legal Entitlement	0.952*** (0.225)	1.317*** (0.217)	1.078*** (0.208)	1.215*** (0.238)	1.126*** (0.360)	0.964*** (0.350)	0.800*** (0.264)	0.653*** (0.264)	0.554** (0.254)
Peasant leaders co-opted (dummy)	-0.931*** (0.274)			-1.42*** (0.288)			-0.768*** (0.316)		
Peasant leaders co-opted (number)		-0.377*** (0.081)			-0.346** (0.137)			-0.203** (0.096)	
Share land peasant leaders			-3.523*** (1.177)			-3.295* (1.979)			-2.455* (1.445)
Observations	1.040	1.040	1.040	1.002	1.002	1.002	987	961	961
State Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓

All regressions control for state fixed effects, geographical variables (area, distance to capital, altitude, precipitation), population (1964), Communist Support (1946), peasant leagues (1931-1947) and land conflicts (1878-1964). The variable land invasions is measured as the number of land invasions between 1972-1978 and FARC rebel actions is measured as the number of rebel actions executed between 1974-1985. The variable legal entitlement is a dummy that takes value 1 if municipality got legal entitlement between 1967-1971 and 0 otherwise. The variable peasant leaders co-opted takes value between 0 and 5. ***p<0.01, **p<0.05, *p<0.1.

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