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CONFLICT: THE CASE OF COLOMBIA

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ABSTRACT

Recent empirical evidence at the cross-country and subnational levels suggests that internal conflicts harm state capacity and tax performance. On the face of it this is odd: internal conflict should create strong incentives for governments to develop the fiscal capacity necessary to assert full control over their territory, just as sociological theories argue external conflict did. We argue that one reason for the pattern is that internal conflict enables groups with de facto power to capture local political and economic institutions. We test this mechanism in the case of Colombia using data on tax performance and institutions in each of Colombia's 1,120 municipalities. We show that municipalities most affected by internal conflict have tax institutions consistent with the preferences of the parties engaging in violence. Those suffering right-wing violence feature higher total property tax revenues and more land formalization. Municipalities with substantial left-wing guerrilla violence collected less tax revenue and saw less land formalization. These outcomes translate into differential level of social investment and social outcomes. Our findings provide the first concrete evidence that internal armed conflict helps interest groups capture municipal institutions for their own private benefit.

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TRIBUTACIÓN ENDÓGENA EN UN CONFLICTO INTERNO EN CURSO: EL CASO DE COLOMBIA

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RESUMEN

La evidencia empírica reciente en los niveles nacionales y sub-nacionales sugiere que los conflictos internos dañan la capacidad estatal en impuestos y prestaciones. Esto podría parecer extraño ya que, el conflicto interno debería crear fuertes incentivos para que los gobiernos desarrollen la capacidad tributaria necesaria para asumir control total sobre su territorio, al igual que las teorías sociológicas argumentan que los conflictos externos hicieron. Sostenemos que la razón de esto es que el conflicto interno permite que los grupos de poder de facto capturen las instituciones políticas y económicas locales. Examinamos los datos fiscales en el desempeño y las instituciones en cada uno de 1.120 municipios de Colombia. Se demuestra que la mayoría de los municipios y sus instituciones fiscales han sido afectadas por el conflicto interno de acuerdo a la parte dominante. Los que sufren violencia de la derecha cuentan con los ingresos tributarios más altos y más formalización de tierras. Municipios con violencia guerrillera izquierdista vieron menos ingresos fiscales y menos formalización de tierras. Estos resultados se traducen en el nivel diferencial de la inversión social y los resultados sociales. Nuestros resultados proporcionan la primera evidencia concreta de que el conflicto armado interno ayuda a capturar instituciones por grupos de interés locales para su propio beneficio privado.

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Endogenous emergence of tax institutions and tax performance in the context of ongoing internal conflict: *The case of Colombia*^{*}

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Abstract

Recent empirical evidence, both at the cross-country and at the subnational level, suggests that internal conflicts harm state capacity and tax performance. On the face of it this is odd internal conflict should create strong incentives for governments to develop the fiscal capacity necessary to assert full control over their territory, just as sociological theories argue external conflict did. Several potential mechanisms have been proposed and tested to explain this result, but a key potential political economy mechanism has not been discussed in the literature; namely the capture by groups with *de facto* power of local political and economic institutions. We test such mechanism in the case of Colombia, a country with large subnational variation in both internal conflict dynamics and the capacity to raise taxes at the local level. Using a new micro-dataset on tax laws in each of Colombia's 1,120 municipalities from 2000 to 2012 we show that municipalities most-affected by internal conflict, especially that perpetrated by right-wing paramilitary groups, have developed tax statutes that feature: lower property tax rates and weaker payment incentives. These municipalities also have a more political concentration in the legislative bodies in charge of issuing tax legislation and are less likely to respond to legally abiding petitions of their current and past tax statutes. These findings provide the first concrete evidence that internal armed conflict helps interest groups capture municipal's institutions for their own private benefit.

JEL: E62, H2, H71

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1 Introduction

A vexing challenge in international affairs is how to help states establish a resilient presence in the context of ongoing conflict featuring large regions controlled by non-state actors. State presence and state capacity are largely thought to be key ingredients of successful peace building. In addition, a sustained state presence in peripheral areas is necessary to confront global problems, like terrorism and migration. Recent large-scale interventions by the US and its allies have involved pouring billions of dollars into security and development programming in countries such as Afghanistan, Colombia, Pakistan, and the Philippines, largely in an effort to help those states extend their writ into ungoverned regions. However, the evidence of the effectiveness of these programs is at best mixed (see Beath et al., 2012; Berman et al., 2011; Crost et al., 2014; and Abadie et al., 2014). In the specific of Colombia, in recent years the government has turned its efforts to support a *territorial consolidation* program that is designed to invest on three complementary consolidation pillars: security, development and governance. While these type of holistic programs are perhaps more likely to succeed than policies that focus on only one aspect (usually security), they are arguably much more difficult to evaluate. Indeed, the evidence of the success of the Colombian consolidation program is weak (Shapiro et al. 2014).

This is all quite puzzling as historically conflicts have motivated states to develop their fiscal capacity. According to an influential sociological theory (Tilly, 1985) the formation of nation-states in 19th century Europe was motivated in part by the fiscal demands created by expansionary external wars. Those demands incentivized leaders to develop institutions which could control local populations and levy taxes. The resulting tax revenue was largely used to finance armies that would protect their kingdoms from external threats.¹

Yet internal wars have not had this effect. This is puzzling as states can clearly develop fiscal capacity when motivated to do so and a key ingredient for the consolidation of state control is the introduction of a sound and efficient tax system at the local level. The reasons are many. Local tax revenues can help finance defense expenditures in conflict-prone areas as well as property rights protections and a variety of development projects for the consolidation of state control in previously ungoverned territories. Understanding this puzzle—why external conflicts seem to motivate investment in fiscal capacity but internal conflicts do not—is key to understand the dynamics of state formation and capacity building as well as their relationship with violence and security.

A key part of the answer surely lies in the fact that in the context of internal conflicts, with fluid state boundaries and where government forces and non-state actors fight for territorial control, local tax institutions are shaped by different types of vested interests

¹Besley and Persson (2008) provide recent empirical support for this theory at the cross-country level.

than in external conflicts.

Several potential mechanisms have been proposed to explain the relationship between internal conflict and state capacity (especially tax performance). To mention a few theoretical channels: (1) By destructing physical capital, inducing forced migration and reducing the market value of private property in affected areas, conflict deteriorates the tax base; (2) As argued by Cardenas et al. (2014) conflict generates negative reciprocity of tax payers towards a state that they judge of having failed to protect them; (3) A generalized conflict environment reduces the return of productive activities and raise that of illegal businesses, that do not pay taxes (Beasley and Persson, 2008); and (4) Conflict facilitates the emergence of interest groups with *de facto* power (for instance because of their access to weapons) that can capture local political and economic institutions and shape them for their own benefit.

We focus on the latter political economy mechanism and tests its validity for the case of Colombia. To the best of our knowledge, this mechanism has not been studied in the previous literature, either theoretically or empirically. Colombia is an ideal setting for studying the relationship between civil conflict, institutional capture and tax performance. On the one hand, the country's 1,120 municipalities vary largely in terms of the dynamics of the internal conflict, as measured by various indicators. On the other, local government authorities in the country have tremendous freedom to shape economic institutions. In particular, they can choose tax rates, the tax base and updates on the land value, collection methods, penalties and incentives, etc. While in theory the autonomy given by this degree of decentralization should make the local tax administration easier by allowing the system to be tailored to the needs of each town, in practice, in the context of uneven state presence and varying degrees of territorial control and contestation by illegal armed groups, local institutions can be captured by private groups with vested interests. Our argument, in a nutshell, is that local tax institutions are endogenous to varying levels of state presence and activity of illegal armed actors.

To test this prediction, in this paper we introduce a new dataset that codes the information contained in the tax laws of each municipality in Colombia. Our dataset includes information on the range of urban and rural property tax rates, whether rates are charged according to the cadastral value of properties, its socioeconomic stratum, etc., whether or not the law includes incentives for property tax pre-payment or fi for delays, whether or not there is criminal prosecution for non-payers, etc. These data allow us to directly observe tax institutions at a high resolution. We combine these data with administrative information on municipal property tax revenues as well as with variables that account for the high frequency longitudinal dynamics of conflict activity in Colombia.

The rest of the paper is organized as follows. Section 2 provides some context and discusses the theoretical framework of our argument. Section 3 overviews the data sources.

Finally, Section 4 reports the (still preliminary) results.

2 Context

2.1 Tax institutions and tax performance in Colombia

Municipalities in Colombia vary widely, not only in levels of unrest and degrees of control the central government exerts, but also in their tax performance. Figure 1 plots the ratio of tax revenue to total expenditure (averaged for the period 2000-2012) across the country's 1,120 municipalities. The average ratio is quite small, with most municipalities levying taxes worth less than 10% of their expenditure, and the remainder of their budgets coming in the form of transfers from the national government based on population size as well as royalties from exploitation of natural resources. However, the variation is enormous, with several municipalities unable to generate practically any revenue, and a few capable of financing up to 80 percent of their expenditures with local taxes. Those choices provide a revealed preference measure of the willingness of local authorities to invest in tax capacity, a key component of state presence.

The large variation in the tax/expenditure ratio reflects the tremendous freedom that local authorities have in designing tax institutions. While the city mayor (the highest executive authority) is in charge of updating the land registry, including the land value and the cadastral information, the city council (the municipal legislative body) issues the municipality's tax statute, which includes information on the tax rates, the type of properties for which each rate applies, the collection methods, the payment incentives and financing etc.²

The main tribute levied by municipalities in Colombia is the property tax, but rates vary substantially between rural and urban areas, and may or may not vary by type of property or its specific use, be that private housing, production, or commercial purposes. In addition, systems can be mixed within municipalities, with some properties/businesses being taxed according to one rule (e.g. the value of the property recorded in the municipal cadaster), and others according to another (e.g. the socioeconomic conditions of the neighborhood where the properties are located). Several municipalities have mixed systems that combine various schemes.

²Although the city council decides on the specific tax rates, they must abide to the rates range defined by the National Congress, which is also the only body that can create new taxes or avoid existing ones. The current range for the property tax is from 5 to 16 per thousand for all types of properties. Contrast this with the case of the US, where the cross-states average property tax rate of owner-occupied houses (the type of properties that are subject to the lowest rates) is 1.04%.

2.2 The capture of local tax institutions

This autonomy is one of the largest in the context of Latin America. Only Brazil and Venezuela have more decentralized systems and in the rest of the countries the freedom of local governments is large restricted, with provincial or national governments in charge of all the tax legislation. However, while in theory such autonomy could enhance the efficiency of the tax administration by allowing it to be tailored to each municipality's characteristics, in practice a broad range of local economic and political incentives can lead to sub-optimal taxation. In particular, in a context of uneven state presence, local political and armed groups that compete with the state's authority can capture tax institutions for their own benefit. That is, the choice of local tax institutions is surely endogenous to varying levels of state presence and illegal armed actors, making this case interesting and unique. From the classic book of Persson and Tabellini (2000), the contemporaneous political economy approach acknowledges that conflicts of interest along with heterogeneity of agents make actual decision-making in the political arena differ from the normative standards. This is likely to be the case in Colombia, where tax policy takes form in different branches of the local government at the hands of politicians who, in addition of having a preference profile that differ from the social optimum, potentially face high degrees of coercion by illegal armed groups.

Table 1 provides suggestive evidence that this is very likely the case. It shows that, during our period of study (2000-2012) violence perpetrated by the different illegal armed groups is negatively associated with property tax revenue per capita, and that this relationship is significantly different from zero. This is true both by looking at the cross sectional municipal variation, averaged over the entire period (Panel A), and by exploiting the longitudinal variation of the data (Panel B).

Columns 1 to 4 in both panels estimate the relationship by OLS. In contrast, to correct for the likely endogeneity present in the relationship between tax revenues and the incidence of conflict (potentially given either by reversed causality or by omitted variable bias), columns 5 to 8 estimate the relationship by 2SLS. Here conflict incidence is instrumented by a vector of variables capturing the anti-drug trafficking enforcement efforts of the government. The Colombian Anti-narcotic police (DIRAN by its Spanish acronym) is a centralized branch of the National Police that has its own intelligence infrastructure and that carries out anti-drug operations following centralized orders. Thus, this type of actions, including the dismantling of satellite-detected drug-production laboratories, break-ins and the capturing of drug traffickers, and the seizing of their armament and the drug transported, are unlikely to respond to local-level dynamics such as poverty/inequality, the presence of minerals and, importantly, changes in local tax legislation overtime, that may in turn shape the ebbs and flows of local conflicts. In turn, by challenging the financial support of illegal armed groups, known to get most of

their funding from drug-traffic-related activities, these centrally-planned intelligence anti-drug operations constitute a valid instrument of local conflict incidence.

The identification assumption is then that these type of intelligence activities, which are planned by high-ranked police commanders in a *situation room* in Bogotá, affect tax performance only through their impact on the activities of illegal groups, which are affected insofar as drug-traffic activities constitute a tangible source of financing for them. To the extent that one believes the identification assumption, the association between the violence perpetrated by illegal groups and tax performance, reported in Table 1, could be interpreted as causal.³

Columns 1 and 5 investigate the relationship between per capita property tax revenue and a measure of conflict that aggregates the attacks of both guerrilla and paramilitary groups. Both in the cross section and the panel, and both using OLS or 2SLS, this association is negative and significant. Columns 2 and 3 (respectively 6 and 7 for the instrumental variables case) break the aggregated measure into guerrilla attacks (columns 2 and 6) and paramilitary attacks (columns 3 and 7). As in the case of the aggregate conflict measure guerrilla attacks are negative and significantly associated with tax performance across specifications. Paramilitary attacks, however, while negative in sign are not significant in the cross-section, neither in the OLS nor in the IV specification (see columns 3 and 7 of Panel A, respectively).

Finally, columns 4 and 8 include the attacks perpetrated by both armed groups in the same regression model to investigate whether they are significant conditioning on one-another. Again, paramilitary attacks are not significant in the cross-section (Panel A). However, once the full panel variation of the data is exploited both type of attacks are jointly significant (Panel B). The panel specifications include municipality fixed-effects (which control for any characteristic, observed or unobserved, that varies across municipalities but not overtime), and the standard errors are clustered at the municipal level.⁴

The IV specifications (columns 5 to 8) include the F-statistic of the test of weak instruments of the first stage. In the majority of cases (the main exception being the regressions in which guerrilla and paramilitary attacks are simultaneously included), the statistic is larger than 10, considered the minimum threshold necessary to avoid a weak instruments problem.

Thus Table 1 illustrates the main stylized fact that motivates this paper, there is a negative (and likely causal) association between variables related to the dynamics of civil conflict and state capacity as proxied by tax performance. This result is in line with the

³This source of exogenous variation has been widely used in the recent international literature on the Colombian conflict. Examples include Rodriguez and Sanchez (2010 and 2012), Camacho and Rodriguez (2012), Lemus (2014) and Vargas et al. (2015).

⁴In contrast, the cross-section specifications add department-level fixed effects. Colombia's 1,100+ municipalities (equivalent to US counties) are aggregated into 32 (inland) departments (equivalent to US states).

evidence presented by Cardenas et al. (2014), whose identification strategy is the inclusion of municipality fixed effects only. Instead the main contribution of this paper is testing the empirical relevance of one of the potential mechanisms behind this reduced-form relationship. Such mechanism, that has yet been studied, posits that internal conflict hinders tax performance as groups with *de facto* power in the context of the armed struggle for territorial control are likely to capture political and economic institutions at the local level, in order to use them for their own private interest.

2.3 Impact on local public goods provision

Understanding the determinants of why some places are much better at collecting taxes than others is of foremost importance for policy purposes. To mention just one compelling example of why we should make strong efforts in improving local tax capacities, Table 2 shows that per capita property tax revenue is positively associated with desirable outcomes of both the quantity and quality of education (respectively enrollment rates and test scores), and negatively associated with undesirable outcomes such as illiteracy rates. This association is, again, both present in the cross section (Panel A of Table 2) and in the panel structure (Panel B), and when controlling, respectively, for department and municipality effects (even columns). The capacity of accumulating human capital is hampered by the incapacity of collecting the taxes that are necessary for the provision of this and other relevant public goods. To the extent that interest (legal and illegal) groups can capture local institutions to shape them to favor their interests and not those of the community, the long term prospects of development will be hurt.

3 Data

Recall that our argument is that a particular channel through which the dynamics of local conflict may affect tax performance is the capture of municipal tax institutions and policy-making bodies by groups with *de facto* power, like armed groups, that try to shape such institutions and decision making for their own private benefit. This channel is largely understudied in the literature, in contrast to other potential mechanisms like the conflict-induced destruction that deteriorates the tax base and the shift from productive, revenue-generating activities to illegal activities which thrive on violence.

Perhaps one first order reason of the relative little attention to this political economy mechanism is the lack of reliable data at the local level on the characteristics of the tax institutions. In Colombia there is publicly available data from IGAC, the national land registry service, on the land values registered in the municipalities' cadaster. These data are aggregated at the municipal level. We compute two additional variables: the number of registry updates and the time elapsed since the last registry update.

In contrast, data on the content of local tax legislation is unavailable. Thus, for the purpose of answering our research question, we have constructed (and are still putting together) original data on taxation schemes at the local level. In particular, we obtained the tax statutes of most Colombian municipalities and coded local level information on the range of urban and rural property tax rates, whether rates are charged according to the cadastral value of properties, its socioeconomic stratum or a mixed system, whether or not the law includes incentives for property tax pre-payment or fi for delays, whether or not there is criminal prosecution for non-payers, etc.

While some tax laws are available on the official website of the municipalities' administration, most of them had to be retrieved by sending a legally valid petition, requesting the statutes. The Colombian Constitution gives the right to citizens to obtain from local authorities or official institutions public information that they may consider of interest. For this purpose, individuals have to submit a so called "derecho de petición", and the receiver is legally bounded to provide the requested information within a specific time frame. Unfortunately, in practice the authorities that receive the request respond way after the legal period has passed, if they ever respond. In spite of the Constitutional mandate, in most cases no penalties are attached to non-compliers.

Delaying the response of, in the extreme, refusing to provide the tax law documentation altogether is, of course, likely to be correlated with both the determinants of diff t tax schemes and with the actual equilibrium schemes. So, in addition to coding the available tax statutes, we consider these delays or lack of responses an interesting outcome per se, that may help explain the capture mechanism.

In addition to the aforementioned data, on average land values as recorded in the municipal land registry, and on tax laws, originally collected and coded by us, we have administrative data on per capita tax revenues. We focus for the time being on property tax, both because is the most important tribute levied by municipalities in Colombia and because we have not fi coding the information on other taxes from the statutes.

We also have data on the incidence and and dynamics of conflict-type violence at the municipal level. The event-level dataset compiled in the last fi e years by one of us (Vargas), records for every event its location and date, its perpetrator and type (distinguishing between unilateral bellicose activities like guerrilla attacks and combats between two of the conflict parties), and the resulting casualties.

We also use data on local elections to code several variables related to political competition and the potential *de jure* capture of municipalities by political elites, both at the city council and the mayor level. Recall that in Colombia local government authorities municipalities are free to choose both tax rates and collection methods. In particular, while the mayor is in charge of managing and updating the city's cadaster (i.e. land registry), the council decides upon the rate ranges. Hence, the large variation in the tax ratio reflects choices made by the mayors and municipal councils about both the rates of

property tax and what kinds of properties are subject to taxation.

Our dataset contains a number of important controls including other fiscal data, the presence of natural resources and illegal coca crops, geographical characteristics of municipalities and variables related to state presence and institutional quality. Taken together, our data will allow us to study the interplay between endogenous tax systems, tax performance, and the incidence of violence and conflict.

4 Results

Recall that the city mayor is in charge of managing and updating the land registry, and the city council can decide tax rates, tax collection mechanisms, enforcement, fiscal data, etc. Since either or both these government levels can be captured by violent groups with vested interests, we explore the extent to which the intensity of the internal conflict is correlated with variation in outcomes associated both with the responsibilities of the mayor and those of the city council.

We also distinguish between violence perpetrated by left-wing guerrillas and by right-wing paramilitaries. In fact, our findings point to an interesting asymmetry between the activity of these two groups and the mechanisms through which it affects tax performance. In particular, we find that guerrilla attacks are correlated with the mechanisms pertaining to the jurisdiction of the mayor, while paramilitary attacks are associated with those pertaining to the city council.

Table 3 shows that guerrilla attacks are associated with a lower registry-recorded valuation of properties (column 1), with a longer elapsed time since the municipal cadastre was last updated (column 2), and with fewer number of cadastral updates. That is guerrilla attacks are correlated with less updated land registries, that undervalue properties. Paramilitary attacks do not affect neither of these variables.

In contrast, as reported on Table 4, paramilitary attacks are associated with less competitive elections of city councils (and thus more politically concentrated municipal legislative bodies, column 1), with lower average tax rates (column 3), and with fewer incentives for property tax payment (column 4). In addition, as reported in column 2, places with more paramilitary attacks are places that have taken longer (above and beyond the legal time authorities can use to respond the “derecho de petición”) to send us the municipal tax legislation. Some of these places are likely never to send it. Guerrilla attacks are not correlated with neither of these variables.

It is worth noting that, as time goes on and we obtain new tax statutes, the dataset will be updated, so these results are conditional on the available data and are likely to change. However, since we have about 70% of the municipal statutes, we expect these changes to slightly vary the magnitude of the coefficients and make the standard errors more precise. It is unlikely that the substantive results can be overcome.

5 Conclusion

According to Tilly (1985) the very process of state formation is shaped by the relationship between taxation and (inter-state) conflict. However, there is little evidence on what determines the emergence and persistence of inefficient tax systems at the local level in the context of internal conflict. In particular, the existing literature overlooks a key political economy mechanism, whereby groups with *de facto* power can capture local political and economic institutions and shape them in their favor.

The lack of evidence in favor or against this particular mechanism may be related with the fact that the data necessary to test it is difficult to obtain. We address this obstacle in this paper, and create a new dataset on the institutional details of (property) tax legislation at the municipal-level in Colombia.

We explore both how conflict affects key characteristics of tax statutes that shape tax performance (like tax rates, collection methods, incentives and fines etc.) and the variation given by the very process of obtaining the tax laws.

The results point to an interesting asymmetry between guerrillas and paramilitary that is worth exploring further. While paramilitary violence affects the mechanisms pertaining to the autonomy of city councils, guerrilla violence affects those pertaining to the jurisdiction of the mayor.

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Table 1: Attacks by insurgents (Guerrillas and Paramilitaries) and property tax performance

Dependent variable: <i>Per capita property tax revenue</i>								
	Ordinary Least Squares				Two stages Least Squares			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel A: Cross-sectional variation</i>								
Aggregate insurgent attacks	-0.000821* (0.000446)				-0.00261** (0.00131)			
Guerrilla attacks		-0.00440*** (0.000778)		-0.00472*** (0.000781)		-0.00936*** (0.00196)		-0.0243*** (0.00788)
Paramilitary attacks			-0.000142 (0.000341)	0.000550 (0.000420)			-0.00295 (0.00229)	0.0101 (0.00627)
First-stage F-stat	-	-	-	-	117.4	100.2	62.1	8.9
Observations	1,101	1,101	1,101	1,101	1,093	1,093	1,093	1,093
Dept. fi effects	./	./	./	./	./	./	./	./
<i>Panel B: Panel variation</i>								
Aggregate insurgent attacks	-0.000438*** (8.03e-05)				-0.00146*** (0.000355)			
Guerrilla attacks		-0.000770*** (0.000108)		-0.000746*** (0.000104)		-0.00494*** (0.00189)		-0.00315** (0.00158)
Paramilitary attacks			-0.000300*** (9.64e-05)	-0.000262*** (7.44e-05)			-0.00154*** (0.000440)	-0.00115*** (0.000403)
First-stage F-stat	-	-	-	-	42.6	8.7	45	6.7
Observations	13,814	13,814	13,814	13,814	5,287	5,287	5,287	5,287
No. of municipalities	1,101	1,101	1,101	1,101	1,088	1,088	1,088	1,088
Mun. fi effects	./	./	./	./	./	./	./	./

Notes: Robust standard errors in parenthesis. Standard errors are clustered at the municipality level in the panel specifications (Panel B). All regressions control for (the log of) municipal population to take into account scale differences.

Table 2: Property tax performance and performance in locally provided public goods (education)

Dependent variable:	Illiteracy rate		Primary enrollment		Math scores		Language scores	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel A: Cross section</i>								
Prop. tax revenue	-87.34*** (25.69)	-50.91*** (16.32)	110.4*** (31.81)	140.1*** (41.91)	8.609*** (1.864)	7.686*** (2.033)	22.93*** (3.962)	13.78*** (3.122)
Observations	1,091	1,091	1,057	1,057	1,091	1,091	1,091	1,091
R-squared	0.085	0.37	0.038	0.153	0.040	0.298	0.094	0.445
Dept. FE		./		./		./		./
<i>Panel B: Panel</i>								
Prop. tax revenue					10.78*** (2.057)	27.49*** (4.611)	19.16*** (3.081)	3.156 (2.758)
Observations					8,315	8,315	8,315	8,315
R-squared					0.018	0.032	0.033	0.001
Mun. FE						./		./
Number of Muns.						1,091		1,091

Notes: Robust standard errors in parentheses. Standard errors are clustered at the municipal level in panel specifications. All regressions control for (the log of) municipal population. *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

Table 3: Guerrilla violence and cadastral performance in the period 2000-2012

Dependent variable:	Per capita land value	Cadastral update lag	N. of cadastral updates
Guerrilla attacks	-1.152*** (0.252)	0.821** (0.384)	-0.0501* (0.0268)
Constant	-15.15*** (4.485)	2.808 (4.056)	-0.739*** (0.268)
Observations	908	877	909
R-squared	0.310	0.318	0.442
Dept. FE.	./	./	./
<i>Controls:</i>			
Population	./	./	./
Area	./	./	./
Geography	./	./	./
Distance to capital	./	./	./
Multidimensional poverty	./	./	./

Table 4: Paramilitary violence and tax legislation in the period 2000-2012

Dependent variable:	HHI City Council	Petition Right delayed	Average prop. tax rate	Payment incentives
Paramilitary attacks	0.000865* (0.000466)	1.387** (0.595)	-0.0785*** (0.0225)	-0.0168*** (0.00501)
Constant	0.234*** (0.0160)	-5.257 (13.79)	16.64*** (1.810)	0.893*** (0.272)
Observations	1,037	55	738	722
R-squared	0.361	0.352	0.188	0.225
Dept. FE.	./	./	./	./
<i>Controls:</i>				
Population	./	./	./	./
Area	./	./	./	./
Geography	./	./	./	./
Distance to capital	./	./	./	./
Multidimensional poverty	./	./	./	./

Figure 1: Tax revenue over total expenditure across Colombian municipalities

