

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

Jacob Shapiro Abbey Steele Juan Vargas

Princeton University University of Syracuse Universidad del Rosario

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Motivation

State presence and conflict

- How to help states establish presence in regions controlled by non-state actors in the context of ongoing conflict (or post-conflict)?
 - State presence largely thought to be one of the key ingredients of successful peace building
 - E.g. Currently the main regional policy in Colombia focuses on *Consolidation*
- State presence also thought as necessary to confront global problems, like terrorism and migration.
 - US and allies have poured billions of dollars into security and development programming (e.g. Afghanistan, Colombia, Pakistan, Philippines) in an effort to help states extend their command into ungoverned regions.

Motivation

State presence and taxation

- Sound and efficient tax system is a key ingredient for consolidation of state capacity at the local level
 - Local tax revenues to finance defense expenditures in conflict areas,
 - property rights protection,
 - and development projects.
- Understanding how tax systems emerge endogenously in conflict areas is important to understand the dynamics of state formation and state capacity, and relationship with violence and security.

Conflict → state (taxing) capacity

Potential mechanisms

Several potential mechanisms of the relationship between conflict and tax performance:

- 1 Deterioration of tax base (destruction, displacement, value of property)
- 2 Negative reciprocity from taxpayers toward illegitimate government – Cárdenas et al. (2014)
- 3 Incentives to invest in appropriative instead of productive activities (e.g. emergence of illegal business) – Besley and Persson (2008)
- 4 **Capture of local political and economic institutions**

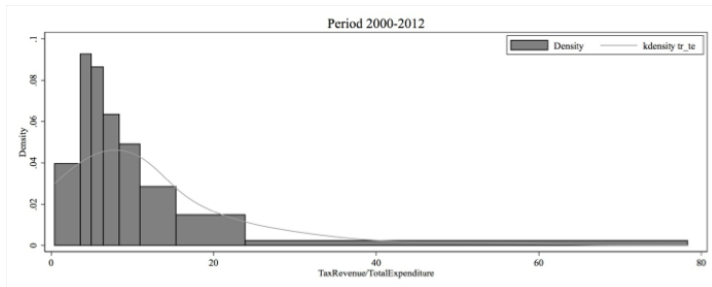
Capture of local institutions

Our argument

- Local government authorities in Colombia have tremendous freedom to choose tax rates, tax base and land value, collection methods, etc.
 - City Mayor is in charge of managing and updating the cadaster
 - City Council decides upon the tax rates, collection methods, fines, etc.
 - In theory, this autonomy enhances tax administration by allowing taxes to be tailored to each municipality's needs
 - In practice, in a context of uneven state presence, local groups with *de facto* power can capture tax institutions for their own benefit.
- Local tax institutions are endogenous to varying levels of state presence and activity of illegal armed actors.

Why Colombia?

- Large variation in levels of violent unrest and degrees of control by central government across municipalities
- Large variation in tax performance. E.g. while some local authorities fund almost no expenditures with tax revenues, while others up to 80%
- Availability of high quality subnational data on tax revenues, conflict, and **local tax codes**



Why do we care?

Local tax capacity is key for provision of important public goods: E.g. Education

Dependent variable:	Illiteracy rate		Primary enrollment		Math scores		Language scores	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: <i>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		✓		✓		✓		✓
Panel B: <i>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

Stylized fact

Local conflict dynamics shape tax revenue

Dependent variable: <i>Per capita property tax revenue</i>				
	Cross section		Panel	
	OLS	IV	OLS	IV
Guerrilla attacks (IV: Anti-narcotic operations)	-0.00440*** (0.000778)	-0.00839*** (0.00311)	-0.000770*** (0.000108)	-0.00246* (0.00138)
First stage F-stat		162.73		24.35
Observations	1,100	1,093	13,814	11,552
R-squared	0.294	0.283	0.024	-0.014
Number of Muns.			1,100	1,090
Paramilitary attacks (IV: Captures)	-0.000142 (0.000341)	-0.00679** (0.00300)	-0.000300*** (0.000096)	-0.00542*** (0.000843)
First stage F-stat		58.27		132.70
Observations	1,101	1,093	13,814	11,817
R-squared	0.282	0.168	0.021	0.374
Number of Muns.			1,100	1,101
Controls	✓	✓	✓	✓
Dept. FE	✓	✓		
Mun. FE			✓	✓

Testing the institutional capture mechanism

- Recall that the City Mayor is in charge of managing and updating the land registry, which includes the value of taxed properties
 - We use data on property values, number of registry updates and the time elapsed since the last update, available from IGAC
- City Councils can decide tax rates, tax collection mechanisms, enforcement, fines, etc.
 - We build an original dataset that summarizes the information available in the tax codes of every municipality, obtained through “derechos de petición”
- We find that guerrilla activity affects tax performance through its impact on institutions pertaining to the City Mayor.
- On the other hand, paramilitary activity affects tax performance through its impact on institutions pertaining to the City Council.

Preliminary evidence

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	✓	✓	✓

Preliminary evidence

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	✓	✓	✓	✓

Conclusion

- **Tilly (1992):** 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 on internal conflict.
- Existing literature overlooks the political economy mechanism that groups with *de facto* power can capture local political and economic institutions.
- Lack of evidence of this mechanism may be related with little data available.
- We overcome this by coding municipal-tax statutes,
- and by exploiting the variation give by the very process of obtaining the statutes
- Results suggest interesting asymmetry between guerrillas and paramilitary that is worth exploring further.

Thanks!