

Property Rights and Social Institutions

How Informal Institutions and Chiefs Shape Land Formalization in Urban Africa

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Gabriel Tourek³ Jonathan Weigel³

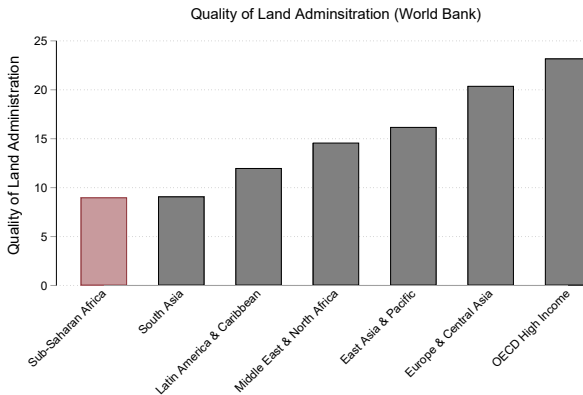
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World Bank Land Conference
May 15, 2024

Property Rights in Weak States

- ▶ Property rights are central to development (Acemoglu, Johnson and Robinson, 2001; Besley and Persson, 2011; De Soto, 2000; North and Thomas, 1973)
- ▶ Weak property rights deter investment and capital accumulation (Besley, 1995; Besley and Ghatak, 2009; De Soto 1989)
- ▶ By 2030, the World Bank Wants 70% of the world population to have secure land property rights
- ▶ Many developing countries are characterized by high levels of informality and weak property rights (Acemoglu, 2005; Holland, 2017)
- ▶ Why?:
 - ▶ **Supply-side:** High monetary and transaction costs → deter citizens from formalization
 - ▶ **Demand-side:** Citizens may achieve tenure security through **informal institutions** or customary land rights → citizens do not really need formal land rights (Deininger, 2001; Honig, 2022; Le Rossignol et al., 2022)

The Puzzle of Land Formalization in Sub-Saharan Africa



Middle East & Africa

Sep 12th 2018 edition



Dreams of fields

The quest for secure property rights in Africa

Handing out title deeds is not enough

Sep 12th 2018
00:00:05:16



Builders are busy outside Louisa Qangiso's house in Khayelitsha, a township on the outskirts of Cape Town. The 49-year-old is putting up eight studio flats in her backyard that she will rent out for 3,000 rand (\$177) per month. This could almost triple the value of her property, from roughly 570,000 to 1.6m rand. These

- ▶ Quality of land administration is the lowest, registration costs are the highest
- ▶ 34 land titling and registration World Bank projects in 2004 – 2009
- ▶ Extremely low rates of land formalization (less than 10%)

This Paper

Does reducing barriers to formalization increase the demand for land titles?

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Land titling intervention in Kananga, DRC

- ▶ **Goal:** Make land tilting **easier** and **cheaper**
- ▶ **Treatment:** subsidies to land titles (individual level)
- ▶ Unit of randomization: individuals
- ▶ Control: status quo (high monetary and transaction costs)
- ▶ Timeline: June 2017 – January 2020 [Timeline](#)
- ▶ $N = 510$ (random sample)

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- ▶ The experiment increased the uptake of formal land titles
- ▶ Significant individual heterogeneity — **explained by informal institutions**
 - ▶ Citizens who participate more in social institutions are more likely to demand a land title

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Result #2: Crowding-out

- ▶ When citizens are offered formal property rights, they are more likely to exit local informal institutions

Outline

Introduction

Argument

Context

Intervention

First Stage

Heterogeneous First Stage

Reduced-Form Effects

Conclusion

Land titling and social institutions

- ▶ **Insurance view**

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- ▶ Informal insurance → lower adoption (or failure) of land titling (Honig 2022)

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Kananga, D.R. Congo



- ▶ Fourth largest city in the DRC
 - ▶ Population \simeq 1.6 million
- ▶ Median income: \simeq \$ 1.5 per person per day

Land Tenure Regime in Kananga



▶ Coverage:

- ▶ Very few citizens have a formal land title
- ▶ 16% in our sample

▶ Tenure Insecurity:

- ▶ Over 25% of respondents experienced at least one property dispute
- ▶ Over 60% knew someone who did
- ▶ Fear of occupation
- ▶ Conflict among neighbors

Land Titles in DRC

- ▶ **Benefits of land titles:**
 - ▶ Most powerful title: 'Impossible to attack', full rights over plot
 - ▶ Can be used as collateral —but most people remain outside the banking system

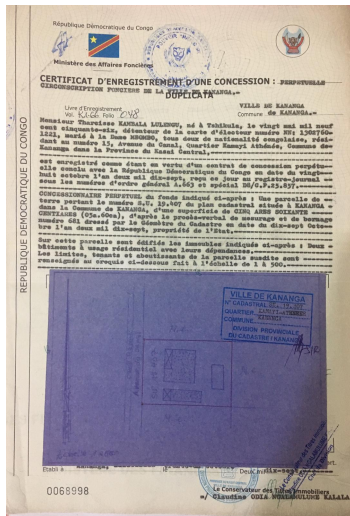
Land Titles in DRC

► Benefits of land titles:

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- Can be used as collateral —but most people remain outside the banking system

► Obstacles:

- Difficult: About six steps, each a potential bottleneck
- Administrative delays
- Costly: Red tape — 'administrative fees'. Citizens report paying \$1,000 for a land title
- Bargaining between the head of the land titling office and the owner → Gap between official and actual price



► Titles by Type

Social Institutions

Social Institutions: The rules that govern social relations within a community (Lust and Rakner, 2018)

- ▶ **Horizontal:** enforcement by individuals of similar social standing. Example: extended family, church networks, mutual aid societies
- ▶ **Vertical:** enforcement by individuals of higher social standing. Example: chiefs and activities they organize

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Benefits:

- ▶ Informal insurance (Fafchamps and Lund, 2003; Townsend, 1994)
- ▶ Substitute for formal institutions

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- ▶ Monetary cost:
 - ▶ Social Extraction (Lust and Rakner, 2018)
 - ▶ Informal Taxation (Olken and Singhal, 2011)

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★ **Weak states, strong societies** (Migdal, 1988; Acemoglu and Robinson, 2019)

Horizontal Social Institutions

Citizens participate in several [horizontal institutions](#)

- ▶ Rotating Savings and Credit Associations (ROSCAs)
- ▶ Mutual Aid Societies
- ▶ Churches
- ▶ Contributions to weddings/funerals

Benefits:

- ▶ Some evidence for insurance (Tshibue, Mbosho and Weigel, 2020)

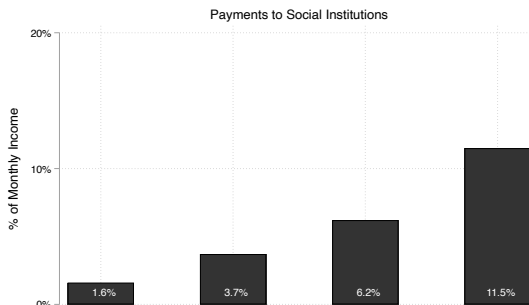
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- ▶ Door-to-door solicitation
- ▶ Social sanctions (isolation, gossip, ostracism)
- ▶ Progressivity
- ▶ Focus group evidence

Vertical Social Institutions: City Chiefs

- ▶ In sub-Saharan Africa traditional and non-traditional chiefs are a key actor in local governance
- ▶ City chiefs common in urban areas of Francophone African countries –also in Kananga
 - ▶ Position created in 1972
 - ▶ Approved by government. Lifelong, often heritable tenure
 - ▶ High status individuals
 - ▶ Link between citizens and the provincial government
- ▶ Chiefs vary in their **power** and **connections** to citizens
 - ▶ **Salongo**: informal labor tax



Outline

Introduction

Argument

Context

Intervention

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Land Titling Program

1. Simplified administrative procedure: Home visits
2. Lower, fixed price: Reduce hassle costs and bribes
3. Subsidies:

DOCUMENT	AVERAGE PRICE
Certificat d'Enregistrement	\$ 75
Contrat de Location	\$ 40
Acte de Vente Notarié	\$ 20

- ▶ 75 USD/ 2,900 USD → title cost: 2.5% of average property value
- ▶ Close to the cost of registering property in Europe (2.8%) (Lall, Henderson and Venables, 2017)
- ▶ [Timeline](#)

Eligibility and Sampling

Eligibility (set by our partner, the Land Titling Office)

1. Show interest in the program
2. Having a previous title
3. Renters excluded
4. Changes in eligibility caused a significant reduction in sample size Attrition

Sampling

1. Partition city into 364 artificial neighborhoods (polygons) using satellite map Polygons
2. Randomly sample HHs in each polygon following skip pattern

Randomization

1. Randomization after survey

- ▶ Sample 12 HHs per polygon
- ▶ Elicit interest in participation in titling program during baseline
- ▶ Assign to T and C, ensuring even numbers within polygon
- ▶ Enumerators revisit selected HHs with invitation to participate

2. Integrated randomization

- ▶ Randomization built-in the survey
- ▶ Faster, obviates need for follow-up visit

★ Randomization **achieved balance**

Balance Titling Sample

Balance Initial Sample

The Title Production Process

► The **simplified procedure** involved the following four steps:

1. Technical visit
2. Cadastral office
3. Land titling office
4. Title delivery

Step 1: Technical Visit

1. Elicit eligibility: proof of purchase / ownership
2. Elicit interest in the titling program
3. Administer baseline survey if **eligible and interested**
4. Invite selected property owners to participate with low/medium/high price flier



Steps 2 and 3: Cadaster and Land Titling Office



- ▶ Amazingly careful: concerned about begin called to court for property disputes

Step 4: Official Signature and Title Delivery



1. Survey Data

- ▶ Respondent Baseline Survey (July – September 2017. $N = 4,343$)
- ▶ Respondent Endline Surveys (Round 1: March – September 2019; Round 2: December 2019 – February 2020)
- ▶ Chief Survey ($N \simeq 1,000$ chiefs)

2. Administrative Data on Land Titling

- ▶ Initiation of the Tilting Process
- ▶ Receipt of a Land Title

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Introduction

Argument

Context

Intervention

First Stage

Heterogeneous First Stage

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Estimate the first stage of the land titling program:

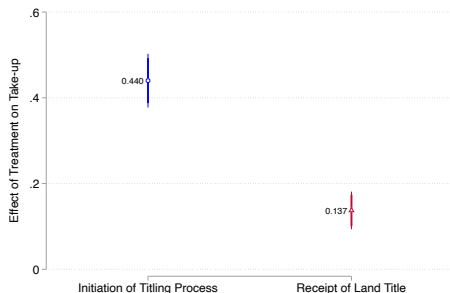
$$Y_i = \beta_0 + \beta_1 \text{Program}_i + u_i$$

First Stage

Estimate the first stage of the land titling program:

$$Y_i = \beta_0 + \beta_1 \text{Program}_i + u_i$$

- ▶ i denotes individuals
- ▶ β_1 denotes the causal effect of the program on take-up
- ▶ Controls: income, gender, education, and property value



- ▶ 44 pp increase in initiation of titling process
- ▶ 14 pp increase in acquisition of formal land title

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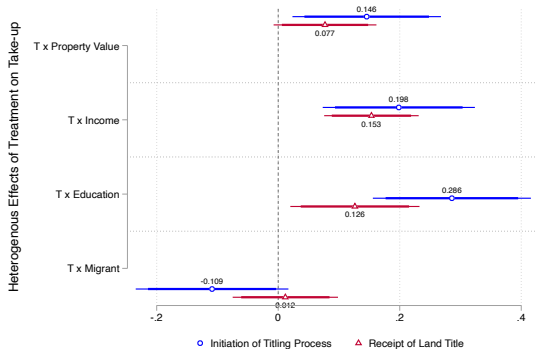
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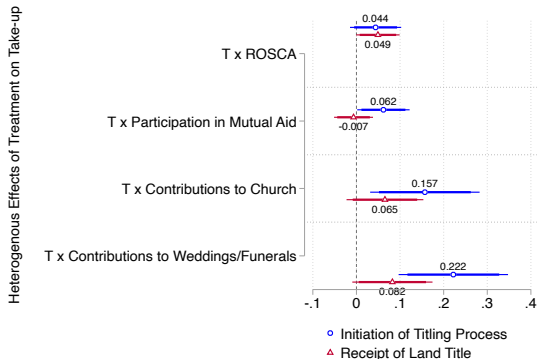
Effect of Socioeconomic factors



- Consistent with economic models of land titling (Alston et al. 1996; Miceli et al. 2001)

Effect of Horizontal Social Institutions

Who demands a Land Title

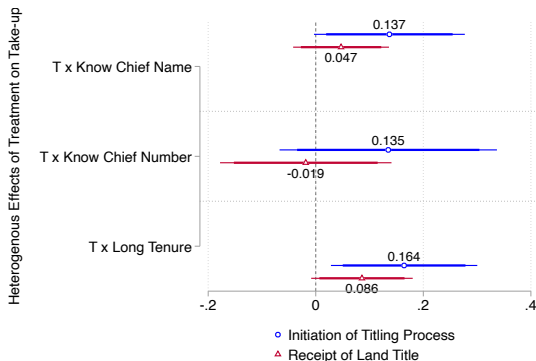


- ▶ Higher participation in horizontal social institutions predicts demand for titling
- ▶ Inconsistent with [substitution](#) logic

- ▶ Information Sharing
- ▶ Social Preferences
- ▶ Trust

Effect of Vertical Social Institutions

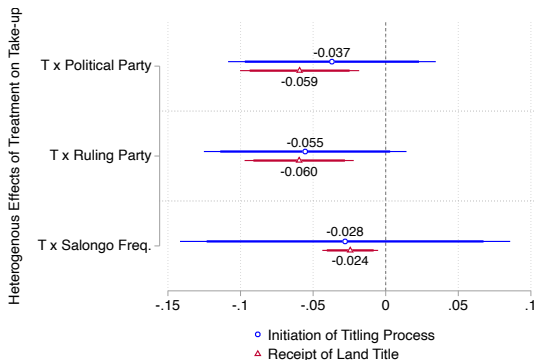
Connections to chiefs



- ▶ Connections to chiefs generally predict demand for titling

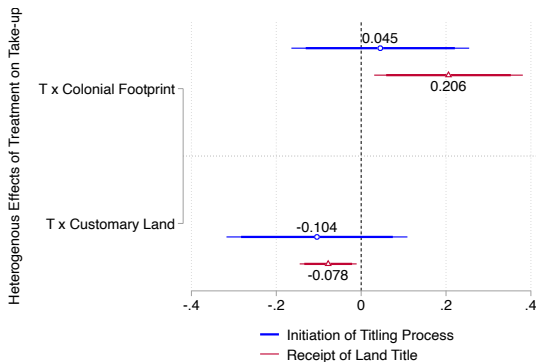
Effect of Vertical Social Institutions

Chief Political Connections/Power



- ▶ Politically connected chiefs lead to lower titling success
- ▶ Consistent with the idea that such chiefs offer protection and thus block titling and/or may fear retaliation by government officials

City center vs. customary areas



- ▶ No titles delivered in customary areas
- ▶ Consistent with substitution and evidence in Honig (2022) and others

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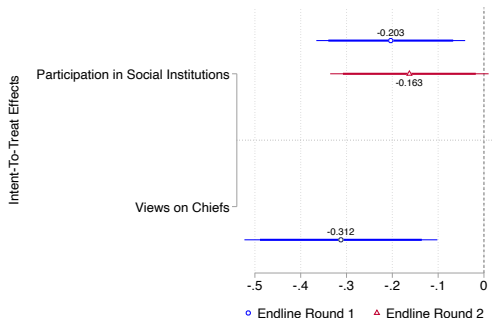
Conclusion

Effects on Social Institutions

Estimate the reduced-form effects of the land titling program

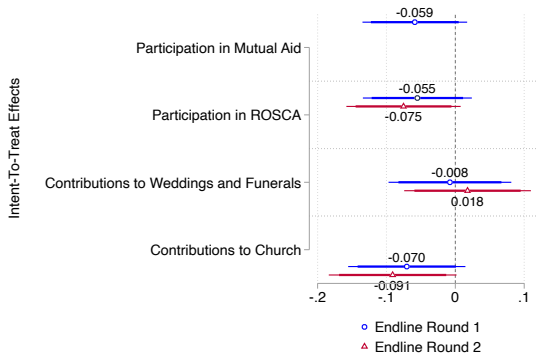
$$Y_i = \beta_0 + \beta_1 \text{Program}_i + u_i$$

- ▶ i denotes individuals
- ▶ β_1 denotes the causal effect of the program on outcomes



- ▶ Program crowded out engagement both with vertical and horizontal institutions
- ▶ Inconsistent with [complementary](#)

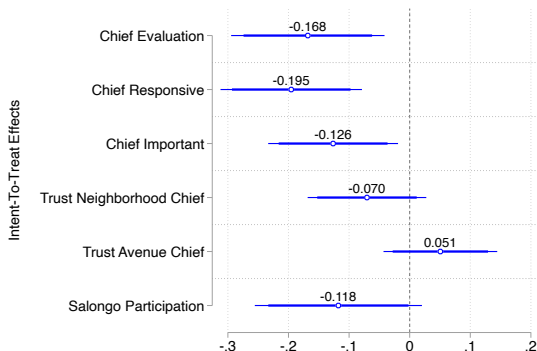
Crowding-out: Horizontal Institutions



- ▶ Treated citizens participate less in horizontal institutions

Crowding-out: Vertical Institutions

Views on Chiefs



- ▶ Treated citizens developed more negative view on chiefs

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Scholarly Contributions and Policy Lessons

Scholarly contributions

- ▶ First paper to document **social effects** of formal land titling
- ▶ Challenge the notion that informal institutions are a **perfect substitutes** for formal property rights

Policy Lessons

- ▶ Well-designed interventions can significantly increase demand for land titles
- ▶ Participation in informal institutions is an important moderator behind take-up
- ▶ Social institutions critically interact with formalization interventions

THANK YOU!

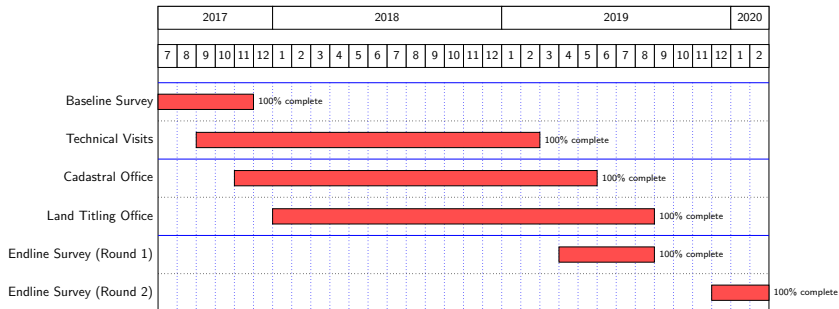
www.pablobalan.com

pbalan@tauex.tau.ac.il

Appendix

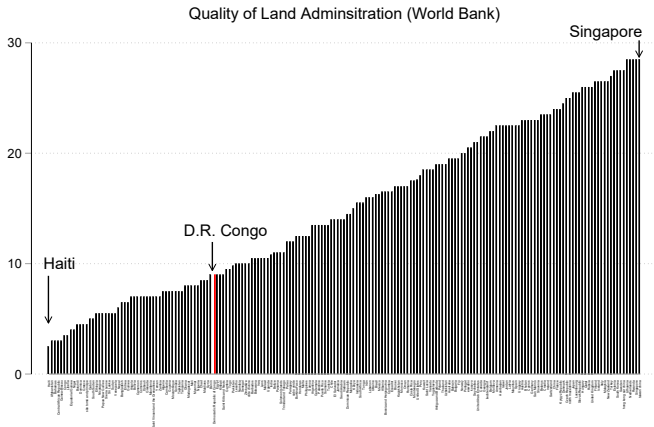
1. Intervention Timeline [▶ Go](#)
2. Neighborhoods of Kananga [▶ Go](#)
3. Balance: Initially Eligible Sample [▶ Go](#)
4. Balance: Final Titling Sample [▶ Go](#)
5. Attrition Analysis [▶ Go](#)
6. Types of Titles Delivered [▶ Go](#)
7. Information Sharing [▶ Go](#)
8. Social Preferences [▶ Go](#)
9. Trust in Formal and Informal Institutions [▶ Go](#)
10. Chiefs' Jurisdictions [▶ Go](#)
11. Focus group evidence [▶ Go](#)

Intervention Timeline

[← Appendix](#)[← Back](#)

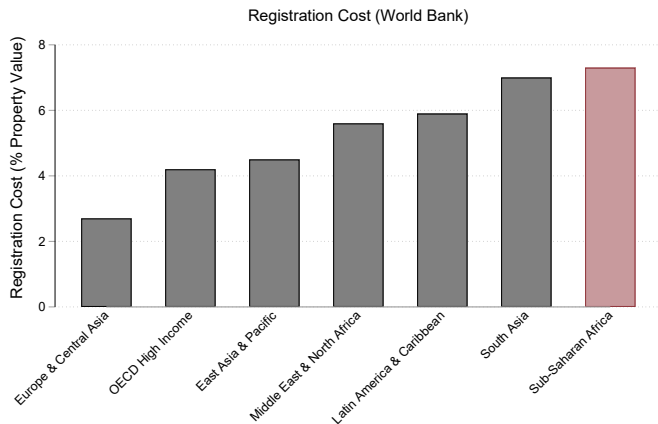
Quality of Land Administration in D.R. Congo

◀ Back



Cost of Registering Land

← Back



Chiefs' Jurisdictions

← Back



1. Certificat d'Enregistrement:

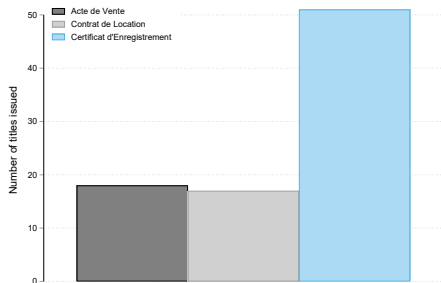
- ▶ Official land title w/o expiration date

2. Contrat de Location:

- ▶ Temporary title for 3 years
- ▶ Payments for 3 years → CE

3. Acte de Vente Notarié:

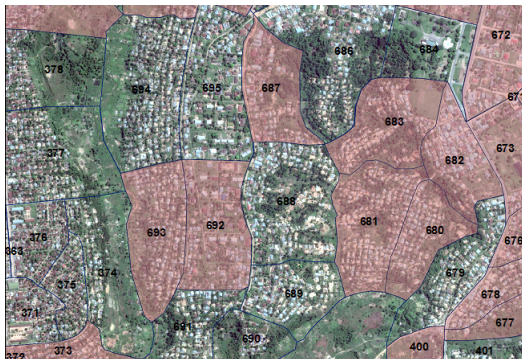
- ▶ Official proof of plot acquisition
- ▶ Not a title, but adds legal weight in case of dispute



Neighborhoods of Kananga

◀ Back

◀ Appendix

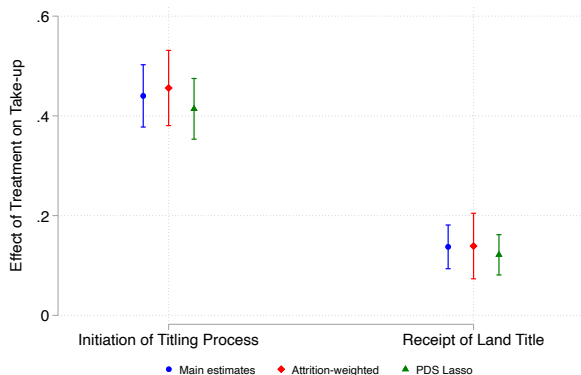


	Control			Treatment			Difference in Means
	Observations	Mean	SD	Observations	Mean	SD	
Age	1505	51.06	16.73	1393	51.16	16.07	0.103
Female	1514	0.27	0.44	1396	0.25	0.43	-0.023
Years of Education	1514	9.90	3.68	1396	10.39	3.69	0.493***
Household Size	1505	5.62	3.79	1393	5.64	3.75	0.021
Years Residing in Kananga	1362	42.16	19.19	1294	42.01	18.45	-0.159
On Electrical Grid	1514	0.00	0.06	1396	0.01	0.10	0.005*
House Near Ravine	1511	0.37	0.64	1396	0.35	0.62	-0.026
Predicted Property Value (USD)	1380	1449.28	2732.76	1267	1759.16	3205.36	309.872***
Monthly Income (USD)	1493	97.68	1006.57	1379	88.48	171.67	-9.197
Recent Expenditure (USD)	1503	2.51	9.03	1392	2.66	5.34	0.151
Business Owner	1514	0.18	0.39	1396	0.18	0.38	-0.001
Trust in Provincial Government	1433	2.52	1.24	1336	2.48	1.25	-0.040
Political Party Member	1514	0.28	0.45	1396	0.29	0.45	0.007
Frequency of Land Disputes	1514	0.73	2.93	1396	0.61	1.57	-0.124
Helps with Community Security	1514	1.54	6.91	1396	1.26	4.81	-0.285
Ever Paid Property Tax	1502	0.34	0.47	1389	0.36	0.48	0.018
Affected by Militia Violence	1500	0.38	0.49	1387	0.36	0.48	-0.017

- ▶ No systematic differences across households originally assigned to the treatment and control groups
- ▶ Only one out of 17 covariates is imbalanced at the 1% level (education) and two are imbalanced at 10% level

	Control			Treatment			Difference in Means
	Observations	Mean	SD	Observations	Mean	SD	
Age	228	54.43	15.91	254	55.65	15.00	1.215
Female	229	0.26	0.44	254	0.20	0.40	-0.053
Years of Education	229	10.72	3.54	254	11.45	3.62	0.724**
Household Size	228	6.33	4.08	254	6.78	4.52	0.447
Years Residing in Kananga	194	45.75	19.77	234	46.98	17.85	1.231
On Electrical Grid	229	0.03	0.16	254	0.05	0.21	0.021
House Near Ravine	227	0.20	0.40	254	0.19	0.39	-0.014
Predicted Property Value (USD)	219	2630.96	3872.13	244	3144.73	3707.23	513.776
Monthly Income (USD)	227	123.48	445.77	254	123.08	230.83	-0.408
Recent Expenditure (USD)	228	3.99	19.85	254	3.37	5.90	-0.616
Business Owner	229	0.22	0.41	254	0.19	0.39	-0.029
Trust in Provincial Government	215	2.56	1.24	241	2.44	1.27	-0.118
Political Party Member	229	0.30	0.46	254	0.33	0.47	0.025
Frequency of Land Disputes	229	0.95	6.04	254	0.66	1.46	-0.286
Helps with Community Security	229	2.22	9.55	254	1.28	3.47	-0.943
Ever Paid Property Tax	229	0.37	0.48	254	0.44	0.50	0.066
Affected by Militia Violence	227	0.35	0.48	253	0.41	0.49	0.055

- ▶ Only 1 of 17 variables (years of education) is imbalanced



- ▶ Results are robust to attrition-weighting and including controls selected by the double LASSO algorithm (Belloni, Chernozhukov and Hansen, 2014)

	Interest in Land Titling Program				
	(1)	(2)	(3)	(4)	(5)
ROSCA	0.041*** (0.012)				
Mutual Aid		0.014 (0.015)			
Church Contributions			0.028** (0.011)		
Weddings/Funerals				0.024** (0.012)	
Social Institutions (Index)					0.087*** (0.022)
Observations	3781	3781	3781	3781	3781
R^2	0.03	0.03	0.03	0.03	0.03
Control Mean	2.68	0.99	0.99	0.99	0.99

- ▶ Participation in horizontal social institutions predicts interest in the program before treatment assignment
- ▶ Heterogeneous effects by participation in these institutions is unlikely due to information-sharing and coordination in these networks

	Initiation of Titling Process			Receipt of Land Title		
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.207*** (0.064)	0.194*** (0.062)	0.213*** (0.063)	0.003 (0.031)	-0.004 (0.031)	0.002 (0.032)
× Envy	-0.041 (0.031)			-0.009 (0.024)		
× Altruism		-0.042 (0.030)			-0.014 (0.022)	
× Reciprocity			-0.052* (0.030)			-0.009 (0.024)
Observations	483	483	483	483	483	483
R^2	0.36	0.36	0.36	0.15	0.15	0.15
Control Mean	0.01	0.01	0.01	0.01	0.01	0.01

- ▶ Social preferences do not predict demand or formalization

	Initiation of Titling Process					Receipt of Land Title				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treatment	0.199*** (0.072)	0.169** (0.073)	0.277*** (0.087)	0.129* (0.074)	0.174** (0.069)	-0.012 (0.038)	-0.036 (0.039)	0.010 (0.056)	-0.028 (0.040)	-0.059* (0.034)
× Trust Prov. Gov.	0.006 (0.061)					0.019 (0.044)				
× Trust Nat. Gov.		0.057 (0.061)					0.060 (0.044)			
× Trust Chiefs			-0.091 (0.070)						-0.012 (0.054)	
× Trust NGOs				0.116* (0.066)						0.043 (0.042)
× Trust FROs					0.058 (0.061)					0.115*** (0.040)
Observations	483	483	483	483	483	483	483	483	483	483
R ²	0.35	0.35	0.35	0.36	0.36	0.15	0.15	0.15	0.16	0.17
Control Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00

► Trust in institutions does not predict demand or formalization

▶ Active solicitation

- ▶ Porte-à-porte
- ▶ Prédications sur la dime et demandes répétées par les agents de l'église
- ▶ Parades avec mégaphone
- ▶ Réseaux sociaux

▶ Social sanctions

- ▶ Perte d'accès aux mécanismes de sécurité collective communautaires
- ▶ Se faire parler dans le dos par ses voisins
- ▶ Isolation d'événements communautaires
- ▶ Perte de pouvoir politique local
- ▶ *"Quand une personne devient non aimée dans le quartier, des fois ces personnes vont maintenant devoir contribuer plus qu'elles n'auraient dû auparavant; des fois la personne quitte simplement le quartier."*

▶ Progressivity

- ▶ Les revenus sont discrets
- ▶ *"L'argent c'est la nudité de quelqu'un, on ne peut montrer."*
- ▶ *'Je connais un ancien président de compagnie. Quand il a commencé à prier chez les Brahmanistes, il donnait en cache cache pour ne pas être exposé.'*