



OVERVIEW OF STUDIES: LAND TENURE

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Outline

- Motivation
 - ▣ Land markets, property rights, investment and adoption
- Some examples from non-experimental studies
 - ▣ Some good and some bad news
- Examples of ongoing RCTs

Land markets

- Sensitive policy topic in many countries
 - ▣ Land key input in any agricultural production,
 - ▣ But also so much more than that (~power, family relations, culture, ...)
 - ▣ Strong link with distributional debates
- For those of interested in agricultural technology adoption:
 - ▣ Important to understand to what extent constraints in the land market may limit increases in agricultural productivity

Property rights and land markets

- Property rights insecurity and land markets
 - Impact on investment
 - Impact on credit
 - Impact on land allocation
 - (and increasingly also impact on other outcomes such as fertility, labor markets, civil participation, self-esteem, etc)
- Much attention and literature on the first 2, much less on the last
- But on the longer-run allocative inefficiency likely very important
- And even on the former: literature is inconclusive and many questions remain about the empirical evidence
- Yet: often very strong policy prescriptions and expensive interventions

Property rights and investments

- Strong theoretical reasons to believe incomplete or imperfect property rights might hamper investments
 - ▣ By reducing incentives to invest
 - ▣ Possibly also by reducing access to credit
- At the macro level, strong and/or strengthening of user rights believed to have been key for productivity increases in China (and elsewhere in Asia)
- Some micro-evidence seems to back this up
- BUT: Empirical micro-literature for Africa inconclusive
 - ▣ Possibly because:
 - Indigenous systems might offer adequate security
 - Investment may strengthen land rights (~ tree planting)
 - Credit markets are thin

Some findings in the literature (SSA)

- Besley (1995): property rights increase plot investments in one region, but not in another in Ghana
- Braselle et al. (2002): lack of property rights can in fact increase tree planting in Burkina Faso
- Jacoby and Minten (2007): title has no significant effect on plot-specific investment in Madagascar
- Goldstein and Udry (2008): more secure rights linked to political power increase fallow period in Ghana
- Deininger et al. (2008): find that registration program increased investment in soil and water conservation measures
- Fenske (2011): pools evidence from 9 countries
 - Tenure and investment significant for fallow and tree planting
 - Less clear relationship with labor and other inputs

Empirical work on land markets

- Very often suffers from serious concerns regarding causation (we will come back to this obviously)
- But also other concerns:
 - ▣ Confusion between ownership rights vs different type of user rights (Little “unbundling” of property rights)
 - ▣ Lack of attention to different means of accessing land
 - ▣ Lack of concern of general equilibrium effects
 - ▣ Ignoring of political and social sensitivities related to land
 - ▣ Failure to recognize certain particularities about this input market (as compared to others), such as:
 - Land markets are often local, transactions are infrequent, agents are not anonymous, information on both sides of the market
 - Allows for different insights related to allocative efficiency and distributional consequences

The good news...

- Some of these features sometimes allow to address the question about causation
 - ▣ IF the local context is very well understood
 - ▣ Possible to find “natural experiments”
 - ▣ Let’s look at some examples
 - Land rights in Ghana
 - Ethnic tensions and property rights in Guatemala
 - Co-ownership in Bulgaria

Example 1: Land rights in Ghana

- Goldstein, Marcus, and Chris Udry. 2008. "The Profits of Power: Land Rights and Agricultural Investment in Ghana." *Journal of Political Economy*
- Security of property rights => investment
 - Fallowing
 - Variation in yields per hectare within plots of the same household (in multicropping casava-maiz) is related to length of fallow
- Set of complex and negotiable rights over land => investment => productivity

Empirical strategy

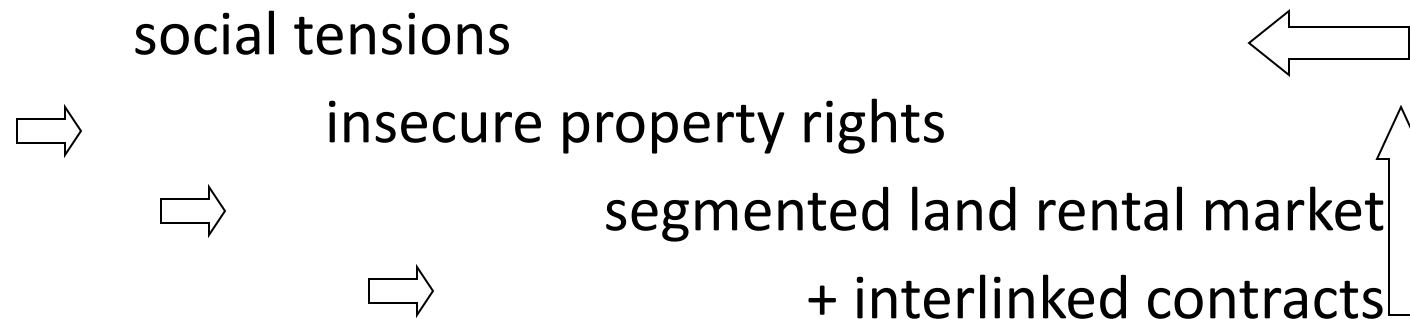
- Household fixed effects
- IV approach
 - Land rights are function of individual position in social and political hierarchies, conditional on crop characteristics
 - Furthermore: variation in plots of same individual, but with different provenance (~ political secure rights or not)
 - Land rights lead to higher investments, i.e. longer periods of fallow

Example 2. Ethnic Divisions, Contract Choice and Search Costs in Guatemala

- Does insecurity of property rights lead to:
 - ▣ An ethnically segmented tenancy market?
 - ▣ Interlinked contracts as an alternative enforcement mechanism (~contract choice)?
- Are there search costs (when markets are not local)?

Motivation: Vicious cycle

Unequal access to land



⇒ Inequality

+ Inefficiencies: 1) Idle and underused land

2) Search costs

3) Large scale conflicts

Property rights security?

- Formal title
- Title status plot mostly determined at end of 19th century (coffee boom and pro-activity individual possessors at that time, Naylor, 1967; McGreery 1994; Grandin 2000)
- Since then: land fragmentized among many owners, ...
- But title status of neighboring plots still correlated with each other
- Use average title status of upto 5 neighboring plots (from different owners) as instrument
 - Should be uncorrelated to many landlord and plot characteristics
 - Control for plot characteristics that might be spatially correlated (and possible related to title status)
 - Control for family background and other characteristics of the owner

Findings

- Insecurity of property rights related to ethnic segmentation land rental market
- Search costs to find tenant of preferred type
 - ~ search costs and matching in labor market
 - => inefficiencies (underused resources)
 - Or: price of scarcer tenants is higher because of bargaining power
- Choice of tenant is more important for fixed rent contract
 - => Interlinked contract as enforcement

Example 3. Property Rights Imperfections and Resource Allocation in Bulgaria

- Privatization in Eastern Europe led to drastic changes in property rights
- This paper:
 - Clearly defined and complete property rights, but property rights imperfection imposed by law:
Co-ownership of restituted land by descendants of former owners
- How does co-ownership (joint property right) affect land allocation?
 - ~ increase in transaction costs

Descriptive statistics

	Plot-level	Household-level
Land allocation		
% Used by the owner	18.2	44.5
% Rented out to an other household	2.2	9
% Rented out to a cooperative	39.9	48.6
% Rented out to company	16.1	28.8
% Abandoned	23.6	43.7
Land ownership		
Area owned per household (ha)		3.9
Area used by owner (ha)		0.6
Number of plots owned per household		5.8
Average plot size (ha)	0.7	
% co-owned parcels	51.4	
Average number of owners per plot	2.2	
Owner declares effective decision power	51	
Other household characteristics		
Age household head		65.8
Years of education household head		8.9

A natural experiment in Bulgaria

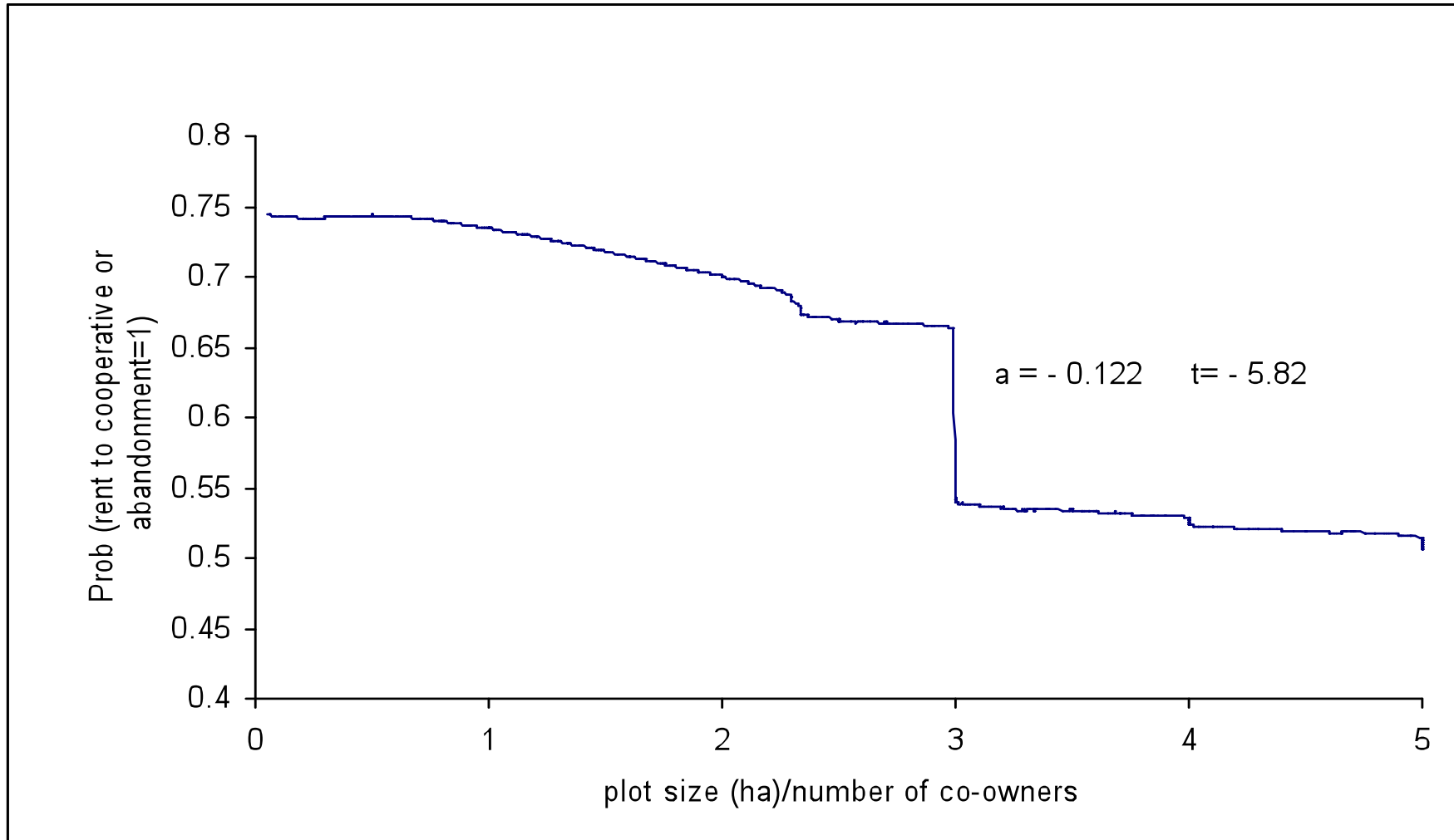
- Privatization occurred through restitution of land to the descendants of the pre-1946 owners
- Inheritance law prescribes that each heir has right to an equal portion of each plot
- Legislation prevents dividing up plots that would be smaller than 0.3 hectares after division

=> Led to forced co-ownership of 50% of the plots

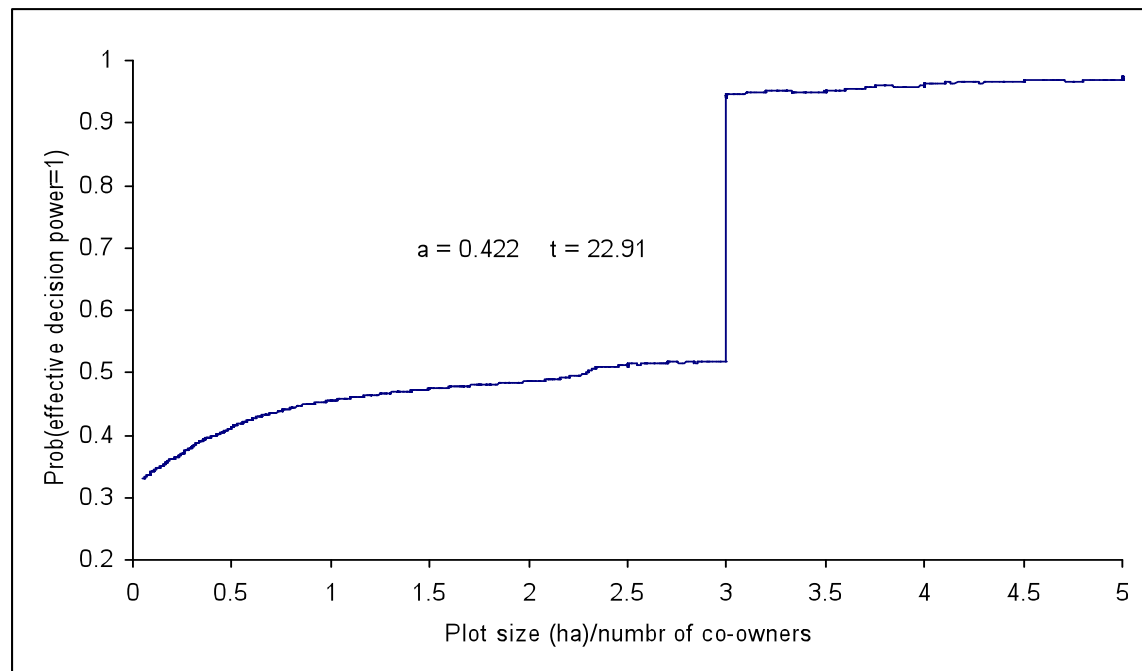
Empirical strategy

- Regression discontinuity analysis using the non-linearity caused by the minimum plot size legislation
 - => Plots that after subdivision would be smaller than 0.3 hectares, have to stay in “forced co-ownership”
- Estimate whether the probability of certain types of land allocation changes discontinuously at the cut-off plot size
- Use within-household variation (household FE)

Probability that plot is rented out to cooperative or left abandoned



Probability that owner has effective decision power on the plot



Findings

- Co-ownership increases the likelihood that land is allocated to the default option
 - ▣ i.e. land abandonment or
 - ▣ land left in large-scale cooperatives
- Our results, combined with existing evidence, suggest that co-ownership leads to an inefficient allocation of land

The bad news...

- Natural experiments are hard to find
- Even when they exist the right data might not be there for the right moment in time
- What if instead of relying on natural experiments (“accidents of history”), we create our own experiments?
 - ▣ After all, we’ll be more sure then that they are experiments
 - ▣ On a sensitive topic as land, this is obviously not very easy

Some ongoing RCTs

- Titling in Rwanda
- Certification of land rights in rural Benin
- Demand for and impacts of property rights in Dar es Salaam (encouragement design)
- Rights clarification and formalization in Haiti
 - ▣ With village level clarification and randomized phase-in over 2 years
 - ▣ Formalization pilot at individual level
 - ▣ Questions on impacts in case of co-ownership (and insurance function of family land)

More broadly for your evaluations

- Even in impact evaluations on other interventions:
Complexity of land rights and markets in many settings important to understand
 - Due to possible heterogeneity of impacts
 - As interventions might affect land dynamics
 - And hence also: possible unintended consequences that need to be understood
 - Equity (distributional)
 - Efficiency
- => Might affect longer-term effects/sustainability