



After 10 years of land reform in Madagascar: is the process of land certification massive and inclusive?

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Malagasy Land Reform

- The Malagasy reform, which started in 2005:
 - (i) **decentralized land management** through the creation of local land offices at commune level; and
 - (ii) **land certification**, which enables individuals to register private property provided the community agrees on the legitimacy of the claimed rights.
- Contrary to similar land reforms in other African countries, Malagasy **land certification is “on demand”** and not based on a systematic demarcation process.

Research question

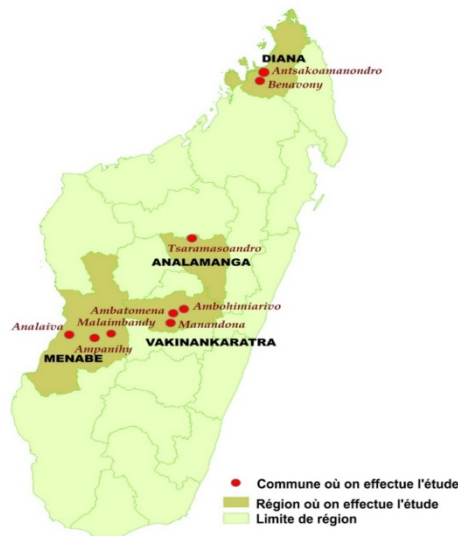
Question: Is the Malagasy certification really massive and inclusive or the preserve of the elites?

Originality of the research:

- Over the 2006-2016 period
- It studies both certification demand and offer
- On the demand side : it analyzes
 - the determinants of farmers' demand for land certificates
 - and the evolution through time of these same determinants;
- On the offer side : it analyzes the impact of information and promotional campaigns on level and distribution of demand

Methodology

- (i) qualitative and in-depth interviews at the local level
- (ii) monthly data on land certificate demand for all communes equipped with a local land office (LLO) (see www.observatoire-foncier.mg)
- (iii) specially designed survey in 2011 and 2015 among 1,860 farm households in 4 regions and 9 communes of Madagascar.

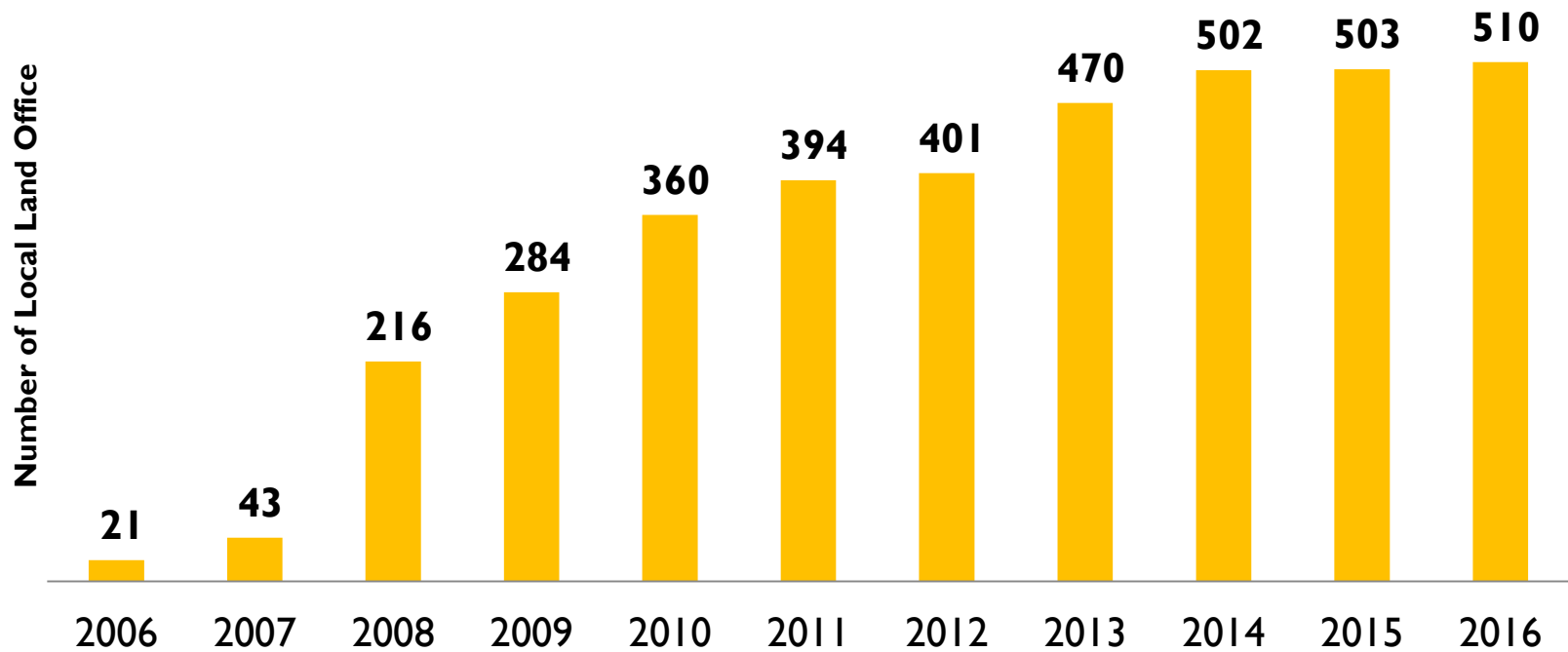


- *In 2011, within each commune, households were randomly selected,*
- *In 2015, 85% of the households were interviewed again*



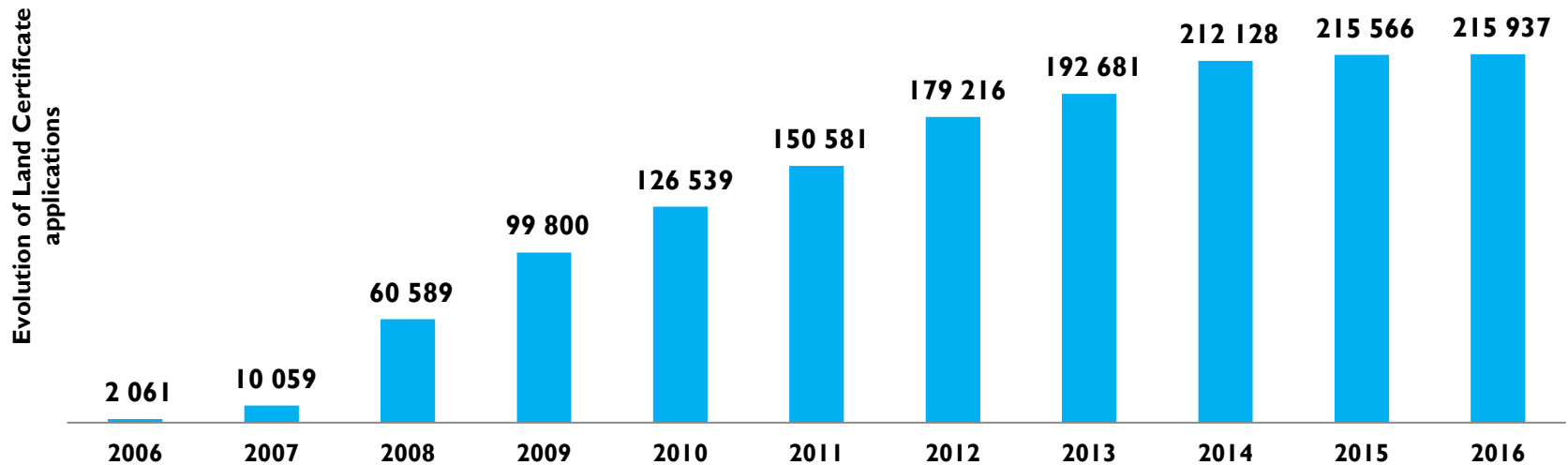
Analyses and results at national level

One third of the municipality have a Local Land Office



- 510 municipalities equipped with a LLO
- The rythm of LLO creation is decreasing but continuous

216,000 applications for land certificate



- 216,000 applications and 116,000 certificates issued
- the global demand is declining every year
- But the demand is very contrasted according to the communes and irregular, echoing promotional and informational campaigns (most campaigns were held before 2011 and proposed a certificate for 2 USD)

A demand that is not massive

Land certificate demand is strongly supported by international donors through information and promotional campaigns

Even though, the number of demands is low compared to:

- agricultural plots (more than 6 million).
- family farms (about 3 million)

But the demand is substantial compared to land titles delivered over the same period (per year)

And, the effects of decentralisation can not be limited to formalisation of land right (and number of issued land certificates): LLO ease the access to land information



Analyses and results at the communes level :

18% of Households apply for land certificate

Who are they?

Land certificate holders

Descriptive statistics

- Early / late applicants / without applications
 - Certification seems relatively accessible to a large panel of households whatever their relative wealth, level of education, age, origin and gender.
 - even though individuals who are richer, more educated or older applied earlier
- In / outside promotional campaigns
 - Richer, more educated and older individuals were relatively more reactive to seize the promotional opportunity

Certified plots

- Descriptive statistics
- Household chose to certify parcels
 - with the highest economic value: rice plots
 - Purchased plots compared to inherited, donated and cleared plots
 - Large sup 2ha compared to small plots.

Econometric analyses : duration models

- Duration model : Similar to models used to determine the adoption of new technology
- Advantages:
 - to estimate the **determinants of certification demand** (households and plots attributes)
 - **To identify the evolution of these determinants through time**
 - **To analyze** the impact of promotional campaigns and of differentiated price in the process

Econometric Results (I)

Determinants of land certificate demand

- **education** level of the household head and his **age**
=> no impact
- **wealth** => when the household belongs to the **highest group, the proba of certification increases**
- **Purchase plots** => **proba of certification is higher for purchase plots than the one for inherited, donated or developed plots**



Economic results (II) = the land certification process becomes more inclusive as time passes

Effect evolves in time for 3 determinants: households 'wealth, status of head (migrant/native) and the owner identity of the plots

Proba of certification increases for poorer households, for the migrants ones and for the plots belonging to women.

Those who initially remained outside of the certification process have managed to catch up after a while. These households could have been reluctant at the beginning (fear of conflicts, lack of trust), but they finally ask for a certificate when they need it, even if the price is higher

Plot-level duration model, time to demand a land certificate. Semi-parametric Cox regression.

	(1)		(2)	
	Hazard ratio	Robust standard error	Hazard ratio	Robust standard error
Plot characteristics				
Localised in the lowland +	2.069***	(0.294)	2.058***	(0.295)
Residence plot +	1.521	(0.514)	1.554	(0.516)
Non-rice cultivated plot +	0.845	(0.281)	0.843	(0.277)
Past conflict +	0.551	(0.283)	0.557	(0.288)
Area (log)	1.217***	(0.0590)	1.218***	(0.0593)
Acquired through heritage +	0.261***	(0.0446)	0.270***	(0.0462)
Acquired through donation +	0.449***	(0.118)	0.457***	(0.118)
Acquired after clearing +	0.359***	(0.0785)	0.374***	(0.0826)
Owner is the couple +	0.889	(0.192)	1.761*	(0.564)
Owner is Madam +	1.384	(0.305)	1.062	(0.405)
Other owner +	1.301	(0.761)	0.191**	(0.128)
Farmed by owner +	0.727*	(0.133)	0.731*	(0.131)
Other document - title +	0.0286***	(0.0299)	0.0290***	(0.0302)
Other document - petit papier +	0.0326***	(0.0132)	0.0342***	(0.0135)
Other document - quittance +	0.0535***	(0.0299)	0.0537***	(0.0300)
Household characteristics				
Education level	1.143	(0.111)	1.139	(0.110)
Age	1.004	(0.00597)	1.004	(0.00592)
Wealth tercile 2 +	1.383	(0.306)	3.204***	(1.271)
Wealth tercile 3 +	2.096***	(0.486)	4.169***	(1.630)
Allochthon "Native" +	2.576***	(0.815)	4.040***	(1.521)
Allochthon "Migrant" +	0.519*	(0.176)	0.187***	(0.0871)
Commune dummy variables				
Vakinankaratra - Ambatomena +	1.503	(0.769)	1.157	(0.599)
Vakinankaratra - Ambohimiarivo +	1.421	(0.802)	0.932	(0.541)
Vakinankaratra - Manandona +	2.679	(1.611)	1.558	(0.903)
Diana - Antsakoamanondro +	4.719***	(2.125)	3.504***	(1.576)
Diana - Benavony +	7.041***	(3.081)	5.551***	(2.420)
Menabe - Ampanihy +	2.046	(0.947)	1.549	(0.720)
Menabe - Malimbandy +	1.455	(0.704)	1.094	(0.523)
Menabe - Analaiva +	2.601**	(1.102)	2.501**	(1.053)
Time varying covariate				
Price of certificate (log)	0.819***	(0.0538)	0.754***	(0.0506)
Time-by-covariate interactions				
Owner is the couple +	-		0.788**	(0.0904)
Owner is Madam +	-		1.092	(0.108)
Other owner +	-		1.651***	(0.271)
Wealth tercile 2 +	-		0.764**	(0.0834)
Wealth tercile 3 +	-		0.801*	(0.0954)
Allochthon "Native" +	-		0.791	(0.157)
Allochthon "Migrant" +	-		1.509**	(0.313)
Observations	5,389		5,389	

*** p<0.01, ** p<0.05, * p<0.1

Robust standard-errors clustered at the household-level in parentheses

+ indicate dummy variables (yes=1, no=0)

Conclusion

- The earlier applicants, who are also the ones who benefited from low prices applied for certificates as an opportunistic response to information and promotional campaigns in villages.
- Promotional campaigns increased the level of demand but reached mainly the better off.
- The households who applied for certificate several years after the start of the reform did it in order to end off concrete threats. These latter were mostly poor households and women.
- Renewing Promotional campaign might be an option:
 - to increase again the number of applications
 - and, as households are better informed and less risk averse, to give new opportunities of formalization for poor and vulnerable households
 - And then to favor a massive and inclusive land reform



Madagascar Land Observatory
Inform to Reform

www.observatoire-foncier.mg