



The impact of land property rights interventions on investment and agricultural productivity in developing countries



Center for International Forestry Research

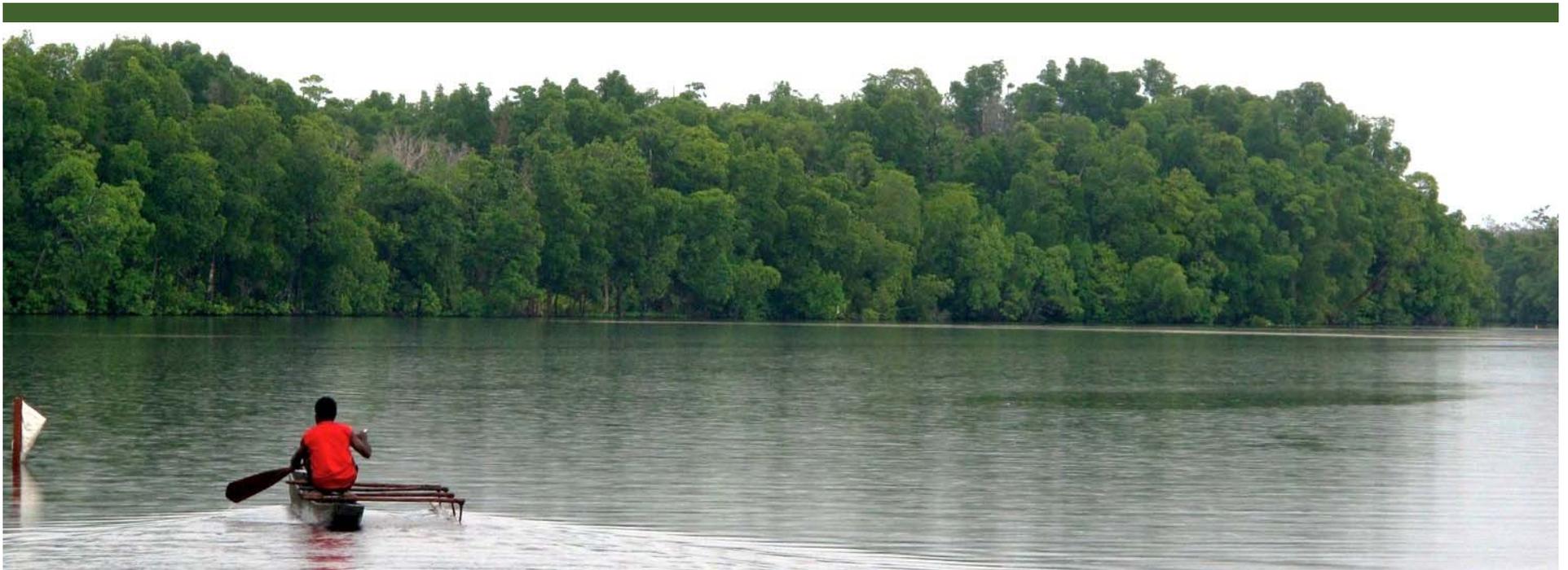
Steven Lawry—AU Conference on Land Policy—
12 November 2014—Addis Ababa, Ethiopia

The impact of land property rights interventions on investment and agricultural productivity in developing countries: a systematic review

Steven Lawry, Cyrus Samii, Ruth Hall, Aaron Leopold, Donna Hornby, Farai Mtero

A project of the Global Governance Institute, Brussels, with financial support from DFID and 3ie.





Objectives of the study

- To understand impacts of interventions to strengthen land property rights on agricultural and livelihood outcomes in rural areas in low and middle income countries;
- To assess whether these effects are different for men and women, and under what circumstances;
- To assess specific mechanisms that enable or limit productivity improvement (barriers and facilitators).



Systematic Reviews (or Meta-Analyses)

- Selection of studies for analysis that share certain very specific and common study design criteria, enabling a quantitative synthesis of the findings of all studies in a single analysis.
- The synthesis assesses variations between and among the included studies, for instance for strength of investment and productivity effects of tenure conversion, regional variations, etc.



Country sites of quantitative studies included in the synthesis

- Nicaragua (2), Peru (3),
- China (2), India, Vietnam (2),
- Ethiopia (6), Madagascar (2), Rwanda, Zambia

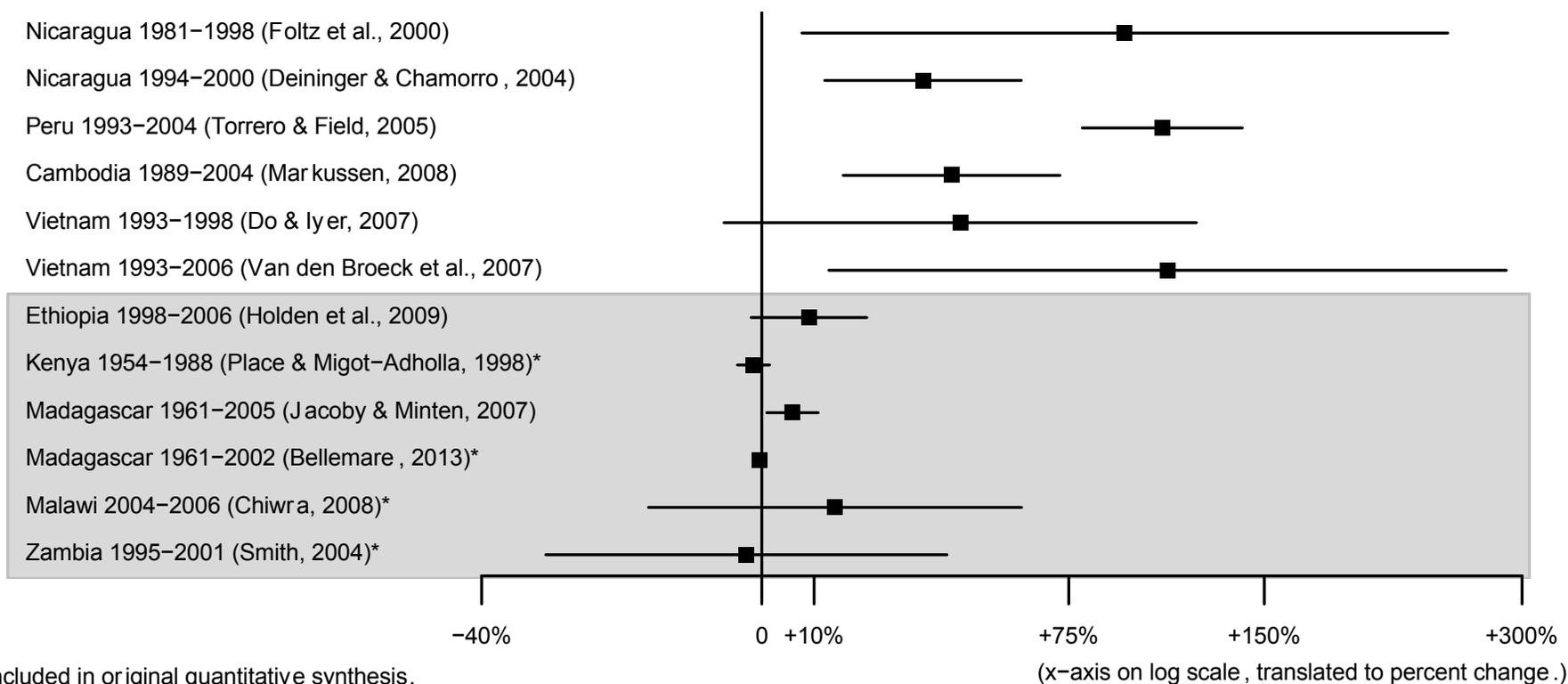


What does the quantitative evidence say?

- In Latin America and Asia cases, significant average gains to productivity after tenure recognition (ca. 50-100 percent) and strongly positive gains to investment and income following tenure recognition, typically titling.
- Weak or modest gains to productivity (ca. 0-10 percent), investment and income in Africa cases, though in most cases still positive.
- No or very weak discernable credit effects anywhere.
- Most studies failed to disaggregate effects of tenure recognition on women though two quantitative studies identified positive effects (Ethiopia, Holden et al. 2011; Rwanda, Ali et al. 2011).
- We found no quantitative evidence on the effects of statutory recognition customary tenure even though it was a primary interest of ours.



Effects on land productivity (output per ha)



Explaining the differential productivity effects in Africa, Asia, and Latin America

Three hypotheses:

- **Pre-existing institutions:** principally customary tenure institutions.
- **Wealth effect:** households' lack of resources necessary for translating tenure rights into higher levels of productivity.
- **Complementary public investments:** land tenure reforms not coupled adequately with investments in complementary institutions, infrastructure, or other forms of "public capital."



Conclusions

- Further research should seek to understand the reasons for such differential effects.
 - Findings from such research can identify other policies to augment tenure recognition to amplify productivity, investment, and welfare effects.
- Of course, we should also be mindful of broader welfare considerations:
 - Productivity is not the only welfare consideration.
 - Tenure security, reduction in land-related conflicts, and validation of the property rights of women and other vulnerable individuals are goals in their own right.
- Research on productivity, investment, and welfare effects of *statutory recognition of customary tenure* should be a priority.





Appendix

SELECTION CRITERIA

We used quantitative studies to assess impacts on intermediate and final outcomes, focusing on counterfactual studies that compare outcomes observed at the point of intervention to those in an appropriate second context.

The review synthesizes quantitative evidence only from studies characterized by all of the following:



1. (a.) Randomized experiments or (b.) quasi-experimental studies that employ strategies for causal identification with clearly delineated treated and control groups and use some method for removing biases due to non-random assignment of treatment;
2. Studies that estimate the impact of either of the two interventions (certification or conversion), with the interventions having clearly defined starting dates;
3. Studies that obtain measurements on at least one of the final or intermediate outcomes;
4. Studies that estimate impacts with outcome data measured at the individual or household level; and
5. Studies undertaken in developing countries (as defined by the World Bank) and that measure outcomes at some point between 1980 and 2012



STUDIES INCLUDED IN THE QUANTITATIVE ANALYSIS

- Ayalew, D.A., Deininger, K. & Goldstein, M. (2011). *Environmental and Gender Impacts of Land Tenure Regularization in Africa: Pilot Evidence from Rwanda*. United Nations University World Institute for Development Economics Research (UNU–WIDER) Working Paper No. 2011/74.
- Bandiera, O. (2007). Land Tenure, Investment Incentives, and the Choice of Techniques: Evidence from Nicaragua. *World Bank Economic Review*, (21)3, 487–508.
- van den Broeck, K., Newman, C. & Tarp, F. (2007). *Land Titles and Rice Production in Vietnam*, Trinity Economics Papers, Working Paper No. 1207. Trinity College Dublin.
- Deininger, K., Chamorro, J.S. (2004). Investment and equity effects of land regularisation: the case of Nicaragua. *Agricultural Economics*, (30) 101-116.
- Deininger, K. & Jin, S. (2002). *The impact of property rights on households' investment, risk coping, and policy preferences: Evidence from China*. World Bank Policy Research Working Paper 2931.

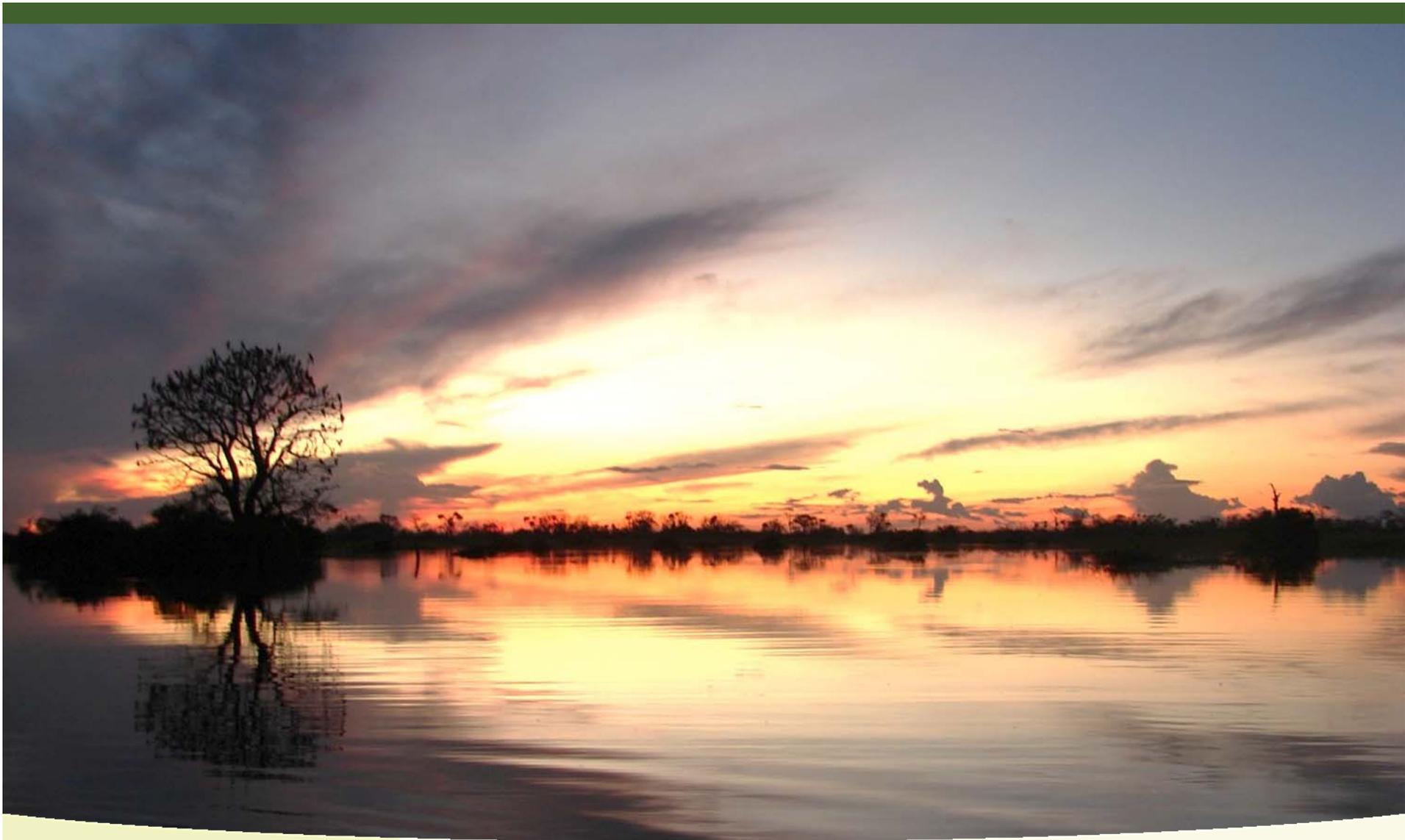


- Deininger, K., Ali, D.A. & Alemu, T. (2009). *Impacts of Land Certification on Tenure Security, Investment, and Land Markets: Evidence from Ethiopia*. Environment for Development (EfD) Discussion Paper Series 09-11.
- Deininger, K., Ali, D.A. & Alemu, T. (2011) Impacts of Land Certification on Tenure Security, Investment, and Land Market Participation: Evidence from Ethiopia. *Land Economics*, (87)2, 312-334.
- Deininger, K., Ali, D.A., Holden, S. & Zevenbergen, J.(2007). *Rural land certification in Ethiopia: Process, initial impact, and implications for other African countries*. Working paper, publisher not indicated.
- Deininger, K., Jin, S. & Nagarajan, H. (2007). *Land Reforms, Poverty Reduction, and Economic Growth: Evidence from India*. World Bank Policy Research Working Paper 4448. World Bank.
- Do, Q.T. & Iyer, L. (2007). *Land Titling and Rural Transition in Vietnam*. Working paper, publisher not indicated.
- Foltz, J., Larson, B. & Lopez, R. (2000). *Land Tenure, Investment, and Agricultural Production in Nicaragua*. Harvard Institute for International Development, Development Discussion Paper No. 738. Harvard University.
- Fort, R. (2008). The homogenization effect of land titling on investment incentives: evidence from Peru. *NJAS* (55)4, 325-343.
- Holden, S., Deininger, K., & Ghebru, H (2009). Impacts of Low-Cost Land Certification on Investment and Productivity. *American Journal of Agricultural Economics* (91)2, 359-373.



- Holden, S., Deininger, K., & Ghebru, H. (undated). *Tenure Insecurity, Gender, Low-cost Land Certification, and Land Rental Market Participation*. Working paper, publisher not indicated.
- Jacoby, H. & Minten, B. (2007). Is Land Titling in Sub-Saharan Africa Cost-Effective? Evidence from Madagascar. *The World Bank Economic Review*. (21)3, 461–485.
- Jacoby, Hanan, & Bart Minten (2005). *Is land titling in Sub-Saharan Africa cost-effective? Evidence from Madagascar*. Report within project: Land Titles, Investment, and Agricultural Productivity in Madagascar. Publisher not indicated.
- Kemperly, N., Klumpz, R. & Schumacher, H. (2011) *Representation of property rights and credit market outcomes: Evidence from a land reform in Vietnam*. Report, publisher not indicated.
- Kung, J.K. (2006). Do Secure Land Use Rights Reduce Fertility? The Case of Meitan County in China. *Land Economics*, (82)1, 36-55.
- Smith, R. (2004). Land Tenure, Fixed Investment, and Farm Productivity: Evidence from Zambia's Southern Province. *World Development*, (32)10, 1641–1661.
- Torero, M. & Field, E. (2005). *Impact of Land Titles over Rural Households*. Working paper OVE/WP-07. Office of Evaluation and Oversight (OVE), Inter-American Development Bank.





Produced as part of



RESEARCH
PROGRAM ON
Forests, Trees and
Agroforestry



Center for International Forestry Research (CIFOR)

CIFOR advances human well-being, environmental conservation and equity by conducting research to help shape policies and practices that affect forests in developing countries. CIFOR is a member of the CGIAR Consortium. Our headquarters are in Bogor, Indonesia, with offices in Asia, Africa and South America.



cifor.org

blog.cifor.org