

# The linkages between land degradation, poverty and social capital in Uganda

By

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## **Dedication**

To my wife Ruth, daughter Tonia and son Patrick (Jr)

## Declaration

I declare that this thesis I hereby submit for the degree of Ph.D. in Environmental Economics at the University of Pretoria is entirely my own work and has not been submitted anywhere else for the award of a degree or otherwise.

Signed .....

Name Birungi Bitonder Patrick

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Any errors in thinking and omissions in this thesis are entirely my own responsibility.

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## **The linkages between land degradation, poverty and social capital in Uganda**

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### **Abstract**

The goal of this study was two fold. First, to investigate the determinants of soil fertility management and conservation practices in Uganda, with particular interest in the role of poverty, social capital and land tenure. Secondly, to provide an understanding of the causal relationships between social capital and household poverty in Uganda.

To achieve the above goals, econometric approaches were employed using a data set collected by IFPRI, the World Bank, and Uganda Bureau of Statistics from a survey that covered eight districts in Uganda. First to investigate the impact of poverty, land tenure and social capital on adoption of SFM and conservation technologies, a multinomial logit (MNL) model was used. Choice of the MNL model was motivated by the need to address the interdependent and joint nature of the adoption decision making. Secondly to understand the influence of social capital and other determinants on poverty in Uganda, a linear regression model was used while a probit model was used to capture the determinants of group participation our measure of social capital.

The results show that participation in social institutions generally tends to increase the probability of adopting most SFM and conservation practices and

reducing non-adoption. Social capital also reduces household poverty. The study further shows that poverty increases the probability of non-adoption. Also, land tenure security was found to be positively correlated with adoption of fallowing and organic fertilizer use and reducing the probability of non-adoption. Other key factors that affect adoption of SFM and conservation technologies, poverty and group participation include education, road infrastructure, agro-climatic differences, and household size among others.

From a policy perspective, the significance of social capital in both technology adoption and the poverty models, suggests that public investment in social capital through: capacity building programs for local groups, infrastructure support, enabling environment for their functioning (legal framework) among others would lead to poverty reduction and improved investments in SFM and conservation technologies. This can be done by incorporating social capital in key government policies such as the poverty eradication action plan and program for modernisation of agriculture. The results also suggest that poverty reduction would increase adoption of SFM and conservation technologies.

Keywords: ***Land degradation, Social Capital, Poverty, Land Tenure and Uganda***

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## Glossary of acronyms and abbreviations

APEP	Agricultural Productivity Enhancement Program
BAT	British American Tobacco (U) ltd
EIA	Environmental Impact Assessment
EPRC	Economic Policy Research Centre
ERP	Economic Recovery Program
FAO	Food and Agriculture Organisation
FGT	Foster-Greer-Thorbecke
GDP	Gross Domestic Program
GNP	Gross National Product
GOU	Government of Uganda
HCCM	Heteroscedasticity Consistent Covariance Matrix
IFPRI	International Food Policy Research Institute
IIA	Irrelevance of Independent Alternatives
KACOFA	Kapchorwa Commercial Farmers Association
LC	Local Council
MNL	Multinomial Logit
MNP	Multinomial Probit
NEAP	National Environment Action Plan
NEMA	National Environment Management Authority
NEMP	National Environment Management Policy
NGO	Non-Governmental Organisation
NRM	Natural Resource Management
OLS	Ordinary Least Squares
PEAP	Poverty Eradication Action Plan
PMA	Program for the Modernization of Agriculture
SAPs	Structural Adjustment Program
SFM	Soil Fertility Management
SSA	Sub-Saharan Africa
UBOS	Uganda Bureau of Statistics

UNHS	Uganda National Household Survey
UPPAP	Uganda Poverty Participatory Assessment Project
USA	United States of America
USAID	United States Agency for International Development
WFP	World Food Program
2SPLS	Two-stage Probit Least Squares
2SCML	Two-stage Conditional Maximum Likelihood