Summary

AN INQUIRY INTO THE EVOLUTION OF LAND INSTITUTIONS AND ITS IMPLICATIONS FOR LAND TENURE SECURITY, LAND TRANSACTIONS AND AGRICULTURAL PRODUCTIVITY: EVIDENCE FROM RURAL UGANDA

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There is a wide consensus that to boost agricultural productivity, sub-Saharan African (SSA) countries need to adopt policies that enhance private land ownership and strengthen land tenure security. However, customary land institutions, characterized by communal land ownership and tenure insecurity, are still prevalent in SSA. While it is believed that these traditional institutions are continuously evolving towards private land ownership in response to population growth and economic dynamics, it is not known how they evolve and what determines this evolution. In addition, recently land conflicts have been increasing in Africa and, given the high and increasing demand for food, this poses a threat to agriculture productivity and food security in the region. Moreover, studies have suggested that food production in SSA has to double by 2050 in order to cope with the region's population growth. Prior studies have suggested that the main causes of these land conflicts are rapid population growth and the weakening of customary institutions, but empirical studies on the causes and consequences of these conflicts are exceedingly scant.

Using community-, household-, and parcel-level data collected from rural Uganda, this dissertation attempts to answer these questions. Uganda presents an interesting case for this study because land is owned by the citizens who can choose how to manage it, either individually or communally in accordance with customary norms and practices. This is unlike some other SSA countries where land is owned by the government and individuals are only granted use rights. In addition, initially the country's population was un-equally distributed across regions and communities and, presumably because of the rapidly increasing population, rural-to-rural migration has increased in the recent past. This study explores the role of these migrations, ethnic diversity, and population pressure in shaping the evolution of land institutions from communal to private land ownership, and on land conflicts. To shed light on the implication of changes in land tenure arrangements, the study explores how land transactions and production efficiency have responded to changes in land institutions from communal to private land ownership. Lastly, the study analyzes the impact of land conflicts on agriculture productivity in Uganda.

The community, household and parcel data I use are from two sources: Research on Poverty, Environment and Agriculture Technologies (RePEAT) panel data collected by National Graduate Institute for Policy Studies (GRIPS) and Makerere University, and land survey data from the survey on land tenure systems which was conducted simultaneously with the fourth round of the RePEAT survey in 2012/2013. In both surveys, information was elicited, from focus groups and from the households, on community migration patterns, land tenure systems, land conflicts, population density, land transactions plus other

household, community and parcel attributes. I also use Uganda population census data to compute district population growth rates.

The community-level data, covering information on migration history for the two generations, current and parents' generations, enables me to categorize communities into migrant-host and migrant-sending communities, and to explore the attributes of these communities such as ethnic composition and the proportion of immigrants in each community. I then examine how community migration patterns and ethnic composition are associated with land ownership status, and with the incidence of land conflicts. I use household-level data to identify whether a household is an immigrant in a community or an indigenous inhabitant, and use this information to examine how household migration status is associated with whether the land is privately or communally owned. The household-, and parcel-level data also helps me to control for other household and parcel level characteristics and to conduct more detailed analysis such as an analysis of the impact of land conflicts on productivity by comparing yield between parcels with and without conflicts operated by the same household.

The main hypotheses in this study are; (1) rural-to-rural migration and the resulting ethnic diversity, and population pressure lead to the break-down of traditional customary land arrangements which, in turn, leads to a change from communal to private land ownership, (2) the break-down of customary institutions weakens the pre-existing informal conflict resolution mechanism which, in the absence of formal institutions such as land titling and registration, leads to land conflicts. I, therefore, expect to find a higher incidence

of private land ownership in communities with many immigrants and are hence ethnically diverse, and those with higher population density. In addition, I expect to find more cases of land conflicts in the immigrant, ethnically diverse communities, and in the communities that have experienced higher population growth rates. To my knowledge, no study has empirically examined the determinants of the evolution of land institutions. In addition, no study has examined how rural-to-rural migration, ethnic diversity and population growth are related to the evolution of land institutions, and land conflicts.

The major findings of this study are as follows. The results reveal that land institutions in Uganda are evolving toward private land ownership. There were more privately-owned parcels in 2012 than there were in 2003, while the number of parcels under communal ownership has decreased significantly over the same period. This study also finds that there are more privately-owned parcels in immigrant and ethnically diverse communities than in non-migrant and homogenous communities. Contrary to what theoretical studies suggest, we do not find a significant effect of population density on private land ownership. We, however, find that population density influences migrations, suggesting that, while population density may not directly affect the evolution of land institutions, it indirectly works through influencing inter-community migrations. We find that land transactions are more common in communities that have privately-owned land as the result of land institution evolution than those with communally-owned land. Also, while we find a significant inverse relationship between farm-size and productivity in communities with more communally owned land, the relationship is insignificant in

communities with a higher incidence of private land ownership suggesting that private land ownership promotes production efficiency.

Consistent with my hypothesis, we find that there are more land conflict cases on parcels in migrant host communities and those that are ethnically diverse (with many tribes). We also find more land conflicts in communities that have experienced higher population growth rates. On the impact of land conflicts, the yield is 20% lower on parcels with conflicts than in those without conflicts.

These findings suggest that while rural-to-rural migrations and ethnic diversity have, through weakening customary institutions, led to the evolution of land tenure institutions from communal to private land ownership which enhances land transactions and production efficiency, these migrations also weaken informal conflict resolution mechanisms leading to land conflicts. We find that there is a higher incidence of boundary-, and eviction-related land conflicts in ethnically diverse immigrant-host communities than the homogenous migrant-sending communities. Therefore, the use of better boundary demarcation mechanisms such as survey stones may be a key to reducing boundary related conflicts. This study finds that majority of the farmers use live plants for land boundary demarcation. However, these plants can be uprooted and replanted in a different position and, if found out, this may lead to land conflicts. We also find more land transaction and higher production efficiency in communities where land is privately owned. However, communal land ownership is still common in Uganda. Policies that enhance private land ownership such as extension of infrastructure like roads may be crucial in boosting land

transactions and, hence, agricultural performance. Indeed, this study results show a high likelihood of private land ownership in communities that are connected to district headquarters by tarmac road.