

# Smallholder Land Access: A New Landscape in Africa?

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## Overview

Common wisdom: *Land is abundant in Africa, and since technology is relatively traditional, there is limited scope for productivity-enhancing land transactions. Land rental markets and their institutional underpinnings therefore play only a minor role in the development process.*

Findings:

- *Land rental markets are important for most of the countries studied.*
- *Large differences in land endowments and productivity create potential for land markets to equalize endowments and contribute to higher levels of productivity.*
- *Land rental markets improve equity by promoting land access to those with limited land endowments.*
- *Labor-rich and young households are more likely to participate in land markets in most countries. (Niger is an exception.)*
- *Female heads of households are much less likely to lease in land. This finding points toward significant barriers to land market participation by women.*
- *Rental market performance seems lower where there are greater risks of expropriation.*

Policy messages:

- *Legal framework: To support sustainable land management, investment in land improvements, and efficiency-enhancing transfers, property rights that effectively protect against the threat of land loss are essential. Low-cost models to secure these*

*rights in ways that can evolve over time are available and implemented in many countries.*

- *Institutional development: easy access to unambiguous and comprehensive information on land rights is key for transparency, land market functioning, and planning. In urban areas, access to this information will also affect the ability to raise local revenue and, if markets function well, the ability to use land as collateral for credit*
- *Women's rights: Land and associated resources make up the lion's share of most households' wealth. Women's use rights, control rights, and transfer rights to land will thus affect not only land use but also women's ability to start independent nonfarm enterprises.*

### **The Issue: Do Land Markets Support Structural Change in Africa?**

Economic development and structural transformation involve specialization and the transfer of labor out of agriculture. This implies an important role for efficiency-enhancing land transfers, as households rent out their land holdings to cultivators or sell their land to finance nonfarm enterprises. Institutions facilitating such transactions at low cost can increase the productivity of land use, help diversify the economy, and foster economic development.

According to the conventional view, land markets are largely absent in subsistence economies, where land is relatively equally distributed, the skill intensity of agricultural cultivation is low, and the availability of nonfarm opportunities is limited. These characteristics are often the presumed state of rural Africa. But as the economy starts to diversify, the scope for land transfers beyond immediate kin assumes considerable importance. Chapter 2 of this volume suggests that factor markets in general function imperfectly in Africa. Therefore, it is important to assess whether the functioning of land markets equalizes land access and raises productivity.

The institutional environment plays a pivotal role. The operation of land markets is likely to depend on the institutions involved in land transactions, and these processes can affect women differently from men. Social conventions governing land access, and land conflicts that disproportionately affect women may reduce the security of their property rights. This could contribute to lower productivity on female-managed plots. These are the issues addressed in this chapter.

### **The Analysis: From the Bird's Eye View to the Details**

The study uses data from the World Bank Living Standards Measurement Study–Integrated Surveys on Agriculture (LSMS–ISA) surveys in Ethiopia, Malawi, Niger, Nigeria, Tanzania, and Uganda. These are large, multipurpose household surveys with detailed information on agricultural production. They are

representative of the entire country or rural areas within a country. These data have three principal advantages:

- They use the Global Positioning System (GPS) consistently to measure plot size, which reduces the measurement error inherent in farmers' estimates.
- They permit analysts to retrieve information on the gender of the plot manager and in many cases also the owner. This allows a much better appreciation of gender-disaggregated asset ownership and control, and the potential implications for efficiency of resource use.
- All the surveys provide GPS coordinates of at least the homestead, to link the household to infrastructure access and other geographic data, including agro-ecological potential. These factors may have an important impact on production, input and output prices, and the ease with which nonfarm opportunities can be accessed.

The study presents a two-pronged analysis. First, the *descriptive analysis* presents a bird's eye view of information on whether and how the household is participating in land markets and the characteristics of that household. Second, the study analyzes the *determinants* of land market participation by taking a multivariate econometric approach (see box 3.1 for the specification).

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### Box 3.1 Econometric Exploration

The descriptive statistics are extremely informative. But the study explores the determinants of land market participation even further. It estimates a probit equation of the form

$$R_{ij} = \alpha + \beta X_{ij} + \gamma Z_j + \varepsilon_{ij}$$

where  $i$  and  $j$  index households and enumeration areas, respectively;  $R_{ij}$  is an indicator variable for households renting in land;  $X_{ij}$  is a vector of household characteristics;  $Z_j$  is a vector of location-specific variables; and  $\beta$  and  $\gamma$  are vectors of the parameters of interest. The estimation provides insights into the determinants of land market household behavior. The analysis focuses on the determinants of *renting in* land. This is because information on leasing out land is too thin in the available data sets.

The results for specifications with geovariables (population density, distance to road, and nonagricultural income shares) complement the conclusions from the descriptive statistics. The main conclusion is that although land rental can play an important role in equalizing land endowments and land/labor ratios, allowing more efficient producers to access land and contributing to the movement of labor out of agriculture, the extent to which it does so varies widely across countries in ways that are partly linked to institutional factors. The analysis suggests that although land rental markets fail to equalize factor ratios, they contribute to structural transformation by helping to transfer land to land-poor and relatively labor-rich households.

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## The Results: Land Markets Support Structural Change in Africa

### *A Bird's Eye View*

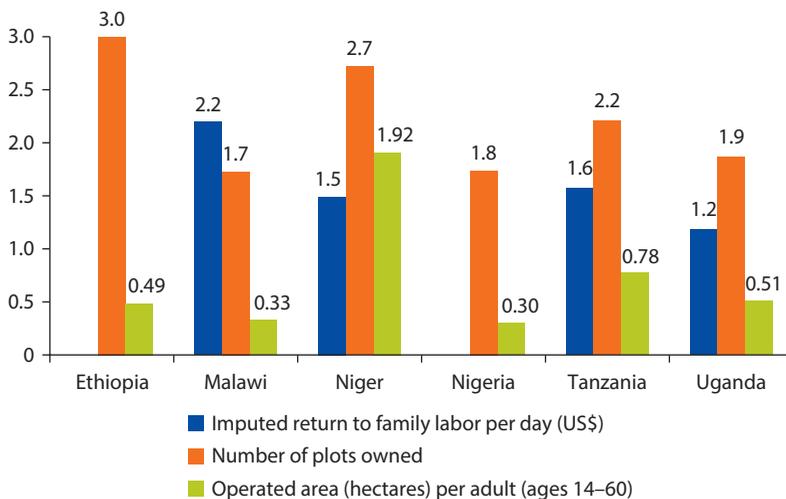
Descriptive statistics from the surveys suggest that there are five main characteristics of land markets in Africa. First, *the amount of land used for crop cultivation remains small*, with land distribution skewed to the right in virtually all countries. For all countries except Niger, the operated area per adult (household members ages 14 to 60 years) is less than one hectare (figure 3.1). With 3.02 plots per household, fragmentation is highest in Ethiopia and lowest in Malawi (1.74 plots).

Second, *returns to farm labor vary*. Apart from Ethiopia and Nigeria, it is possible to estimate the returns per day to adult farm labor (figure 3.1). The estimates suggest some variation in the returns, from US\$1.19 in Uganda to US\$2.21 in Malawi.

Third, *gender patterns in land access are diverse*. Male managers are in charge of some 80 percent of cultivated area in Ethiopia and Nigeria, 70 percent in Malawi, and 53 percent in Niger. But male managers command much less land in Tanzania and Uganda (27 and 9 percent, respectively). Women are solely in charge of 24 percent of operated land in Tanzania and 38 percent in Uganda (other land is jointly managed with the men).

Fourth, *land market activity varies across countries*, partly in response to land scarcity. Land sales are much less frequent than land rentals. Renting in land is highest in Ethiopia and Uganda (21 and 19 percent of households, respectively). It is lowest in Tanzania and Niger (6 and 7 percent, respectively). Malawi and Nigeria are in the middle (each with around 10 percent of households). By comparison, the share of households that report renting out land is much lower, being highest in Ethiopia (5 percent), followed by Niger (1.6 percent), Tanzania (1.1 percent), and Uganda, Malawi, and Nigeria (less than 1 percent).

**Figure 3.1 Variations in Farm Characteristics**



Source: Computations based on LSMS-ISA surveys.

Fifth, *there are large differences between households participating in land markets and nonparticipating households:*

- Land markets allow households that are landless or relatively land-poor but well-endowed with family labor or other fixed assets to access productive resources.
- Land markets facilitate younger operators' access to land. Relatively younger household heads are more likely to use land rental markets and expand their agricultural production.
- Female heads of households are much less likely to lease land, especially in Ethiopia, Malawi, and Niger.
- Land rental markets are more active in areas with higher levels of economic activity (reflected by infrastructure access, light intensity,<sup>1</sup> or urban gravity<sup>2</sup>). Nonfarm diversification appears to drive some of the observed land rental activity. In Malawi, Nigeria, and Uganda, land markets are more active in areas with greater nonagricultural employment. This finding may suggest that land markets contribute to structural transformation by allowing interested individuals to take up nonagricultural employment without losing the safety net function implied by land ownership, and make effective use of their land.

### ***Delving Deeper into the Determinants***

Estimates of the probit model (box 3.1) suggest four main findings about land markets. First, land markets help equalize land endowments and land/labor ratios. Evidence of endowment equalization through land markets—with lower land endowments increasing the propensity for land market participation—is found everywhere. The estimated effects are largest in Malawi, Uganda, and Nigeria, where overall land pressure is high, and rather modest in Tanzania, Niger, and Ethiopia. Labor-rich and young households are more likely to participate in land markets everywhere except possibly in Niger.

Second, land markets operate differently for women. The regressions point toward females being less likely to rent in land in many countries, even accounting for differences in other factor endowments. The effects are most pronounced in Ethiopia, followed by Nigeria, Niger, and Malawi.

Third, land markets operate differently in response to population pressure. Although higher population density is associated with higher levels of rental activity in Malawi and Niger, the relationship is insignificant in Uganda and Tanzania and negative in Ethiopia and Nigeria.

Fourth, land markets affect households differently depending on the institutional environment. In four of the countries covered (Ethiopia, Nigeria, Uganda, and Tanzania), rental activity does not increase or is lower in more densely populated areas, possibly because of higher expropriation risk in these contexts. This finding suggests that there is less potential for land transactions to enhance efficiency in these four countries. Reducing expropriation risks would therefore be a priority.

## The Implications

This analysis suggests that land markets are more active and have greater potential to contribute to structural transformation in Africa than is commonly assumed. These findings point toward a need to replace traditional views of African agriculture with a more differentiated and empirically grounded view.

Although factor markets do not function perfectly, land rental markets perform an important function in the process of structural transformation, making it possible for those with better nonfarm opportunities to take advantage of them. At the same time, land rental markets allow land-poor but labor-rich and more productive households to increase the amount of land they cultivate.

Land market performance seems to be lower where there are implicit or explicit restrictions on land rental. Perceived threats of uncompensated expropriation reduce subjective tenure security. Even when there are legal regulations to this end, often they are not implemented, or they are implemented in a way that affects groups (such as women) differently.

## Policy Agenda

The role of land markets in the process of structural change and development in Africa is significant, calling for serious policy attention. Three policy issues emerge from this study:

- *Legal framework.* To support sustainable land management, investment in land improvements, and efficiency-enhancing transfers, property rights that effectively protect against the threat of land loss are essential. Low-cost models to secure these property rights in ways that can evolve over time are available and implemented in many countries.
- *Institutional development.* Easy access to unambiguous and comprehensive information on land rights is key for transparency, land market functioning, and planning. In urban areas, access to information will also affect the ability to raise local revenue and, if markets function well, the ability to use land as collateral for credit.
- *Women's rights.* Land and associated resources make up the lion's share of most households' wealth. Women's use rights, control rights, and transfer rights to land will thus affect not only land use but also women's ability to start independent nonfarm enterprises.

## Research Agenda

The study shows that microdata can help provide a better understanding of the forces shaping structural change in Africa's rural areas. Consistently implementing improvements in questionnaire design to obtain data on nonagricultural land, land acquisition history, individuals' rights, land-attached investment, tenure and ownership status, prices, and output and input at the plot level can help in better harnessing this potential for analysis. Households' awareness of and trust in key institutions could make the data even more useful.

Improving the capacity of African land institutions implies considerable scope for complementing household surveys with administrative data. Improved capacity would exploit complementarities and cross-check results—for example, to explore the extent of informal transactions and potential reasons for them, cross-check information on sales prices, follow up in more detail on rare events such as disputes, and explore positive or negative spillover effects from large land transfers (for agro or other industries). Exploring these opportunities, together with links to remotely sensed imagery, is likely to further expand the usefulness of household data in seeking to understand the processes of structural transformation in Africa and beyond.

## Notes

1. The sum of nighttime lights from the satellite of the DMSP-F16 across all pixels of the city in 2009 is used to proxy light intensity. Ephemeral events, such as lightning strikes and fires, have been discarded. The light emitted by each city is assumed to be highly correlated with its overall gross domestic product.
2. As a proxy for urban demand, a measure of urban gravity based on the gravity model is developed that captures the interaction between a particular location and all urban centers in the country with a population over 500,000 in 2010.

## Additional Reading

### *This chapter draws on:*

Deininger, Klaus, Sara Savastano, and Fang Xia. 2017. "Smallholders' Land Access in Sub-Saharan Africa: A New Landscape." *Food Policy* 67: 78–92. <https://doi.org/10.1016/j.foodpol.2016.09.012>.

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