

Beyond Ownership: Women's and Men's Land Rights in Sub-Saharan Africa

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Abstract

Advancing women's land rights is a priority for the international development agenda as highlighted in at least two targets of the Sustainable Development Goals (SDGs) and linked to the success of several others. Yet, there is limited practical guidance on how to measure progress on land rights especially in contexts where individual property rights and customary tenure regimes coexist and where large shares of agricultural land remain unregistered as in Sub-Saharan Africa. In such contexts, data on land ownership may not provide an accurate picture of women's and men's land rights and the progress made towards improving their tenure security. This study fills a gap in the literature by empirically examining the gender gaps in land rights, extending beyond reported ownership, and by assessing the extent to which reported ownership overlaps with other land rights in six countries in Sub-Saharan Africa. The study reveals significant gender gaps not only in land ownership but also in land management and the rights to sell or use the land as collateral. The sizes of the gender gaps in land rights vary across countries with Niger and Nigeria exhibiting larger gender gaps. Moreover, reported ownership and other rights over land do not always overlap, indicating that concepts of ownership, management and economic rights should not be used interchangeably, especially in plot-level analyses. Drawing on the empirical analysis, the study provides technical guidance on the collection of harmonized, quality sex-disaggregated data for generating land statistics on the various land rights that women and men have, beyond ownership. Good quality measures of women's and men's land rights are fundamental for the development of better policies that seek to empower rural women and to contribute to poverty reduction through increased productivity and increased participation in income generating activities.

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I. Introduction

Gender inequalities in access to productive resources, including agricultural land, continue to be an important concern, particularly in low-income countries. The Sustainable Development Goals (SDGs) adopted in 2015 recognize that to end poverty (Goal 1), it will be necessary to ensure equal rights in ownership and control over land, as well as equal rights to inheritance of productive resources (target 1.4). The SDGs also imply that to achieve gender equality and empower all women and girls (Goal 5), policies and legal reforms are needed to give women equal rights and access to ownership and control over land and other economic resources (target 5a). Therefore, improving women's land rights is well-recognized in the international development agenda as an important pathway for achieving poverty reduction and gender equality.

A widely-cited literature shows that women's land rights are associated, sometimes causally, with better outcomes for women and their families. Women's land ownership has been associated with increased bargaining power in the household (Deere, Oduro, Swaminathan, & Doss, 2013; Deininger, Goyal, & Nagarajan, 2013), better child nutrition (Allendorf, 2007), lower exposure to HIV-AIDS (Strickland, 2004), and higher protection from domestic violence (Friedemann-Sánchez, 2006; Panda & Agarwal, 2005). Higher tenure security for women reduces productivity losses on women's plots in Ghana (Goldstein & Udry, 2008). Regularization of women's land rights through titling programmes have increased investment in land soil conservation in women's plots in Rwanda (Ali, Deininger, & Goldstein, 2014). These findings suggest possible pathways from women's land rights to poverty reduction and gender equality more broadly.

Yet, although there is consensus that land rights are important for women, there is less consensus on which land rights are important or how the various land rights are related to agricultural productivity or women's empowerment. Various land rights, especially ownership and management, are often used interchangeably in the literature. While there has been a recent emphasis on women's land ownership, some data sources, particularly those collected by agricultural censuses, have focused on women as land managers. And even when the discussion focuses on ownership, there is little consensus on how to define ownership.

These issues are particularly acute in Africa, where customary land tenure systems continue to govern the access to and use of much of the agricultural land. Most land in Africa remains unregistered and without formal ownership documents, even when there are legal provisions for the issuance of certificates for all types of land, including customary lands, as in Tanzania, Uganda and Nigeria (Deininger, Xia, & Savastano, 2015). African tenure systems are changing due to rising population pressures, changes in land allocation institutions, and the introduction of land registration programmes, all of which may stimulate land rental and purchase markets (Jayne, Chamberlin, & Headey, 2014), making it all the more important to understand which rights people hold and how this is changing over time.

The myriad of land tenure systems in Africa complicate the (Western) notion of land ownership and make land ownership statistics difficult to compare across, and even within, countries. For example, the right of alienation – the transfer of land ownership – may not exist or be difficult to apply to lands with communal ownership² (FAO, 2003). In contrast, in countries with more developed land markets, land ownership typically implies “full ownership” including the full set of rights held by the landowner including the rights to alienate or dispose of (as in freehold

² Including community lands (e.g. pastures and forests) or lands with exclusive rights for members of a given community typically allocated to them by the community chief or leader.

in English law (FAO, 2003)). Feder & Noronha (1987) categorize African land tenure systems into three types: countries that allow the acquisition of individual titles, although some rights of title-holders may be restricted (e.g. Kenya and Malawi, with restrictions); countries that recognize different types of tenure including individual property rights, customary tenure and public lands (e.g. Uganda and Sierra Leone); and countries that vest land ownership in the state and grant individuals only use rights (e.g. Ethiopia, Nigeria, Tanzania). Given these variations, the data from household and farm surveys on ownership may represent very different rights in different countries, depending on the existing customary and statutory legal frameworks.

Gender inequalities may differ across the various land rights. Even if women have rights to work and use the land, they may not be able to transfer it through sale, lease or rental. Women's agricultural decisions may be based, in part, on the rights that they have over the land. And, in turn, this may influence their economic empowerment and welfare. By assuming that land rights are unidimensional, we may miss key elements of the gender gaps.

This paper identifies the gender gaps in a wider set of land rights than simply ownership. In addition, we analyse the extent to which the various land rights are correlated. Using the most recent waves of the Living Standards Measurement Surveys-Integrated Surveys on Agriculture (LSMS-ISA) for six African countries, we extend the recent work on gender differences in land ownership in Africa. Doss et al. (2015) propose a framework of indicators for the study of gender inequalities in landownership and illustrate the framework using data from Africa. Similar approaches have been used to analyse gender inequalities in land ownership in Asia (Kieran, Sproule, Doss, Quisumbing & Kim 2015) and in Latin America (Deere & León 2003). All of this work finds that women are less likely to be landowners and to own a smaller share of land. This paper complements these findings by examining gender inequalities in other land rights, including the right to sell, management rights, and the right to control the output.

We analyse the overlap in rights on individual plots of land to understand i) whether owners have a full bundle of rights over their land; and ii) whether the patterns differ based on the gender of the owner. The findings have implications for both survey design³ and policy, and they may provide some insight to the ongoing methodological work on the SDG indicators on land rights. Do surveys need to include multiple measures of land rights, particularly land ownership and land management, or are they strongly correlated? Is it appropriate to use these two concepts interchangeably or do we need to distinguish them, both in research and policy? The limited evidence available finds that the size of the gender agricultural productivity gap differs depending on whether they proxy land rights by using the roles in production (e.g. manager, decision-making on the output of production) or the land owner (de la O Campos, Covarrubias, & Patron, 2016; Peterman, Quisumbing, Behrman, & Nkonya, 2010).

This study confirms that there are significant gender gaps, not only in land ownership, but also with regard to other land rights such as plot management and the rights to sell or use the plot as collateral. The size of the gender gaps varies across countries and across the rights. Generally, countries in West Africa (Niger and Nigeria) exhibit larger gender gaps than countries in East and Southern Africa (Ethiopia, Malawi, Tanzania and Uganda). However, there are little or no gender gaps in the control over the use of the harvest from the plot, confirming that the focus on one metric of land rights may provide misleading results about the overall gender inequalities.

³ While proposals have been made for strengthening land tenure modules, particularly for the LSMS (S. Holden, Ali, Deininger, & Hilhorst, 2016), the issue of bundle of rights and discrepancies on the concept of land ownership across countries has not been widely discussed.

Moreover, owners do not always have the rights to sell or use their plots as collateral and the owners are not necessarily the managers in terms of production or the only individuals in the household with a say in the use of the output, which we refer to as the economic managers. The overlaps among ownership, production management and economic control varies across countries and by gender. The findings reflect the complex web of interest that different household members have over various plots and indicate that the various metrics of land rights should not be used interchangeably, especially for plot-level analyses, such as those used in studies of agricultural production.

II. Conceptualizing and measuring land rights

Many different conceptualizations of land rights are used across the various disciplines that consider these issues. Here, we focus on three types of land rights that are relevant for agricultural land (as opposed to forests or commons) and for which survey data is available.

- a) **Ownership rights** are usually conceptualized as the full bundle of rights, including the right to alienate or transfer, manage or make improvements, exclude others, and control the proceeds, with the right to alienate or transfer as the critical one (FAO, 2003). Yet, in practice, the strongest bundle of rights possible in a particular context are often treated as ownership rights. Owners may be limited in their alienation rights, but it is usually the case that someone would not claim to be an owner if another individual had the right of alienation over that land.
- b) **Management rights**, or the rights to make decisions on the use of the land for crop production or other agricultural use, including whether to plant crops or leave the land fallow, what crops to plant, what inputs to apply, and when to harvest.
- c) **Economic rights**, or rights to derive economic benefits from the land in accordance with its use, including decision-making on the use of the output/income derived from the use of the land.⁴

In this analysis, data from six nationally representative data sets in Africa, the World Bank's Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA)⁵ will be used to understand the patterns of men's and women's land rights.

Understanding ownership rights is challenging, particularly in the context of Africa where much of the land ownership takes place under customary tenure systems. While in some contexts it is useful to only consider those who have documented rights under the statutory legal system as owners, this would eliminate many of those who consider themselves landowners in Africa. For example, within the six African countries in our analyses, the percentage of plots for which there is an ownership document ranges from 8% Niger, to 32% in Ethiopia. If we only consider those with documented rights as owners, we would miss many who have secure land rights.

Understanding who has documented ownership rights becomes particularly relevant in areas with dynamic land sale and rental markets or where credit is available to those with documented

⁴ The access rights to land have several meanings in the literature. As conceptualized by Schlager and Ostrom (1992), access is the right to walk across the land, while in much of the women's land rights literature, access involves management rights or the right to use the land to grow agricultural produce.

⁵ These include the 2013-2014 Ethiopia Socioeconomic Survey, the 2013 Malawi Integrated Household Panel Survey, the 2011 Niger Enquête Nationale sur les Conditions de Vie des Ménages et l'Agriculture (ECVM/A), the 2012-2013 Nigeria General Household Survey (GHS), the 2012-2013 Tanzania National Panel Survey and the 2010-2011 Uganda National Panel Survey.

rights (Deininger, Ali, & Yamano, 2008). However, in a context of poor governance, inadequate land institutions and limited knowledge about land rights, ownership documents may not ensure security of rights (Deininger et al., 2008; R. Meinzen-Dick et al., 2014).

In this paper, we are going to use two conceptualizations of ownership. The first, that we term reported ownership, is based on the respondents answer to questions regarding whether they or someone in their household owns the land. In addition, we will make specific reference to documented ownership in some sections of the analysis; again, we are using the responses to questions about whether or not there is an ownership document. Because we are comparing the land rights as reported in household surveys, we do not have information on whether the ownership rights as reported by the respondent correspond with local laws or would be upheld in a court of law.

It then becomes necessary to operationalize the concept of reported ownership across the various contexts. The survey questions were all tailored to the local context and thus are slightly different. Table A1 outlines the exact survey questions used to capture each set of land rights in each country. In Malawi, Niger, Tanzania and Uganda, the reported owners are identified from a question about who owns or has the ownership rights to the plot. In Ethiopia, the reported owner is the person(s) listed on the plot certificate when one exists or the person who has the right to sell the plot. In Nigeria, the owner was only identified for plots that were purchased; for all other plots, we consider the owner to be the household member(s) who has the right to sell or use the plot as collateral.

Differences also arise regarding the management rights within the surveys. In Ethiopia, Malawi and Tanzania, respondents were asked to identify the family members who made the decision about planting; in Malawi, they were asked about decisions regarding planting and inputs. In Uganda and Niger, respondents were asked merely “who works the plot” and in Nigeria they were asked “who manages” the plot.⁶ Some of the gender differences across countries may thus result from the different formulation of the survey questions. Therefore, interpretations of the cross-country comparisons of gender gaps in management and overlap between ownership and management should be made with this in mind.

The questions about economic control used two approaches. In Ethiopia, Malawi, Nigeria and Tanzania, respondents were asked who made the decision about the use of each crop on each plot. In Uganda, they were asked who controls the output from each plot. No question on control over output was asked in Niger. So the questions vary in their specificity, whether they refer each crop on each plot, or the total output of each plot.

The coding for all the land rights questions allows for multiple people to be listed. In all surveys, there was space for at least two family members to be listed as owners; in Nigeria, four family members could be listed as holders of the rights to sell or use the plot as collateral. The ownership and management questions were coded differently in Niger, where there was an option to list either one household member or the whole household. The surveys of Ethiopia, Malawi, Nigeria and Tanzania allowed for up to three family members to be listed as managers, and in some of these, the primary decision-maker was noted. The survey in Uganda allowed

⁶ It is possible that the management questions were formulated differently because of local cultural and language understanding of management. For example, a question that asks “who works the plot” may be too dubious a proxy for management when translated to English but may indeed capture the decision-maker in some contexts and languages. There is no clear information as to why the management questions were so different across countries.

for only two household members to be listed as managers. As for the economic control, usually one or two household members could be listed as decision-makers.⁷

We will sometimes distinguish plots that are currently under cultivation from those that are not. Information on the management and economic rights were only collected for plots that were under cultivation. Moreover, economic rights were not collected for the whole plot (except in Uganda) but only for the crops on the plot that had been harvested in the reference period.

One limitation of the structure of these surveys is that they typically interview one person in the household regarding agricultural land. Thus, we only are able to capture the set of rights as reported by the one individual, not men's and women's reporting of their own rights.

These three indicators of land rights have typically been used to understand different sets of issues. Land ownership is important for understanding assets and wealth. Management rights are used to understand agriculture production and to develop appropriate interventions to increase productivity. Finally, the control over output is directly related to women's economic empowerment and household welfare. It is often assumed that ownership rights are the most important and secure of the three forms of rights discussed here. A woman may lose her rights to manage a plot that is owned by her husband if he dies or divorces her. Yet, women may see the rights to manage land and keep the output as equally important.

III. Women's land rights: in the context of six African countries

Land rights are influenced by property and family law, including both statutory and customary law as well as the prevailing tenure system. Property law and land law identify the formal rights that people may have over land. Family law affects how property is owned within marriage and the rules of inheritance. The formal law interacts with customary practices; they may be similar or contradictory. In this section, we highlight key differences that can help explain the results we obtain in our cross-country analysis.⁸

Ethiopia

According to Ethiopian law, all land is officially owned by the state and Ethiopians only have land use rights. These use rights, which can be certified, allow alienation through inheritance, renting out or division between spouses in the case of divorce. However, regional land laws further influence who is able to use the land. In some regions, inheritance rules require that household members who inherit land live in rural areas and participate in agricultural work. Some regional laws also restrict how much of the holding can be rented out and whether land use rights can be used as a collateral.⁹

⁷ When the question about the decision-makers of the use of the output was collected for each crop on each plot, in order to get a plot level aggregate measure of control of output, we aggregate the responses so that any household member who decides about the use of any of the crops on the plot is counted as a decision-maker regarding output.

⁸ Unless specifically stated, the information in this section is derived from the USAID land tenure and property rights portal (<http://www.usaidlandtenure.net/country-profiles>) and from FAO's Gender and Land Rights Database (<http://www.fao.org/gender-landrights-database/en/>)

⁹ Small-scale farmers are usually restricted from using their land as collateral while these restrictions do not apply to large-scale commercial farmers.

Significant efforts have been made to secure women's land rights in Ethiopia. In 1997, the government launched a land certification program which aimed at including the names of both the husband and wife. As a result of these efforts, women saw an increase in their legally recognized rights to land and increased opportunities to participate in rental markets (Deininger et al., 2015; S. T. Holden, Deininger, & Ghebru, 2011).

Tanzania

In Tanzania, four land tenure systems coexist. *Village land* rights are held collectively by the villages and can be communal or individualized, and can also be registered and certified.¹⁰ *Customary rights of occupancy* are given for village land that is governed by customary laws. The rights are perpetual and may be transferred through bequest and sale, including to those outside of the community with the consent of the village council. *Granted rights of occupancy* are for general land (including woodlands, rangelands and urban and peri-urban areas not reserved for public use) and reserved land (public use land such as parks and wildlife reserves). They can be issued for a fixed period of up to 99 years. The fourth type is *leasehold*. Both holders of granted right of occupancy and customary right of occupancy can transfer their rights through leasing.

Statutory laws allow equal land ownership rights for men and women but they do not protect women against discriminatory customary practices. The marriage regime in Tanzania is progressive, all marriages, monogamous and polygamous, must be registered. In addition, all married women, including those in polygamous unions, are allowed to own property individually. Yet, marital property is co-registered and the consent of the spouse is needed to transfer the property. Nevertheless, customary practices, the lack of legal knowledge and social norms hinder the realization of those rights (USAID 2011). At the dissolution of the marriage, women may lose control of land (Peterman, 2012). The property rights of the one-third of all women who are Muslim are further influenced by Sharia law.

Uganda

In Uganda, four main types of tenure are recognized: customary, leasehold, freehold and mailo. Most rural land is under customary tenure (75-80%) and only about 15-20% of rural people have land that is formally registered. Owners of customary land are able to obtain certificates for the land they occupy (USAID, 2010a) and to convert this certificate to a freehold title (GLRD). Mailo land is that which was historically allocated by the British Empire to Ugandan elites; currently, tenants occupy most of the mailo land and they often have long term rights to remain on the land.

The constitution of Uganda protects women from discrimination on the basis of sex, protects their rights to own property, and protects the rights of women during and after the disillusion of marriage. Customary laws in Uganda are discriminatory against women, although the extent of the discrimination varies by region. The 1998 Land Act tried to increase women's rights to land by stipulating that spousal written consent is necessary for the transfers of land on which the household depends for its livelihoods. An amendment to the act in 2004 broadened the definition of spousal land; women were given the rights to access and live on their husband's land and could refuse to give consent to transfer that land, but were not owners. Moreover, the knowledge of the law has been low (GLRD).

¹⁰ The villages can register their land and obtain certificates; in addition, individuals can obtain *customary rights of occupancy* certificates for village land.

Malawi

In Malawi, there are three types of land: public land, private land and customary land.¹¹ The 15-20% of land which is public land is used for public parks, conservation areas, schools and government buildings. Private lands (constituting about 10-15% of all land) can be held under various tenure arrangement including freehold titles which provide the rights to the exclusive use of land and its alienation through sale, rental or leasing. Land under customary tenure (between 65% and 75% of total land) is vested in the President for the public good but is under the jurisdiction of traditional leaders. Some customary land can be *individualized* and can carry exclusive rights for use by specific families, who can also bequeath it but they cannot sell it outside the community. Both private and customary land, can be leased for various lengths of time and use terms. However, if customary land is leased formally, at the end of the lease agreement, it loses its customary status and becomes public land under the jurisdiction of the government (USAID, 2010b).

Under the constitution women and men have equal rights to own land but there are no laws governing matrimonial property (GLRD). Moreover, when it comes to land ownership it is traditional norms and customs that dominate. Under patrilineal traditions, prevalent in the north, women cannot own or inherit land and obtain access to land through male family members. Matrilineal customs, which are found in the central and southern regions, are more egalitarian and often give women more land rights.

Niger

In Niger both private property and various customary tenure systems are common. Privately held land is characterized by exclusive use and by the possibility to lease or sell, while the customary systems are characterized by different levels of restrictions on the transferability of land. The 1993 Rural Code aimed at increasing land security for both women and men through individualizing and enabling registration of customary land-use rights and decreasing the influence of community chiefs. This law grants women and men equal rights to land but the provisions are not well understood or implemented. Rural women's rights are often unrecognized (USAID).

Under statutory law, women can own and transfer land including through the market while under customary law, all land is owned by men, but women are usually given a small plot near their home to use as kitchen gardens. Upon divorce, separation or widowhood, women may lose their access to land under customary law. Most Nigeriens are Muslim and Islamic law stipulates that women may inherit land, though only half of what their brothers inherit. Yet, there are reports that the inheritance laws are not followed and women do not receive any land (USAID).

Nigeria

In Nigeria, the 1978 Land Use Act nationalized all land in order to remove the customary tenure system. When the Act came in to place, Nigerian women and men could apply for two types of land use certificates – customary and statutory – both of which were for a fixed term. In

¹¹ The National Land Policy of 2002 differentiates between government land, public land and private land. Government land is land designated exclusively for the needs of the government. Public land is defined as land that is held in trust by the government or the traditional authorities, but the fact that it is held in trust precludes ownership. Private land is either freehold land or customary land that is clearly designated to individuals, families, communities or other entities (GLRD).

general, they could not be transferred, even within the lineage, without government approval. The registration of land certificates was costly and time-consuming and, therefore, limited in practice. Furthermore, knowledge of the law remained low and customary practices continue to govern land transactions (USAID). The customary system offers flexible land rights including the rights to transfer land (even through sale).

While statutory laws state that men and women have similar inheritance rights, the law only applies to women married under statutory law. In Northern Nigeria, Islamic law guides inheritance practices and, women inherit only half of what their brothers inherit and often, under social pressures, relinquish even that land. Customary laws also discriminate against women and women can only obtain use rights to the land through their husbands (GLRD). Furthermore, land is almost exclusively registered in men's names (GLRD).

Summary

These six countries present a wide range of tenure systems and land rights. Land acquired through different means and with different tenure systems may provide people with different rights. Large sample household surveys are not designed to capture the nuances of these various rights, but the data analyzed here demonstrates that there is a potential to easily capture information on the three basic sets of land rights, including ownership, management, and economic rights.

IV. Analyses of land rights

We first consider land rights at the individual level, analyzing which rights are held by men and by women. Then we consider land at the plot level, analyzing who holds the rights for each plot.¹² Land rights may be held individually, by one person, or jointly, by two or more individuals. When more than one person holds the rights, it does not necessarily mean that the benefits of ownership are equally distributed (Jacobs & Kes, 2015). Because land rights held solely or jointly may confer different benefits, we often analyze them separately. We do not analyze common property rights, which also may differ for men and women (R. S. Meinzen-Dick, Brown, Feldstein, & Quisumbing, 1997).

a. Gender gaps in land right at the individual level

The gender gaps in land ownership, land management and economic control for each country are presented in Figure 1. For each right, Figure 1 shows the percentage of men and the percentage of women who hold the particular rights.

The gender gap in land rights, particularly land ownership, is significant across all countries. Nigeria and Niger show the greatest gender gaps in all land rights. In Nigeria only 4% of women, compared to 23% of men, own agricultural land (whether alone or jointly with someone else). In addition, less than 2% of women own at least one plot solely compared to

¹² Note that although we follow the framework of Doss, Kovarik, Peterman, Quisumbing, & van den Bold (2015), some of our statistics reported here may differ because Doss et al. (2015) report the distribution of the total *area* of land while we report the distribution of *plots* owned. We also use the most recent round of data, which was not available for their analysis.

almost 17% of men. In Niger, 63% of men and 35% of women own agricultural land.¹³ The data on sole land ownership shows greater inequality between adult women and men in Niger; 40% of men own land solely compared to 14% of women.

The gender gap in land management in Niger and Nigeria is also wide indicating that land inequalities are not confined to ownership. In Nigeria, only 11% of women compared to 32% of men manage agricultural land and less than 6% of women manage at least one plot alone compared to 25% of men. The results for the control of output are similar to the results for management. In Niger about 50% of women are land managers, either jointly or alone, compared to 72% of men and twice as many men manage land solely compared to women.

In the other countries, the gender gaps in land ownership and land management are smaller. In Tanzania, 32% of all women are landowners, with a corresponding figure of 42% for men. In Ethiopia and Uganda, the incidence of landownership (sole or joint) is only about 4-5 percentage points in favour of men. In Malawi, a higher proportion of women than men own land.

Across most countries, the gender gap in the control over output is smaller than the gender gaps in other land rights. In four out of the five countries for which we have information on the control over output, there is little or no gender gap in control over output. Nigeria is the exception where nearly 30% of men but only 13% of women report having control over output. Moreover, 20% of men have a sole control over output and only 4% of women have a sole control over output. In Uganda, the gap is reversed with a larger share of women compared to men having a control over output.

b. Gender Gaps in Land Rights at the Plot Level

The remainder of the analyses use plots that are owned by household members as the unit of analysis. The advantage of this is that it facilitates consideration of individual and joint rights over each plot. For each plot, we can identify the individual(s) who hold the rights. We are considering the rights over plots that are owned by someone in the household; we specify when we are considering only plots that are owned and cultivated.

In five of the countries, more plots are solely owned by a man than by a woman (Figure 2). The gap is largest in Nigeria where more than 70% of plots are owned by a single man while only 8% are owned by a single woman. Similar patterns are found for management. In Niger, women own 14% of plots solely while men own 59% of plots solely; the rest are owned by the whole household. Most plots (47%) are managed solely by men, while only 13% are managed solely by women.

Malawi is the one country where the gender gap in land ownership does not favour men. However, since women's plots are smaller than men's plots on average, the gender gap in terms of land area owned is slightly larger for men than for women (see Doss et al 2015).

In Malawi, Niger, Nigeria and Tanzania, most plots are under single-person ownership. In contrast, in Ethiopia and Uganda more than half of the owned plots, are owned jointly by a man and a woman in the household.¹⁴ However, joint ownership does not necessarily mean that the rights are equal, as we will see below.

¹³ As mentioned earlier, one of the response options in the survey for Niger was that the plot was owned by the whole household. In that case, all adult members are treated as ownership which means that the individual level land ownership estimates may be overestimated.

¹⁴ These are usually the husband and wife.

Uganda also has high levels of joint management and control of output. When management and control over output is done by an individual, it is more often done by a woman than a man. Joint management of plots is high in Malawi (55% of plots), although joint control over output is lower (39%). The pattern is similar, but at a slightly lower level for Tanzania, with 43% of plots managed jointly and 36% of plots where the output is jointly controlled. In Ethiopia, almost half of plots are jointly managed and the output is jointly controlled.

The patterns are noticeably different in West Africa. Only 36% of plots in Niger are jointly managed and only 13% in Nigeria. We also see very large gender gaps in favour of men in management and control over output in West Africa. In Nigeria, 72% of the plots are managed by men and they control the output of 53% of the plots.

Overall, the analysis identifies gender disparities in land rights in all countries. However, these gender gaps are more severe in Nigeria and Niger than in the countries of East/Southern Africa. In all countries, the percentage of women owning land is significantly smaller than the percentage of women managing and controlling outputs, revealing that reported ownership indeed does not capture the full range of women's and men's rights over land.

Moreover, Figure 1 and Figure 2 highlight important differences between management of production and control of the output. The literature offers little practical guidance as to which set of rights should be used in various analyses. However, it is clear from these findings that the choice of rights is likely to affect the analysis because there are differences in the distribution of plots by the sex of the manager and the sex of the individuals who control the output.

c. Relationship of land ownership and rights to transfer

Thus far, we have considered ownership rights using reported ownership where available and the right to sell the plot as a proxy in Ethiopia and Nigeria. However, in the Malawi and Tanzania surveys, questions are asked both about ownership and the right to sell the plot. In this section, we consider how these rights are correlated in these two countries.

It is often assumed that the owner has the right to alienate the land. However, in contexts where customary tenure systems predominate, this may not hold and the rights to transfer may not be vested in the person reported as the owner.

In both Malawi and Tanzania, there is an imperfect overlap between ownership and the right to sell. In Malawi, where a small share of land is freehold, many reported owners do not have the right to sell the land or use it as collateral. Sole male owners have the right to sell 55% of their plots, while sole women owners can sell 46% of their plots (Figure 3) also reflecting a gender gap in the transfer rights.

In Tanzania, where occupancy rights can be sold, leased and mortgaged, there is a larger overlap between reported ownership and the right to sell – for 85% of sole male owned plots and for 76% of sole female owned plots, the reported owners have the rights to sell the plots or use them as collateral. Thus, although the legal framework guarantees the same transfer rights to men and women, in practice, women owners are less likely to have these rights. Moreover, of the jointly owned plots, 68% can be sold by both owners; 23% can be sold by the male owner alone and only 1% can be sold by the woman owner alone. Not only is there a gender gap in the transfer rights evident here, but women who are joint owners may be vulnerable in that the man has the right to transfer the plot without her involvement.

The stronger overlap between reported ownership and the right to sell or use land as collateral in Tanzania relative to Malawi is the consequence of the different tenure systems and different customary and statutory laws governing land transactions. Although the share of land under

customary tenure is similar,– 82% of land in Tanzania (Leavens & Anderson, 2011) and 75-80% in Malawi (USAID 2010) – in Tanzania occupancy rights can be transferred¹⁵ outside the community, while in Malawi land under customary occupancy cannot be sold outside the community (Chirwa (2008) in USAID 2010). It may also be the case that the varying strength and dynamism of land markets affects awareness about transfer rights but the data cannot provide insights into this.¹⁶

d. Relationship of land ownership and management

Ownership and management are the two most common forms of land rights discussed in the literature. Our analysis also finds an imperfect overlap between reported ownership and the management of agricultural production. Figure 3 presents the percentage of plots for which the same person holds both rights. The overlap is highest in Niger where 84% of plots are managed by the owners.¹⁷ This overlap is also strong in Nigeria where about 75% of plots are managed by the owners. The overlap is smaller in the East/Southern African countries: 69% in Tanzania and 47% in Malawi. The overlap is the greatest for jointly managed plots and the least for sole male managed plots in all countries, except Nigeria.

Table 1 provides some additional insights into these gendered patterns of ownership and management. For all the plots that are owned and cultivated within surveyed households, it shows the gender of the owner and manager. (The table only identifies if the gender is the same, but in almost all cases where the gender is the same between the owner and manager, it is the same person. Thus, we can identify the gender of the manager, when it is not the same as that of the owner. In Nigeria, over half of the relatively few plots that are jointly owned are managed solely by men and 19% of the jointly owned plots are managed solely by women. Thus, over 72% of plots owned jointly are managed solely. The comparable numbers for the other countries range from 8-18%.

We can also see who manages the plots that are owned solely by men. In the East and Southern African countries, half or more are jointly managed. Thus, women are sharing in the management of plots owned by men. In West Africa, 80% of the plots owned by men are managed solely by men.

In no country, do we see more than 8% of the plots owned by men being managed solely by women. Thus, the story that women are given plots to manage by their husbands is not visible in the data. It may be that when men allocate one of their plots to their wife, it is then reported as jointly managed, rather than managed solely by her.

Finally, who manages plots owned solely by women? In Ethiopia and Malawi, 40-46% are managed jointly. In Niger, Nigeria, and Tanzania, 72-80% of women's plots are managed by women. In Uganda, 52% are managed by women solely, while equal numbers are managed jointly and by the "other" category (which for Uganda is dominated by joint management by

¹⁵ In theory, the transfer rights are with the rights holders but, in effect, the government has to approve the transfers (Leavens & Anderson, 2011).

¹⁶ Respondents were not asked to identify the tenure system directly in any of the surveys, though it may be inferred from other information, such as the method of land acquisition. The Tanzania survey did not collect information about the method of land acquisition.

¹⁷ As noted above, the response options in Niger allowed for the whole household to be listed as the owner or the manager. The high overlap may in part be due to the question formulation.

women). Thus, it is not necessarily the case that sole ownership by a woman implies that she is the sole manager.

e. Relationship of ownership and economic control

We also explore the overlap between reported ownership and economic control, proxied by decision-making regarding the use of the harvest from the plot (Figure 3).¹⁸ Similar to the relationship between ownership and management, the overlap between ownership and economic control is partial, but it is stronger for plots owned solely by a woman than for plots owned solely by a man (except in Nigeria). This suggests that other family members have some say about the use of agricultural outputs even from male owned plots. For example, in Ethiopia, men solely decide what to do with the output from only a quarter of their plots; other family members participate in the decision for the remaining plots. Similarly, in Malawi, Tanzania, and Uganda, men solely decide on the use of the output from about a third of their plots and women have a say in almost all remaining plots.

f. Relationship between management and economic control

Finally, we analyse the extent to which the management of agricultural production and economic control over the output overlap. Understanding these relationships is important for both policy and for technical guidance around questionnaire designs. It is often assumed that decisions about cropping and the use of the output are done by the same person. Yet, this assumption is not reflected in our findings.

As seen in Table 2, the relationship between management of production and the control of output does not follow a clear pattern across countries. The strongest overlap between management and control of output is in Uganda; in 82-83% of the plots, the manager of the plot also controls the output, whether this is a sole man, sole woman or couple. In general, women usually control the output from the plots they manage and often have a say in the use of the output from male-managed plots. This is particularly pronounced in Ethiopia, where women and men jointly decide how to use the output from 61% of sole male managed plots. Generally, the overlap between joint production and joint economic control of output is high, except in Nigeria and to some extent in Malawi where men solely decide how to use the output from almost a quarter of jointly managed plots.

g. Land Rights and Tenure Security

Surveys generally do not provide much information about the security of land tenure. Formal land ownership when backed by documentation is often used as a proxy for tenure security; however, given the nature of tenure systems in Sub-Saharan Africa, this proxy is far from ideal. In all countries analysed, relatively few plots have documents regarding ownership. Fewer than 5% of the plots under cultivation that are owned by someone in the household in Malawi have documents; the comparable numbers are fewer than 10% in Niger and fewer than 15% in Tanzania and Uganda. In these four countries, women's plots are less likely than men's plots

¹⁸ Because the question concerns the use of harvest, the decision-makers with regard to harvest are identified only for the crops on the plot which were harvested at the time of the survey. This explains the missing values with regard to economic control in most countries. The only exception is Uganda where the information on the control of output was collected at the plot level regardless of whether or not crops were harvested.

to have documents but the gap is generally small. The gap is somewhat larger in Niger where only 4% of sole female plots compared to 9% of sole male plots are documented. The patterns in Ethiopia are reversed: 58% of sole female owned plots compared to 46% of male owned plots have a certificate under the name on the owner. This is likely a result of Ethiopia's extensive gender-sensitive land certification program.¹⁹

Farmers' own perceptions of land tenure security are addressed directly in five of the surveys analysed here. They are asked whether they fear that someone may dispute the plot ownership or whether they feel comfortable leaving the plot uncultivated. Farmers are concerned about disputes for about 8% of plots in Uganda, 11% of plots in Malawi and 40% of plots in Nigeria.²⁰ In Tanzania respondents were asked whether they felt comfortable leaving the plot fallow as a proxy for tenure security. For 95% of the plots owned by households, the response was positive, indicating a level of tenure security. The evidence thus suggests that titles may not be a necessity for tenure security in customary settings, at least in the surveyed countries in East and Southern Africa. In Nigeria, a large share of plots is under insecure tenure, which has important implication for land investments. Moreover, with the slow, but growing, development of land markets in Sub-Saharan Africa, land conflicts and concerns over land dispute are likely to increase in many countries.

Because of the structure of the surveys, often one proxy respondent answered the questions about tenure security for the household. Thus, they may have interpreted the question as being concerned with disputes from individuals outside the household, rather than among household members. Therefore, tenure insecurity resulting from within the household or family, which may particularly affect women, is likely not to have been captured.

Tenure security may also be related to the method of land acquisition. Inheritance in a customary setting may provide different levels of tenure security than purchases in an area where land markets are rapidly changing. Which mode of acquisition provides more secure tenure may vary across contexts.

In the five surveys that asked about land acquisition, the question seems to ask how the household acquired the plot rather than how the individual owner(s) acquired the plot. For women, inheritance of land from her parents may provide different rights than inheritance from her husband, but this can't be untangled with the available data.

In most of the countries analysed, inheritance is the main method of land acquisition for both men and women. The results presented in Table 4 support previous studies which generally conclude that men are more likely than women to inherit land, but also that inheritance is the most important method of land acquisition for women, simply because other methods – such as participating in the land market, for which significant financial resources are needed – are less accessible to women (Croppenstedt et al 2011). Ethiopia differs since a larger share of plots owned exclusively by a woman are acquired from local leaders rather than through inheritance (while the opposite is true for plots owned exclusively by a man).

Relatively little land is purchased in any of the countries. In Malawi, only about 3% of owned plots were purchased. The share of purchased plots is about 8-9% in Niger and Nigeria. Uganda

¹⁹ The Ethiopia survey is the only one that asks the names included in the land documentation. Others simply ask who the owner is and whether there is a document, but do not clarify that the owners name is on the document. This can especially be an issue when ownership is reported as joint, but it is not necessarily the case that both names are on the document (See Doss, Meinzen-Dick, & Bomuhangi (2014)). Also, in Ethiopia, a larger share of female solely-owned plots is documented (58%) than that of either solely-owned male and jointly owned plots.

²⁰ There is a small gender gap in the perceptions of land security in Nigeria, with reports for concerns of disputes for 41% of sole male plots and 36% of sole female owned plots.

has the largest land markets: a third of all owned plots were purchased. Other studies confirm the importance of land sale markets in Uganda (Baland, Gaspart, Platteau, & Place, 2007). In Nigeria, although land transfers are restricted, almost 9% of the plots were purchased. In Ethiopia the market is not an option for acquiring land because land sales are prohibited by law, therefore inheritance and local leaders are the only two available options. (The Tanzania survey did not collect information on how the plots were acquired.)

Regardless of the importance of land markets, across all countries, a larger share of plots owned by a man solely in comparison to those owned by a woman solely were purchased. The gap is particularly large in Uganda, where 33% of plots owned solely by a man were purchased compared to 24% of plots owned solely by a woman.

The patterns in Niger differ somewhat from the others. Almost half of plots owned solely by a woman were obtained as a gift; this may be land that they acquired from their husband or the community at marriage. It is noteworthy that they claim to own this land, since they are not allowed to own land under customary laws and they obtain access to land through their husbands. These plots may also be the so-called kitchen gardens, which are traditionally allocated to women at marriage.

V. Conclusion

Gender gaps in landownership have been a focus of recent literature, but gaps in other land rights such the rights to transfer the land and the rights to manage and derive economic benefits from land have not been extensively analysed. This is a serious omission given the complex tenure systems of developing countries, particularly in Sub-Saharan Africa.

This study fills the gap in the literature by analysing the gender gaps in various land rights and demonstrating that the patterns differ widely. When land rights are not all vested in the same person, understanding who holds the various rights provides insights into the intricate ‘web of land interests’ (R. Meinzen-Dick & Mwangi, 2009) around land. This notion of a web of interest is an appropriate framework to understand land rights given the myriad of ways the different land rights can be distributed, both within and outside the household.

We find significant gender gaps in a number of rights, not only in reported land ownership. In all countries under analysis, except in Malawi, fewer women than men are land owners. Most striking is women’s disadvantage in land ownership in Nigeria and Niger compared to the other four African countries. These differences may be due to fewer protections for women’s land rights in the statutory and customary systems of these two countries. In countries where women have stronger protection of their rights, the gender gaps in land ownership are smaller. For example, in Ethiopia, Tanzania and Uganda women have relatively strong legal rights. While there is still often a lack of awareness about women’s rights, the existence of these provisions in the legal system, as well as the existence of less gender-discriminatory customary practices, may help explain the smaller gender gaps in land rights in these countries compared to Niger and Nigeria. In Ethiopia and Uganda, where there have been programs or provisions in the legal system encouraging joint ownership, more than half of all plots are jointly owned or managed. Evaluations of the program in Ethiopia confirm that it was successful in including women’s name on the land certificates (S. T. Holden et al., 2011). This may suggest that progressive programming is effective in strengthening women’s land rights. Similarly, women’s land use rights in Rwanda have improved as a result of nationwide land registration

programme (Ali et al., 2014). When more of the land is held jointly, women's land rights are more visible in the data.

Across all countries, except Malawi, the gender gaps in landownership are larger than the gender gaps in other land rights, but women are disadvantaged in these other rights as well. In four of the countries (Ethiopia, Niger, Nigeria and Tanzania) a smaller proportion of women than men are land managers. The opposite is true for Malawi and Uganda – more women than men are reported managers but at least in the case of Uganda, the difference may be linked to the way the question was formulated ('who works the plot').

As in the case of land ownership, the gender gaps in land management are most pronounced in Niger and Nigeria, suggesting the existence of strong obstacles to women's access to and control of land in those two countries. The gender gaps in the control of harvest are smaller than the gaps in other rights, suggesting that even though women are less likely to be land owners and managers, they may still participate in the decisions about the use of the harvest from the plot.²¹

In addition, rights that are commonly assumed as synonymous – such as ownership, the rights to sell land, management of agricultural production and control over output – are often vested in different household members and therefore, should not be used interchangeably. Individuals reported as land owners do not necessarily enjoy the full set of property rights.

The set of rights associated with land ownership may be limited based on the country's tenure system. Some African countries that recognize individual ownership to land and issue land titles still restrict the power of the title-holder to rent-out or sell the plot. Efforts to improve women's land rights require a clear understanding of the legal and customary laws governing the range of land rights, marital regimes and inheritance practices. It is critical to move beyond simply considering land titling and to consider the range of land rights.

While these new data allow us to systematically compare the various land rights for plots held solely and jointly for men and women, they also point to areas where additional data and analyses are needed.

First, the various land rights do not necessarily overlap and the patterns vary by gender. But much more detailed analysis of individual country data would be needed to understand the circumstances under which the rights overlap and when they do not. For example, when does women's land ownership mean that she also manages production and controls the output? And when do women share in the management and control over output of jointly owned land? Both detailed small sample surveys and qualitative analyses may be useful in our understanding of these issues.

Second, these surveys do not necessarily interview the holder of the land rights. In all the surveys under analysis, the agricultural module was completed by the most knowledgeable person in the household. Some evidence suggests that reports of land rights depends on the gender of the respondent (Kilic & Moylan, 2016; Twyman, Useche, & Deere, 2015). Experiments have been conducted in Uganda (Kilic & Moylan, 2016) and find that the patterns of asset ownership differ depending on who is interviewed within the household. In the surveys analysed in this paper, we don't know whether different people would provide different information about ownership, management, and control over output.

²¹ However, as mentioned in the previous section, the question about the control of harvest was only asked with regard to the crops that were already harvested (and not crops that were still in the field) and, therefore, the responses should be treated with caution.

Finally, because the questions are asked differently across the six countries, the comparative findings may be affected by the wording of the questions. Yet, even if the wording were exactly the same, the context of each country shapes how the questions are interpreted and what the various rights imply. It is challenging to analyse land rights in ways that are both comparable across countries and relevant in the local context. While there are differences in the wording of the survey questions analysed here, they do provide useful insights into the patterns across countries.

In the future, the need to monitor progress on the SDGs will only grow. The results of this analysis contribute to the methodological debate on measuring secure land rights for men and women, reflected in Goal 1 (indicator 1.4.2) and Goal 5 (indicator 5.a.1) of the SDGs. Our analysis strongly suggests that a single proxy question on land rights will not be enough to monitor effectively the state of land rights and the gender gap in land rights, particularly in Sub-Saharan Africa where customary land tenure prevails. The analysis also suggests that a proper interpretation of the land ownership statistics requires clear information (therefore specific survey questions) on the land tenure system under which the land is ‘owned’.

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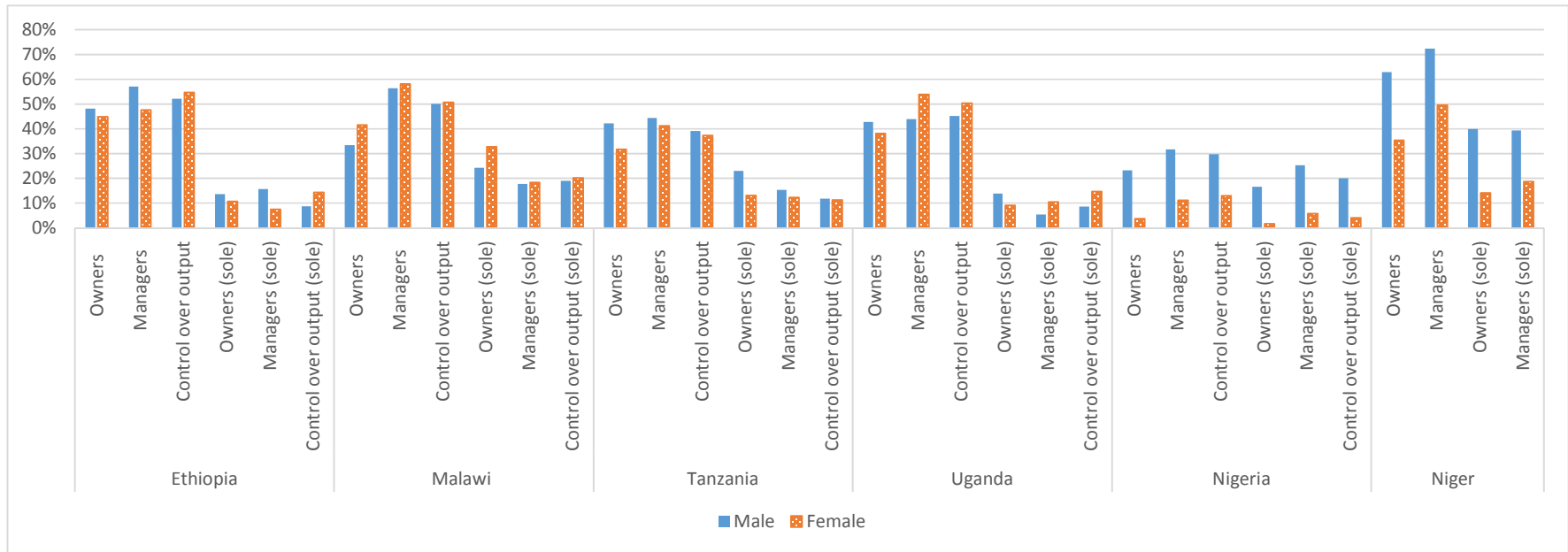
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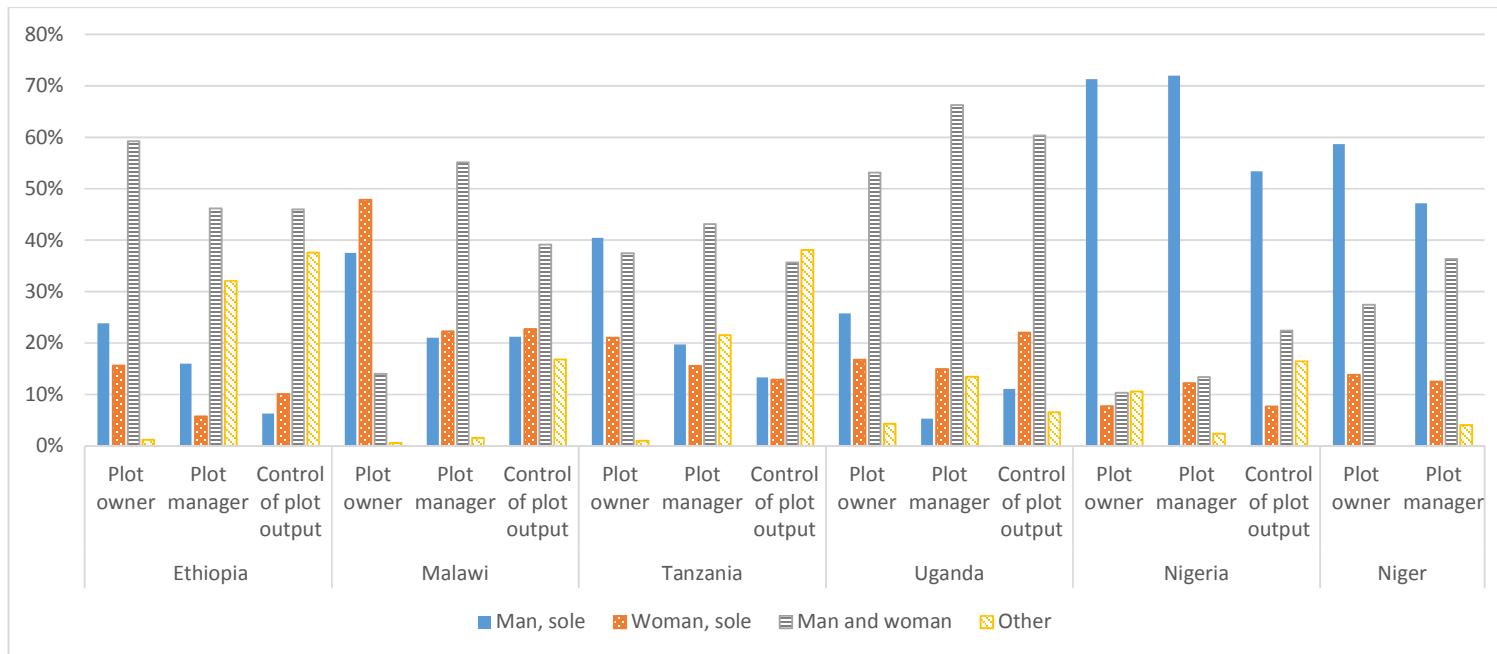
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Figure 1. Percentage of men and women holding land rights, by form of land rights, sex and country



The statistics are based on a sample of 26,156 individuals (N men = 12,687 and N women = 13,158) for Ethiopia; 20,220 individuals (N men = 9,873 and N women = 10,347) for Malawi; 25,125 individuals (N men = 12,405 and N women = 12,720) for Niger; 30,423 individuals (N men = 15,008 and N women = 15,415) for Nigeria; 25,376 individuals (N men = 12,345 and N women = 13,050) for Tanzania and 19,160 individuals (N men = 9,205 and N women = 9,955) for Uganda.

Figure 2. Distribution of plots by holder of land rights, by form of land rights and country.



The statistics are based on 27,153 owned plots for Ethiopia; 5,497 owned plots for Malawi; 5,357 owned plots for Niger, 3,621 owned plots for Nigeria, 6,313 owned plots for Tanzania and 6,339 owned plots for Uganda.

Figure 3. Percentage of plots for which the owner holds the other rights, by form of ownership (owned cultivated plots only)

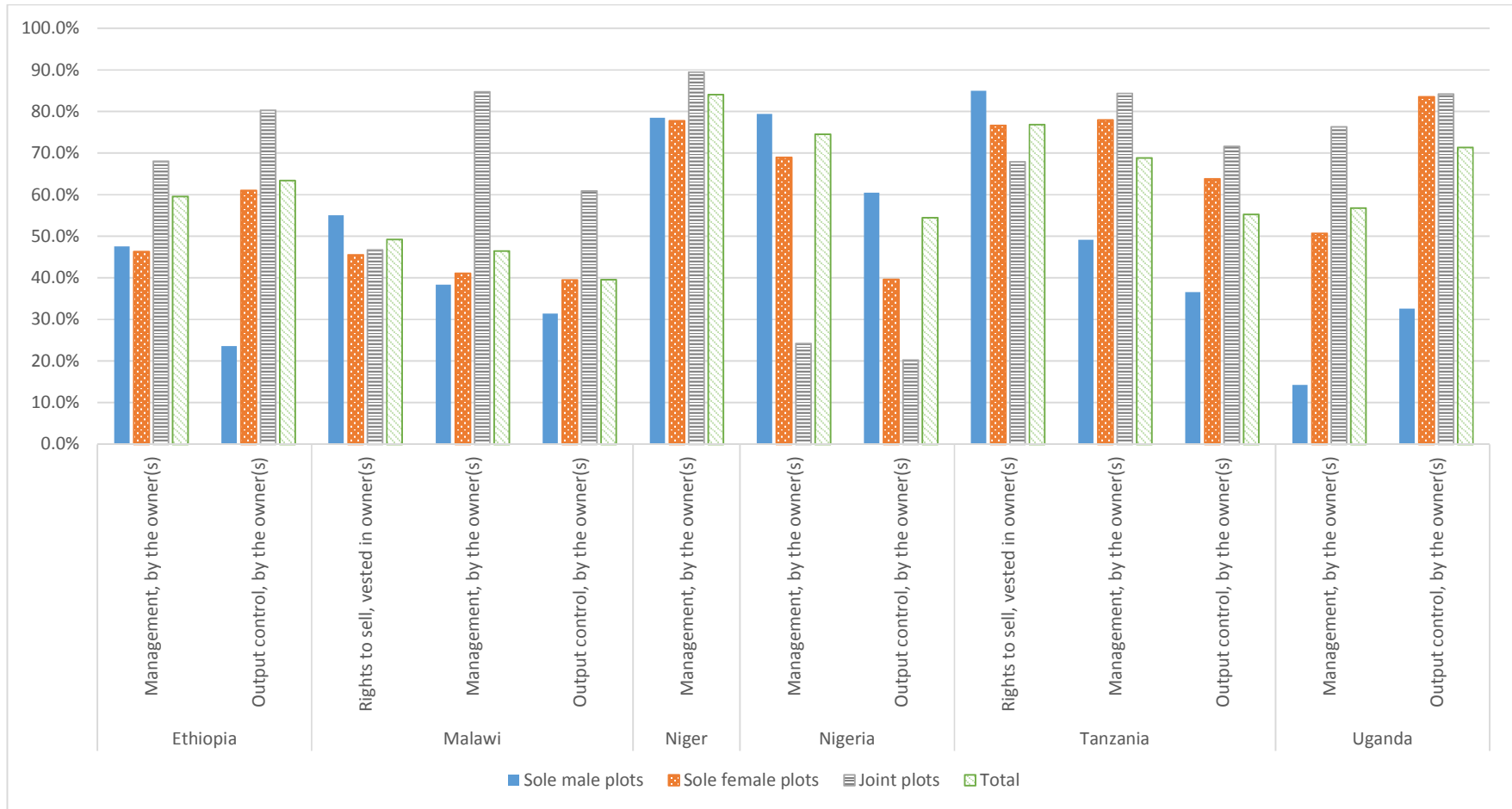


Table 1. Relationship of reported ownership and management rights, by sex and country (for owned, cultivated plots)

		Reported ownership					Reported ownership				
		Ethiopia					Malawi				
Management		Sole male	Sole female	Joint, M & W	Other	Total	Sole female	Joint, M & W	Other	Total	
	Sole male	48.0%	5.1%	17.1%	0.3%	22.6%	38.5%	9.3%	11.9%	3.9%	20.5%
	Sole female	2.1%	46.6%	0.9%	0.4%	8.0%	3.4%	42.3%	2.7%	30.7%	22.1%
	Joint, M&W	47.0%	40.1%	80.2%	43.6%	65.8%	57.7%	46.0%	85.2%	20.7%	55.8%
	Other	2.9%	8.2%	1.8%	55.7%	3.6%	0.4%	2.4%	0.2%	44.8%	1.6%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Obs.		4,512	2,928	10,764	239	18,443	2,057	2,344	864	32	5,297
		Niger					Nigeria				
Management		Sole male	Sole female	Joint, M & W	Other	Total	Sole male	Sole female	Joint, M & W	Other	Total
	Sole male	78.9%	5.5%	5.1%		48.4%	80.3%	7.9%	52.9%	84.4%	72.3%
	Sole female	1.7%	80.2%	2.4%		12.8%	5.1%	72.2%	19.2%	6.7%	11.9%
	Joint, M & W	18.7%	13.7%	89.5%		37.4%	12.7%	15.0%	27.1%	3.5%	13.3%
	Other	0.8%	0.7%	3.0%		1.4%	1.9%	4.9%	0.9%	5.4%	2.4%
	Total	100%	100%	100%		100%	100%	100%	100%	100%	100%
Obs.		2,936	669	1,572		5,177	2,512	305	364	346	3,527
		Tanzania					Uganda				
Management		Sole male	Sole female	Joint, M & W	Other	Total	Sole male	Sole female	Joint, M & W	Other	Total
	Sole male	49.3%	2.2%	10.4%	5.3%	24.4%	14.5%	0.6%	1.9%	5.0%	5.0%
	Sole female	2.3%	78.8%	4.5%	13.8%	19.3%	8.2%	51.6%	8.1%	3.3%	15.1%
	Joint, M & W	47.4%	11.7%	84.8%	4.0%	53.5%	71.2%	24.1%	82.6%	8.9%	66.8%
	Other	1.0%	7.3%	0.3%	76.9%	2.8%	6.1%	23.7%	7.5%	82.8%	13.1%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Obs.		2,138	1,093	1,877	53	5,161	791	502	1,668	143	3,104

All statistics are weighted using the household weights available in the data and considering the sampling framework.

Table 2. Relationship between management and economic control over outputs (owned, cultivated plots)

		Management					Management				
		Ethiopia					Malawi				
		Sole male	Sole female	Joint, M & W	Other	Total	Sole male	Sole female	Joint, M & W	Other	Total
Economic control	Sole male	22.6%	1.3%	5.1%	12.8%	9.0%	41.7%	2.8%	23.0%	1.0%	22.0%
	Sole female	7.6%	76.0%	9.2%	17.5%	14.5%	4.9%	74.2%	10.0%	38.0%	23.6%
	Joint, M & W	60.5%	9.4%	77.4%	29.4%	66.4%	35.3%	7.1%	57.0%	7.8%	40.7%
	Other	9.4%	13.3%	8.3%	40.3%	10.1%	18.2%	15.9%	10.1%	53.2%	13.7%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Obs.	4,387	1,736	1,1487	833	18,443	1,187	1,146	2,874	90	5,297
		Nigeria					Tanzania				
		Sole male	Sole female	Joint, M & W	Other	Total	Sole male	Sole female	Joint, M & W	Other	Total
Economic control	Sole male	69.2%	4.7%	23.5%	34.5%	54.6%	50.8%	0.9%	7.1%	3.3%	16.5%
	Sole female	1.9%	47.0%	5.8%	5.2%	7.9%	1.6%	69.0%	2.7%	28.1%	15.9%
	Joint, M & W	18.6%	20.1%	48.0%	24.2%	22.8%	22.6%	6.5%	69.8%	3.8%	44.2%
	Other	10.3%	28.3%	22.7%	36.1%	14.7%	25.0%	23.6%	20.5%	64.8%	23.4%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Obs.	2,495	435	509	88	3,527	1,374	977	2,647	163	5,161
		Uganda									
		Sole male	Sole female	Joint, M & W	Other	Total					
Economic control	Sole male	83.3%	1.2%	8.6%	4.6%	10.7%					
	Sole female	1.4%	82.3%	8.0%	32.2%	22.1%					
	Joint, M & W	11.0%	16.0%	82.0%	22.9%	60.7%					
	Other	4.4%	0.4%	1.4%	40.3%	6.5%					
	Total	100%	100%	100%	100%	100%					
	Obs.	157	430	2,094	423	3,104					

The survey for Niger did not contain a question on the economic control of output. All statistics are weighted using the household weights available in the data and considering the sampling framework.

Table 3. Relationship between management and economic control over output (accessed plots)

		Management					Management				
		Ethiopia					Malawi				
		Sole male	Sole female	Joint, M & W	Other	Total	Sole male	Sole female	Joint, M & W	Other	Total
Economic control	Sole male	26.7%	1.8%	4.2%	2.4%	8.3%	40.6%	2.4%	23.6%	0.0%	24.2%
	Sole female	0.8%	60.0%	4.8%	0.4%	4.1%	2.6%	68.0%	10.8%	81.7%	19.1%
	Joint, M & W	65.5%	18.8%	85.7%	6.1%	57.1%	28.1%	5.9%	54.1%	0.0%	38.6%
	Other	7.1%	19.5%	5.3%	91.1%	30.6%	28.8%	23.7%	11.5%	18.3%	18.2%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Obs.	755	169	1,857	1,364	4,145	417	289	916	12	1,634
		Nigeria					Tanzania				
		Sole male	Sole female	Joint, M & W	Other	Total	Sole male	Sole female	Joint, M & W	Other	Total
Economic control	Sole male	65.7%	3.1%	22.7%	32.6%	42.2%	56.2%	0.1%	9.8%	0.0%	20.0%
	Sole female	1.8%	53.5%	4.9%	7.9%	13.5%	1.9%	78.1%	1.2%	47.9%	23.2%
	Joint, M & W	17.1%	12.5%	45.4%	6.8%	21.8%	24.8%	6.4%	76.7%	0.0%	40.8%
	Other	15.5%	30.9%	27.0%	52.7%	22.6%	17.2%	15.4%	12.3%	52.1%	16.0%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%
	Obs.	1,196	466	503	84	2,249	343	233	427	32	1,035
		Uganda									
		Sole male	Sole female	Joint, M & W	Other	Total					
Economic control	Sole male	84.8%	2.5%	8.8%	1.1%	12.9%					
	Sole female	1.2%	80.1%	7.7%	42.2%	24.0%					
	Joint, M & W	14.0%	13.8%	82.6%	26.1%	58.5%					
	Other	0.0%	3.6%	0.9%	30.7%	4.5%					
	Total	100%	100%	100%	100%	100%					
	Obs.	82	207	726	139	1,154					

The survey for Niger did not contain a question on the economic control of output. All statistics are weighted in accordance with the survey design.

Table 4. Plot acquisition, by sex of the plot owner

		Reported owner					Total	(Row) N (unweighted)
		Male, sole	Female, sole	Multiple owners, all MALE	Multiple owners, all FEMALE	Multiple owners, MALE & FEMALE		
Malawi	Inheritance	95.1%	97.5%	82.6%	98.0%	91.3%	95.7%	5,219
	Marriage	0.6%	1.5%	0.0%	0.0%	0.6%	1.0%	52
	Purchased w/o a title	1.5%	0.2%	17.4%	0.0%	2.1%	1.0%	80
	Purchased with a title	2.9%	0.8%	0.0%	2.0%	6.0%	2.3%	146
								5,497
Uganda	Purchased	32.7%	24.8%	37.2%	18.1%	36.5%	33.0%	1,118
	Inheritance/Gift	67.3%	75.3%	62.8%	81.9%	63.5%	67.1%	2,221
								3,339
Ethiopia	Granted local leader	37.3%	55.2%	45.0%	52.8%	48.1%	46.7%	12,172
	Inheritance	62.7%	44.8%	55.0%	47.2%	51.9%	53.4%	14,969
								27,141
Nigeria	Purchase	8.5%	6.1%	4.4%	7.9%	17.8%	8.9%	270
	Local leaders	91.5%	93.9%	95.6%	92.1%	82.2%	91.1%	3,351
								3621
Niger	Purchase	10.9%	4.1%			5.0%	8.3%	396
	Inheritance	77.7%	45.5%			89.1%	76.4%	4,105
	Gift	8.4%	48.3%			3.7%	12.6%	659
	Taking possession, after clearing	2.1%	0.7%			1.5%	1.7%	120
	Other	0.9%	1.5%			0.7%	0.9%	76
	Not identified	0.0%	0.0%			0.1%	0.0%	1
								5357

Source: Authors' calculations. The question on method of plot acquisition was not included in the Tanzania survey.

Annex

Table A1. Formulation of survey questions about land rights

	Ethiopia	Malawi	Niger	Nigeria	Tanzania	Uganda
Reported ownership	Who in this household can decide whether to sell this [PARCEL] or use it as collateral?	Who in this household owns this [PLOT]?	What is the ID number of the owner of this parcel? If it is the entire household, write 98	Do you, personally, have the right to sell this [PLOT]? Do you, personally, have the right to use this [PLOT] as collateral security? Does anyone else in the household have the right to sell this [PLOT] or use it as collateral? Who else in the household has the right to sell this [PLOT] or use it as collateral?	Who in the household owns this plot?	Who has the Ownership rights to this parcel?
Documented ownership	Does your household have a certificate for this [PARCEL]? Under whose name(s) is the certificate issued for this [PARCEL]?	Who in the household is listed on the title as owner of this [PLOT]?	What kind of title do you have on this parcel?	n/a	What type of title did your household have for this plot?	Does this parcel have a formal certificate of title or customary certificate of ownership or certificate of occupancy issued by and registered with government authorities?
Management of agricultural production	Who in the household makes primary decisions concerning crops to be planted, input use, and the timing of cropping activities on this [FIELD]? Who are the other household members consulted by the primary decision maker on the [FIELD]?	Who in the household makes the decisions concerning crops to be planted, input use and the timing of cropping activities on this [PLOT]?"	What is the ID number of the person who currently works the parcel? If the parcel is worked by several members of the household, write 98	Who in the household manages this [PLOT]?	Who decided what to plant on this plot in the long rainy season (separately for the short rainy season).	Who usually mainly works the plot?
Economic rights	Who in your household makes the decisions concerning the use of [CROP] output from [FIELD]?	Who in the household makes the decision concerning the use of the [CROP] output from [PLOT]?	n/a	Who in the household made decisions concerning the use of the total harvested crop [from the plot]?	Who in the household made the decisions concerning the use of the harvested crop [from the plot]?	Who manages/ controls the output from this parcel, among household members?

Rights to sell or use the plot as collateral	see reported ownership	Who in the household can decide whether to sell this [PLOT] or use it as collateral?	n/a	see reported ownership	Does the owner/household have the right to sell this plot or use it as collateral? Who in the household can decide whether to sell this plot or use it as collateral?	n/a
Rights to bequeath	n/a	n/a	n/a	Do you, or other member of the household, have the right to BEQUEATH this [PLOT]? Whose approval do you need to BEQUEATH this [PLOT]?	n/a	n/a
Concern dispute	n/a	Have you ever been concerned that somebody might dispute your ownership of this [PLOT]?	n/a	How likely is it that someone will dispute your ownership or use rights over this [PLOT]? How confident are you that you WILL NOT lose this [PLOT] due to government expropriation in the next 5 years? How confident are you that you WILL receive compensation for this [PLOT] if expropriated? Have you ever had any disputes or disagreements with anyone over this [PLOT]?	Would you feel comfortable leaving this plot uncultivated for several months without being worried of losing it?	Have you ever been concerned that somebody might dispute your ownership/ use rights on this parcel?
Tenure system	n/a	n/a	n/a	n/a	n/a	Tenure system 1= Freehold 2= Leasehold 3= Mailo 4= Customary 6= Other (specify)

Table A2. Distribution of plots by sex of owner or manager for six countries in Sub-Saharan Africa

		Reported owner [OR manager]									
		Owned or accessed	# surveyed plots [population of plots]	Male, sole	Female, sole	Multiple owners, all MALE	Multiple owners, all FEMALE	Multiple owners, MALE & FEMALE	Not identified	Total	Share owned in plot roster
Ethiopia, 2014	Distribution of ownership by sex, %	Owned, all	27,153 [130,774,921]	23.8%	15.7%	0.9%	0.3%	59.3%		100%	88.4%
	Mean plot area (he)	Owned, all	26578 [128564556]	0.13	0.13	0.14	0.17	0.13		0.13	
	Distribution of ownership by sex, %	Owned, cultivated	18,443 [90,242,986]	24.3%	14.8%	0.9%	0.3%	59.7%		100%	69.0%
	Mean plot area (he)	Owned, cultivated	18220 [89520333]	0.13	0.13	0.14	0.21	0.14		0.13	
	Distributions of management by sex, %	Owned, cultivated	18,443 [90,242,986]	22.6%	8.0%	1.7%	1.3%	65.8%	0.6%	100%	
	Mean plot area (he)	Owned, cultivated	18220 [89520333]	0.11	0.12	0.16	0.10	0.14		0.13	
	Distributions of management by sex, %	Accessed	4,145 [17,108,589]	20.8%	2.5%	2.1%	0.0%	48.1%	26.5%	100%	
	Mean plot area (he)	Accessed	3971 [16357106]	0.26	0.21	0.21	0.32	0.27		0.24	
Malawi, 2013	Distribution of ownership by sex, %	Owned, all	5,497 [5,834,952.4]	37.6%	47.9%	0.1%	0.4%	14.0%		100%	79.5%
	Mean plot area (he)	Owned, all	5476 [5,812,775.7]	0.36	0.29	0.46	0.37	0.37	n/a	0.33	
	Distribution of ownership by sex, %	Owned, cultivated	5,297 [5,614,980.1]	37.2%	48.0%	0.1%	0.4%	14.3%		100%	96.2%
	Mean plot area (he)	Owned, cultivated	5277 [5593423]	0.37	0.29	0.46	0.36	0.36		0.33	
	Distributions of management by sex, %	Owned, cultivated	5,297 [5,614,980.1]	20.5%	22.1%	0.2%	1.4%	55.8%		100%	
	Mean plot area (he)	Owned, cultivated	5277 [5593423]	0.34	0.30	0.47	0.32	0.34		0.33	
	Distributions of RIGHTS TO SELL by sex, %	Owned, cultivated	5,297 [5,614,980.1]	22.73%	22.73%	0.02%	0.37%	9.43%	44.24%	100%	
	Mean plot area (he)	Accessed	1,634 [1,501,320.6]	26.1%	17.4%	0%	0.7%	55.8%		0.32	
Niger, 2011	Distribution of ownership by sex, %	Owned, all	5,357 [5,085,551.7]	58.7%	13.8%	n/a	n/a	27.5%		100%	79.9%
	Mean plot area (he), by sex of owner	Owned, all	5,310 [5053422]	2.24	1.36			2.18		2.10	
	Distribution of ownership by sex, %	Owned, cultivated	5,177 [4,947,079.4]	58.7%	14.0%	n/a	n/a	27.4%		100%	97.3%
	Mean plot area (he), by sex of owner	Owned, cultivated	5,132 [4916187]	2.20	1.31			2.18		2.07	
	Distributions of management by sex, %	Owned, cultivated	5,177 [4,947,079.4]	48.4%	12.8%	n/a	n/a	37.4%	1.4%	100%	
	Mean plot area (he), by sex of manager	Owned, cultivated	5,132 [4916187]	2.17	1.14			2.26		2.07	
	Distributions of management by sex, %	Accessed	1,293 [1,282,486.1]	43.5%	22.4%	n/a	n/a	30.6%	3.5%	100%	
	Mean plot area (he), by sex of manager	Accessed	1,278 [1273862]	1.64	1.01			1.67		1.51	

Nigeria, 2013	Distribution of ownership by sex, %	Owned, all	3,621 [20,011,285]	71.3%	7.8%	10.0%	0.6%	10.3%	100%	61.5%
	Mean plot area (he), by sex of owner	Owned, all	3607 [19941276]	0.51	0.21	0.55	0.23	0.51	0.49	
	Distribution of ownership by sex, %	Owned, cultivated	3,527 [19,475,510]	71.4%	7.8%	10.2%	0.6%	10.1%	100%	97.3%
	Mean plot area (he), by sex of owner	Owned, cultivated	3515 [19413593]	0.51	0.21	0.55	0.23	0.52	0.49	
	Distributions of management by sex, %	Owned, cultivated	3,527 [19,475,510]	72.3%	11.9%	1.9%	0.5%	13.3%	100%	
	Mean plot area (he), by sex of manager	Owned, cultivated	3515 [19413593]	0.58	0.19	0.38	0.12	0.33	0.49	
	Distributions of management by sex, %	Accessed	2,249 [12,525,913]	54.0%	20.9%	2.7%	1.1%	21.3%	100%	
	Mean plot area (he), by sex of manager	Accessed	2242 [12491273]	0.56	0.19	0.81	0.10	0.42	0.45	
Tanzania, 2013	Distribution of ownership by sex, %	Owned, all	6,313 [13,398,924]	40.4%	21.4%	0.3%	0.6%	37.4%	100%	88.3%
	Mean plot area (he), by sex of owner	Owned, all	6,313 [13,398,924]	1.28	0.81	1.24	0.61	1.09	1.11	
	Distribution of ownership by sex, %	Owned, cultivated	5,161 [10,817,052]	40.5%	21.0%	0.4%	0.7%	37.5%	100%	80.7%
	Mean plot area (he), by sex of owner	Owned, cultivated	5,161 [10,817,052]	1.21	0.74	1.27	0.65	1.10	1.07	
	Distributions of management by sex, %	Owned, cultivated	5,161 [10,817,052]	24.4%	19.3%	0.6%	2.1%	53.5%	0.2%	100%
	Mean plot area (he), by sex of manager	Owned, cultivated	5,161 [10,817,052]	1.31	0.71	1.31	0.82	1.09	1.07	
	Distributions of RIGHTS TO SELL by sex, %	Owned, cultivated	5,161 [10,817,052]							
	Distributions of management by sex, %	Accessed	1,035 [1,772,165.4]	28.3%	26.0%	0.7%	3.1%	41.9%		
Mean plot area (he), by sex of manager	Accessed	1,035 [1,772,165.4]	0.87	0.56	0.66	0.50	0.58	0.65		
Uganda, 2011	Distribution of ownership by sex, %	Owned, all	3,339 [6,990,216.8]	25.8%	16.8%	1.1%	3.3%	53.2%	100%	73.5%
	Mean plot area (he), by sex of owner	Owned, all	3332 [6980505]	0.74	0.58	0.93	0.87	0.72	0.71	
	Distribution of ownership by sex, %	Owned, cultivated	3,104 [6,509,565.9]	25.4%	16.5%	1.1%	3.3%	53.6%	100%	93.1%
	Mean plot area (he), by sex of owner	Owned, cultivated	3098 [6500393]	0.73	0.56	0.82	0.85	0.70	0.69	
	Distributions of management [work] by sex, %	Owned, cultivated	3,104 [6,509,565.9]	5.0%	15.1%	1.9%	10.8%	66.8%	0.4%	
	Mean plot area (he), by sex of manager [works]	Owned, cultivated	3098 [6500393]	0.78	0.51	1.05	0.64	0.72	0.69	
	Distributions of management [work] by sex, %	Accessed	1,154 [2,516,019.4]	8.1%	18.2%	0.3%	10.2%	63.1%	0.2%	
	Mean plot area (he), by sex of manager [works]	Accessed	1144 [2500847]	0.43	0.35	0.28	0.79	0.58	0.51	

*The plot roster is the sum of owned and accessed plots (i.e. all the plots listed by the household). Some of the owned plots may be rented out or given out and, therefore, the sum of accessed and owned does not equal operated land. In Nigeria reporter owners are the family members who have the right to sell the plots or use them as collateral. In Ethiopia, reported owners are the family members who are listed on the land ownership documents (documented owners) and when plots are not documented, the reported owners are approximated with the family members who have the rights to sell the plots or use them as collateral.