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

Vanya SLAVCHEVSKA[1]
Cheryl DOSS
Ana Paula DE LA O CAMPOS
Chiara BRUNELLI

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Abstract
Advancing women's land rights is a priority for the international development agenda. Little consensus exists, however, on which rights should be monitored and reported, especially in Sub-Saharan Africa where individual property rights and customary tenure regimes coexist and where much agricultural land remains unregistered. In such contexts, data collected on land ownership may provide only a limited complete picture of women's and men's land rights. While some surveys collect information on women's land ownership, others collect information on women's management of land or control over the output produced. This study examines the extent to which these various dimensions of land rights overlap in six countries in Sub-Saharan Africa. Using recent waves of the Living Standards Measurement Study-Integrated

poverty reduction through increased productivity and increased participation in income generating activities.

Keywords: Gender, Land ownership, Land management, Land rights, Africa

I. Introduction

Much of the international development community views strengthening women's land rights as an important pathway to poverty reduction and gender equality. This is highlighted in the recognition by the Sustainable Development Goals (SDGs) that to end poverty (Goal 1) and to achieve gender equality and empower all women and girls (Goal 5), women must have equal rights and access to ownership and control over land and other economic resources.

A widely-cited literature associates land rights with better outcomes for women and their families. Women's land ownership has been associated with increased bargaining power in the household (Agarwal, 1994), better child nutrition (Allendorf, 2007), lower exposure to HIV-AIDS (Strickland, 2004), and protection from domestic violence (Friedemann-Sánchez, 2006; Panda & Agarwal, 2005;). Higher tenure security for women reduces productivity losses in Ghana (Goldstein & Udry, 2008). Regularization of women's land rights through titling programs has increased investment in land soil conservation on their plots in Rwanda (Ali, Deininger, & Goldstein, 2014).

Although there is consensus that women's land rights are important, there is little consensus on what is meant by women's land rights.[2] Land rights are sometimes conflated with formal land ownership. Yet in areas where customary land tenure systems govern access to and use of much of the agricultural land, most agricultural land remains unregistered and without formal ownership or use rights documents. People without documents may have many of the rights associated with ownership. In addition, ownership is only one dimension of agricultural land rights and may not be the most salient one in some contexts. Other relevant dimensions include the rights to manage the land and to control the output.

This paper makes two key contributions to the literature on women's land rights. First, it develops indicators of land rights that go beyond ownership, using publicaly-available large-sample household survey data from six African countries. These indicators capture several dimensions of ownership as well as management and economic rights or control over output. We calculate the gender gaps in land rights using these various indicators.

We find significant gender gaps across all of the indicators of land rights. The size of the gender gaps varies across countries and across the different indicators. Generally, countries in West Africa (Niger and Nigeria) exhibit larger gender gaps than countries in East and Southern Africa (Ethiopia, Malawi, Tanzania and Uganda).[3]

Second, our key contribution is to demonstrate that there is limited overlap in these various indicators for any given plot. The indicators for land ownership include reported and documented ownership as well as the rights to sell or use the plots as collateral. We find that the person reported as the owner is not necessarily the one whose name is on the ownership document. In addition, the owners are not necessarily the plot managers or the only individuals with a say in the use of the output. The overlaps among reported land ownership, management, and control over output vary widely across countries and by gender. The findings reflect the complex web of interests that different household members have over

[2] In this paper, we focus on rights regarding agricultural land. Rights for common property resources, such as water or forests, are beyond the scope of this paper. See Meinzen-Dick et al. (1997) for a discussion of property rights in these contexts.

[3] Our findings are consistent with those of Doss et al. (2015) who calculate the gender land gaps for earlier rounds of the surveys.

plots (Meinzen-Dick and Mwangi, 2009) and indicate that the various indicators of land rights should not be used interchangeably.

We reflect on the challenges of doing cross-country comparisons using empirical data on women's agricultural land rights. While researchers may conduct surveys with detailed and nuanced understanding of land rights in a particular location, for comparisons at the national level across countries, it is necessary to rely on data collected by national statistics offices (NSOs). Each survey takes into account the corresponding NSO's preferences regarding the data needed for monitoring land rights. These indicators do not necessarily align with the country's legal frameworks on land rights, in part because legal experts are not always consulted for such surveys. The need for local relevance is occasionally at odds with the desire for cross-country comparability. Using the same survey questionnaire across countries makes the data analysis and global monitoring of land rights easier, but may not reflect with sufficient detail the realities of the different contexts across countries.

The findings have implications for both survey design and policy. They also provide insights relevant for the ongoing methodological work on the SDG indicators on land rights. Surveys should include the data for multiple indicators of land rights in accord with the tenure system of the country, capturing the different rights, beyond "ownership", to include management and economic rights.

II. Conceptualizing and measuring women's agricultural land rights

A consensus has emerged that "women's land rights" are important, but the development community has interpreted this term in many different ways in different situations. The term land rights is sometimes treated as synonymous with formal legal land ownership, particularly among those working within the legal sector. However, the extensive literature on the formalization of land rights (see Sjaastad and Cousins, 2008; Lastarria-Cornhiel, 1997), suggest that land rights do exist before they are formalized. Others conceptualize land rights as a complex bundle, including rights of access, withdrawal, management, exclusion, and alienation (Schlager and Ostrom, 1992). Tenure security, rather than land rights, is the focus of another thread of the literature (Place et al, 1999; Ghebru & Lambrecht, 2017). FAO uses the concept of a land holder, defined as the person who undertakes the management of the land, either as owner or agent (FAO, 2009). This is also the person who has the economic claims on the land, in other words, they control the output. FAO distinguishes this from the farm manager who is the person dealing with issues such as what to produce, how much to produce and how to produce (FAO, 2009).

While recognizing the myriad ways that people conceptualize land rights, in this paper, we develop three sets of indicators of agricultural land rights. These indicators proxy for land ownership, management, and economic rights.

Household surveys have evolved over recent years to reflect the understanding that the various rights may be held by different people. Data collection efforts are usually framed by the practical policy and programmatic questions that governments seek to answer rather than by the theoretical literature on property rights. Often, as discussed below, data collection builds on questions about who does what, or who makes which decisions, rather than about whether different individuals have the rights to do so. While the data does not always map cleanly onto the various conceptualizations of property rights, it is close enough to allow us to explore the patterns and clearly identify the lack of overlap among ownership, management, and economic rights for any given plot of land.

The Living Standards Measurement Study - Integrated Surveys on Agriculture (LSMS-ISA)[4] are unique among large-sample household and agricultural surveys in that they include questions that allow us to develop a range of indicators of land rights for the same plot of land. We use the data for six countries: (Vanya, can you list the countries and the dates of the survey?) All of the surveys are nationally representative.

The LSMS-ISA not only ask who owns the land, but also who has the right to sell or use the plot as collateral. Questions are asked about who makes decisions about agricultural production and the agricultural produce for each plot. The surveys analyzed in this paper all go beyond simply asking whether "the household" owns the land and seek to identify which people within the household hold the different rights for each plot.

The survey questions in each of the six LSMS-ISA surveys were tailored to the local context and thus are not formulated identically across surveys. Yet, each survey allows us to develop a set of indicators for these rights. Ownership rights are captured through indicators of reported and/or documented ownership and the rights to sell, bequeath, or use as collateral. Management rights are captured through indicators of plot management; and economic rights are captured by indicators of who controls the output. Reported ownership, management of agricultural production and control over output are captured in all surveys. The rest of these rights are collected in only some of the surveys.

Ownership rights are usually conceptualized as including the right to alienate or transfer as the critical one (FAO, 2009). Ownership rights are typically understood to have legal standing and it is expected that they can be enforced. Women's ownership of assets, including but not limited to land, may contribute to women's empowerment, strengthen their agency and bargaining power within households and communities, and reduce their vulnerability to a variety of economic shocks.[5] Thus, the emphasis on 'ownership' in the women's land rights literature is a reflection of concern about women's legal rights and equality within a society.

Ownership rights may be formal; the owner may hold a legal title document or government-issued certificate. We develop an indicator of a *documented* owner, which is the name of the person listed on such a document if that is asked or the owner when the question simply asks if there is such a document.[6] In some contexts, this kind of formal legal ownership might be the appropriate way to understand ownership; in most African countries, using this indicator would eliminate many of those who consider themselves landowners. Many people have secure land rights, even without recognition from statutory legal systems.

Thus we also have an indicator of *reported* ownership. In Malawi, Niger, Tanzania and Uganda, this indicator is based on the person identified by the survey respondent as the one who owns or has the ownership rights to the plot. In Ethiopia, the government claims ownership of all land, and individuals do not officially own land. Thus, the indicator for the reported owner in Ethiopia is the person(s) listed on the plot certificate -- when one exists -- or the person who is reported as having the right to sell or use the plot as collateral.[7] In Nigeria, the owner was only identified for plots that were outright purchased; for all other plots, the indicator for reported owner is based on the household member(s) who has the right

[4] http://surveys.worldbank.org/lsms/programs/integrated-surveys-agriculture-ISA

[5] See Deere and Doss, 2006 for a broad discussion of these issues.

[6] The type of document that has legal standing will vary across countries.

[7] This is an instance where the survey questions do not reflect the legal framework, since the law does not permit people to sell land. Nonetheless, there are informal land markets and people report having the right to sell.

to sell or use the plot as collateral. While it might be useful, for comparative purposes, to ask exactly the same questions across surveys, the local understandings of ownership differ sufficiently across countries such that it is not feasible to harmonize the questions in this way.

Within the six African countries in our analysis, the percentage of plots for which the person reported as the owner has an ownership document[8] ranges from 8% in Niger to 32% in Ethiopia. Understanding who has documented ownership becomes particularly relevant in areas with dynamic land sale and rental markets or where credit is available to those with documented rights (Deininger, Ali, & Yamano, 2008). Documented rights are also important in situations with high levels of land disputes, where documentation is critical to resolve such matters quickly and fairly. However, in a context of poor governance, inadequate land institutions and limited knowledge about land rights, documents may not ensure security of rights (Deininger et al., 2008; Meinzen-Dick et al., 2014). Given the low incidence of documented ownership in these six countries, we use the indicator of reported ownership for much of our comparative analysis.

Finally, we use the indicator of 'rights to sell or use as a collateral' to assess how these rights relate to the indicator of reported ownership. This analysis is done only for the countries which collected data for both indicators (see Table A1).

Across the six surveys, we use a single indicator of management rights. Specifically, we identify the plot manager for each plot farmed by anyone in the household. This indicator is useful for programs seeking to improve agricultural productivity, where it is necessary to know who to target for extension services and producer groups. There are numerous instances of programs that failed because they only provided information or inputs to the household head (usually a man) rather than the person who is making the decisions about the particular crop or plot (see Horbulyk & Balasubramanya, 2018 for a recent example). As we will see, women may manage plots even when they do not have 'ownership' rights.

The plot manager[9] indicator captures who decides how to use the land, including whether to plant crops or leave the land fallow, which crops to plant, what inputs to apply, and when to harvest. We construct this indicator based on the information provided by the surveys, as follows: in Ethiopia and Tanzania, respondents were asked to identify the family members who made the decisions 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. Some of the gender differences across countries regarding plot management may thus result from the slightly different formulation of the survey questions.

A final indicator captures the economic rights to the land, identifying who controls the output. Programs that are seeking women's economic empowerment through the marketing of agricultural produce would need to know whether women do, in fact, have control over the output, and would need to monitor whether this changes with increasing commercialization. In the surveys, questions about economic control used two approaches. In Ethiopia, Malawi, Nigeria and Tanzania, the questions asked about *each crop from each plot*[10]; in Uganda the question concerned the *total* output from the plot[11]. (No question on control over output was

[8] The ownership document may be a title or a certificate of long-term land rights.
[9] We use the term plot management to highlight that different family members may manage different plots. The definition is similar to that of FAOs farm manager, but for a smaller unit of analysis.
[10] Who in your household makes the decisions concerning the use of [CROP] output from [PLOT]? (see also Table A1 in the annex).
[11] Who manages/ controls the output from this parcel, among household members? (see also Table A1 in the annex).

asked in Niger.) Thus, the questions vary in their specificity, whether they refer to each crop on each plot, or the total output of each plot.

The coding for the surveys questions on all three dimensions of land rights allows multiple people to be listed. In all surveys, there was space for at least two family members to be listed as owners; in Nigeria, up to four family members could be listed as holders of the rights to sell or use the plot as collateral. However, in Niger, the only options were to list one person or the whole household for the ownership and management questions. The surveys in Ethiopia, Malawi, Nigeria and Tanzania allowed for up to three family members to be listed as farm managers, and in some of these, the primary decision-maker was noted. The survey in Uganda allowed for two plot managers to be listed. As for the economic control, usually up to two household members could be listed.[12]

Information on the management and economic control of output rights was only collected for plots that were under cultivation (as opposed to fallow). 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. Thus, our analyses distinguish plots that are currently under cultivation from those that are not.

Finally, we create an indicator of land tenure security. This indicator is based on questions such as 'Would you feel comfortable leaving this plot uncultivated for several months without being worried of losing it" or "Have you ever been concerned that somebody might dispute your ownership of this plot" (see Table A1 in the Annex for the exact formulations of the survey questions across countries). Perceptions of tenure security provide additional insights regarding conceptualizations of land ownership and bundles of land rights in cross-country comparative studies. We reflect on this indicator towards the end of our analysis.

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

Land rights are influenced by property and family law, both statutory and customary, as well as the prevailing tenure systems. Property and land laws identify the formal rights that people have over land. Family and succession laws affect how property is owned within marriage and the rules of inheritance. Formal law interacts with customary practices; they may be similar or contradictory. In some cases, statutory law recognizes the legal force of customary practices – customary does not always operate outside the state. In this section, we briefly highlight key differences across countries that can help explain the patterns that we find.[13]

According to Ethiopian law, all land is officially owned by the state and Ethiopians only have use rights. These use rights allow alienation through inheritance, renting out or division between spouses in the case of divorce. Regional land laws may be more restrictive. In some regions, inheritance rules require that those who inherit land live in rural areas and participate in agricultural work. Others restrict land rentals and its use as collateral. Significant efforts have been made to secure women's land rights in Ethiopia. In 1997, the

[12] When the information was collected for each crop on each plot, we aggregate the responses to the plot level so that any household member who decides about the use of any of the crops on the plot is said to control the output from the plot.

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

government launched a land certification program which emphasized including the names of both the husband and wife. As a result, many women gained legal documentation of land rights (Deininger et al., 2015; Holden et al., 2011).

In Tanzania, four land tenure systems coexist. *Village land* rights are held collectively by the villages and can be communal or individual, and may be registered and certified.[14] *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. *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 (such as parks and wildlife reserves). They can be issued for a fixed period of up to 99 years. The fourth type is *leasehold*. Holders of granted rights of occupancy and customary rights of occupancy can transfer their rights. Statutory laws grant equal land rights for men and women. The marriage regime in Tanzania is progressive recognizing all registered marriages, both monogamous and polygamous. All married women are allowed to own property individually. Marital property is co-registered and the consent of the spouse is needed to transfer the property. Nevertheless, customary practices, lack of legal knowledge, poor access to justice and poor or absent systems for the implementation of existing statutory rights, and discriminatory social norms hinder the realization of those rights (USAID 2016; Peterman, 2012). The property rights of the one-third of all women who are Muslim are further influenced by Sharia law.

In Uganda, four main types of tenure are recognized**:** customary, leasehold, freehold and *mailo*. Most rural land is under customary tenure (75-80%). Only 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 and to convert this certificate to a freehold title (FAO, 2019). *Mailo* land is that which was historically allocated by the British Empire to Ugandan elites; currently, tenants with long term rights to remain occupy most of the *mailo* land. The Ugandan constitution protects women from discrimination on the basis of sex, protects their rights to own property, and protects their rights during and after the dissolution of marriage; however, customary laws in Uganda discriminate against women, although the extent of the discrimination varies by region. The 1998 Land Act stipulated that written consent from the spouse is necessary for transfers of land on which the household depends for its livelihoods. A 2004 amendment to the Act broadened women's rights; women were given the rights to access and live on their husband's land and could refuse to give consent for its transfer. The knowledge of this law is low (FAO, 2019).

Malawi has three types of land: public, private, and customary.[15] Public land is used for 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. The 65-75% of land under customary tenure 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 cannot sell it outside the community. Both private and customary land, can be leased for various lengths of time and use terms. The constitution provides women and men with equal rights to own land but there are no laws governing matrimonial property (FAO, 2019). Traditional norms and customs dominate the practices regarding land ownership and vary across the matrilineal and patrilineal areas.

[14] Villages can register their land and obtain certificates; in addition, individuals can obtain *customary rights of occupancy* certificates for village land.

[15] New land bills were passed in 2016, but they did not apply when this data was collected.

In Niger, both private and customary tenure systems are common. Privately held land is characterized by exclusive use and by the possibility to lease or sell, while customary systems are characterized by varying restrictions on land transfers. The 1993 Rural Code enabled registration of customary land-use rights by individuals. Although men and women have equal rights to land under the law, the provisions are not well understood or implemented. Under statutory law, women can own and transfer land while under customary law, all land is owned by men, but women are usually allocated kitchen garden plots. Most Nigeriens are Muslim and Islamic law stipulates that women may inherit land, though only half of what their brothers inherit. Yet, in practice, women rarely inherit land.

In Nigeria, the 1978 Land Use Act nationalized all land in order to remove the customary tenure system. Under the Act, women and men could apply for customary rights of occupancy. In general, these cannot be transferred, even within the lineage, without government approval. Registration of land is costly and time-consuming and thus, rarely done. Almost all the registered land is in men's names (FAO, 2019). Knowledge of the law remains low and customary practices continue to govern land transactions. Customary systems appear to offer more flexible land rights including rights to transfer land. Statutory laws provide similar inheritance rights for men and women with registered marriages. 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; typically, married women can only obtain use rights to the land through their husbands (FAO).

These six countries present a wide range of tenure systems. 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 indicators developed demonstrate the potential to capture information on ownership, management, and economic rights.

IV. Results: Gendered patterns of land rights

In this section, we analyze the patterns of the land rights indicators. The indicator that we use for land ownership is "reported land ownership" as defined above, unless otherwise specified. We first analyze the extent to which men and women hold various land rights (individual level analyses). Then we consider indicators at the plot level, analyzing who holds the rights for each plot (plot level analyses).[16] Land rights may be held solely, by one person, or jointly, by two or more people. When land rights are held jointly, benefits from having these land rights may not be shared equally (Jacobs & Kes, 2015). Because land rights held solely or jointly may confer different benefits, we distinguish between any rights (including both solely and jointly held rights) and rights held solely.

a. Gender gaps in men's and women's agricultural land rights

The gender gaps based on the indicators of reported land ownership, plot management and control over output for each country are presented in Figure 1. The unit of analysis is adult individuals living in respondent households.[17] For each of the indicators, Figure 1 shows the percentage of men and that of women who hold that right, as defined above. All of

[16] Although we follow the framework of Doss et al. (2015) for this section, our statistics reported here may differ because they report the distribution of the total *area* of land while we report the distribution of *plots* owned by the household. We also use a later round of data.

[17] All adult individuals (ages 18 and over) listed in the household roster comprise the total number of adult men and women.

the indicators show gender gaps. The gender gap in land ownership is large across all countries. Nigeria and Niger show the largest gender gaps for all of the indicators. In Nigeria, only 4% of women, compared to 23% of men, own agricultural land (whether solely or jointly with someone else). In addition, less than 2% of women own any land solely compared to almost 17% of men. In Niger, 63% of men and 35% of women own agricultural land.[18] The gaps are much larger for land owned solely; while 40% of men own land solely, only 14% of women do so.

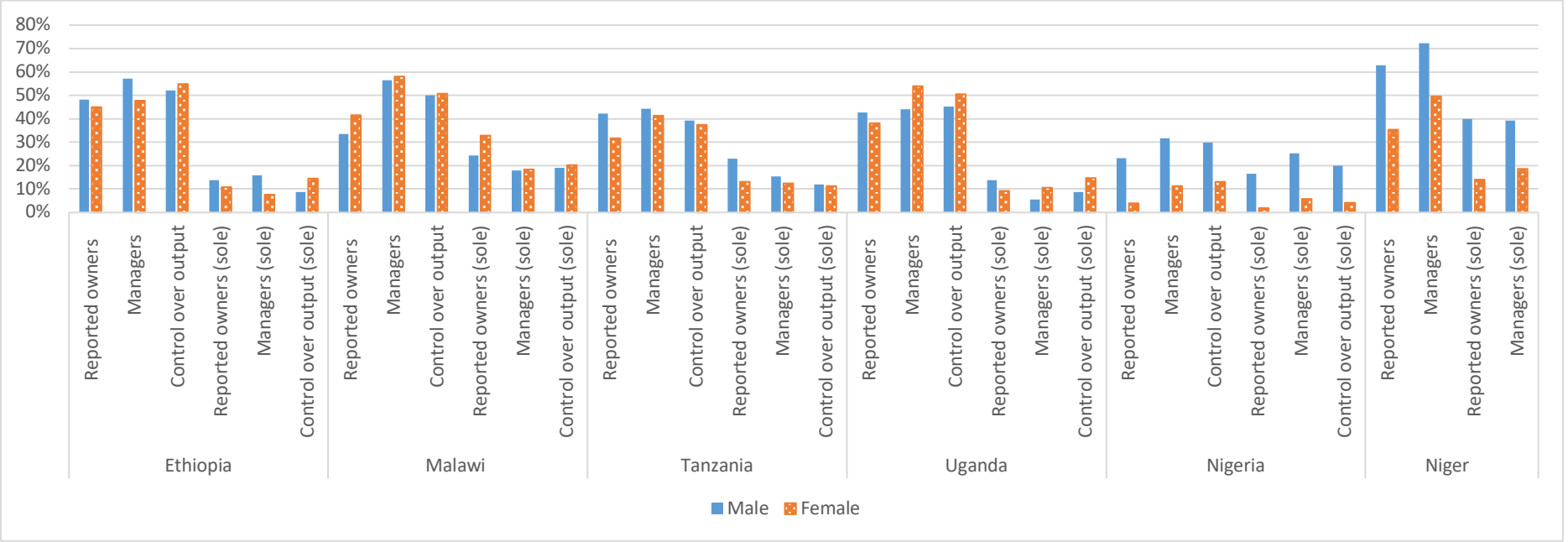
Inequalities in Niger and Nigeria are also large for plot management. In Nigeria, only 11% of women compared to 32% of men manage agricultural plots; less than 6% of women manage at least one plot alone compared to 25% of men. The results for the control of output are similar. In Niger about 50% of women are plot managers, either jointly or alone, compared to 72% of men and twice as many men manage plots solely compared to women.

In the other countries, the gender gaps in the indicators of land ownership and plot management are smaller. In Tanzania, 32% of all women and 42% of men are landowners. In Ethiopia and Uganda, the incidence of landownership is only about 4-5 percentage points higher for men than women. In Malawi, a slightly higher proportion of women compared to men own land.

Across most countries, the gender gap in the indicator for control over output is smaller than the gender gaps in other indicators. In four out of the five countries for which we have information on the control over output, there is a small or no gender gap on this indicator. Nigeria is the exception where nearly 30% of men but only 13% of women report having control over any output from the plot. In Uganda, the gap is reversed with a larger share of women compared to men having control over output.

[18] The response options for Niger are to identify either an individual or the whole household. When the latter is used, all adult members are treated as owners, possibly overestimating individual level ownership.

Figure 1. Percentage *of men and women* with agricultural land rights, by land rights indicator, sex and country



Notes: The statistics are based on a sample of 26,156 individuals for Ethiopia; 20,220 individuals for Malawi; 25,125 individuals for Niger; 30,423 individuals for Nigeria; 25,376 individuals for Tanzania and 19,160 individuals for Uganda.

b. Gender gaps at the plot level

The discussions that follow use plots as the unit of analysis. All plots reported as owned by someone in the household are included in the sample. We analyse a set of indicators regarding the rights over each plot. For each plot, we identify who holds each of the rights. Since information on plot management and control over output are only asked for cultivated plots, the sample for these indicators is 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 solely by a man while only 8% are owned solely by a woman. Similar patterns are found for plot management. In Niger, women own 14% of plots solely; men, 59%.[19] Almost half of plots in Niger (47%) are managed solely by men, while only 13% are managed solely by women.

Malawi is the one country where more of the plots are owned by women than by men.[20] However, since women's plots are smaller than men's plots on average, the gender gap in terms of land area owned favors men (see Doss et al., 2015).

In Malawi, Niger, Nigeria and Tanzania, most plots are individually owned. 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, usually the husband and the wife. However, joint ownership does not necessarily mean both people have the same rights, as we will see below.

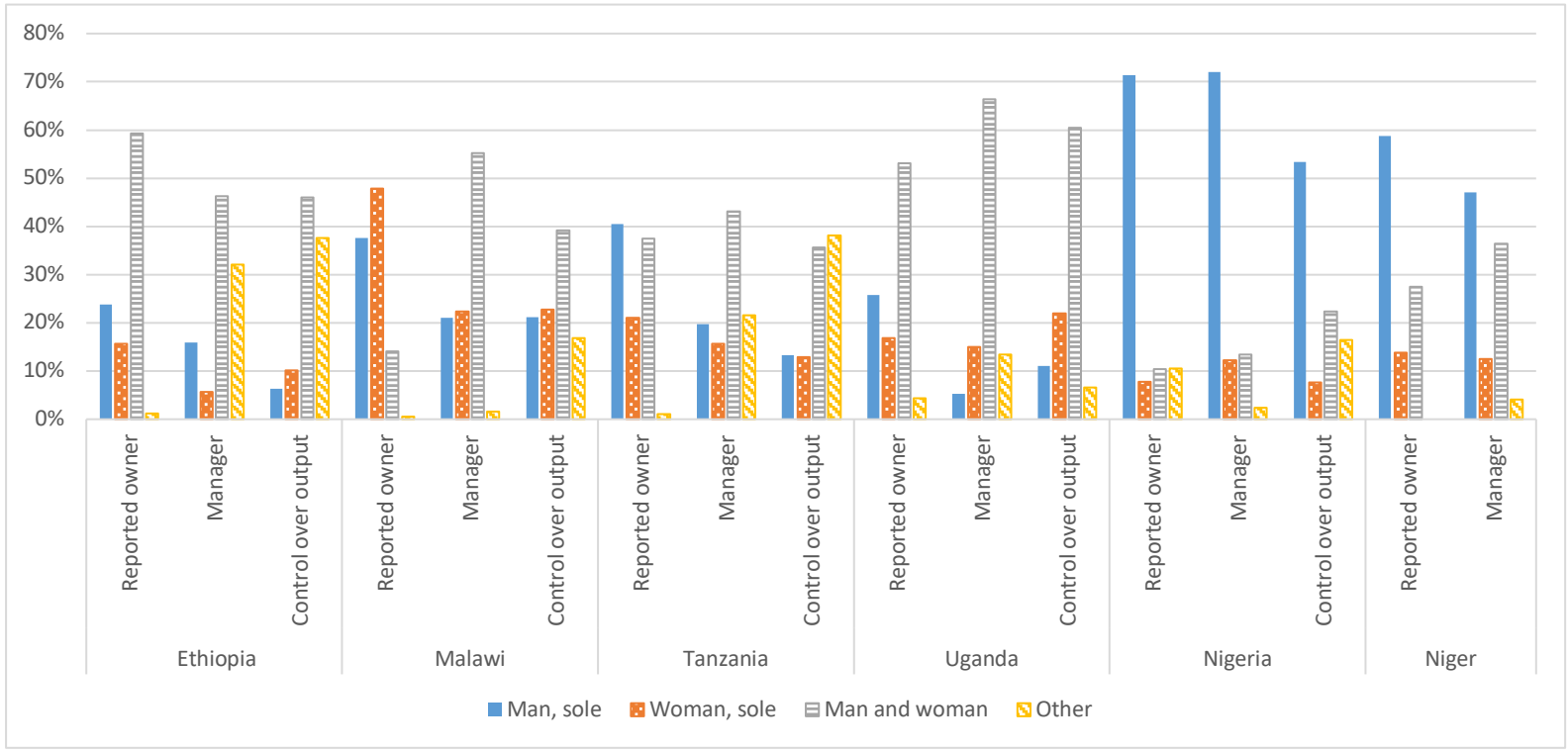
Uganda also has high levels of joint plot management and control of output. When these are vested in an individual, rather than jointly, it is more often a woman. Joint management of plots is high in Malawi (55%), although joint control over output is lower (39%). The pattern is similar, but at a slightly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

The patterns for management and control over output are noticeably different in the two West African countries. Only 36% of plots in Niger and 13% in Nigeria are managed jointly. Large gender gaps in favor of men in plot management and control over output are found 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 much larger in Nigeria and Niger than in the countries of East/Southern Africa. In all countries, the percentage of plots owned by women is significantly smaller than the percentage of plots managed by women and plots for which women control the outputs, revealing that reported ownership indeed does not capture the full range of women's and men's rights over land.

[19] As noted above, in Niger, the only coding options were to list a single person or "the whole household."
[20] This is due, in large part, to the fact that the southern and central parts of Malawi, where the majority of the people live, are matrilineal and women are more likely to be identified as owners of land (Berge et al., 2014).

Figure 2. Distribution of agricultural *plots* by holder of land rights, by land rights indicator and country.



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

c. Relationship of agricultural land ownership and rights to sell

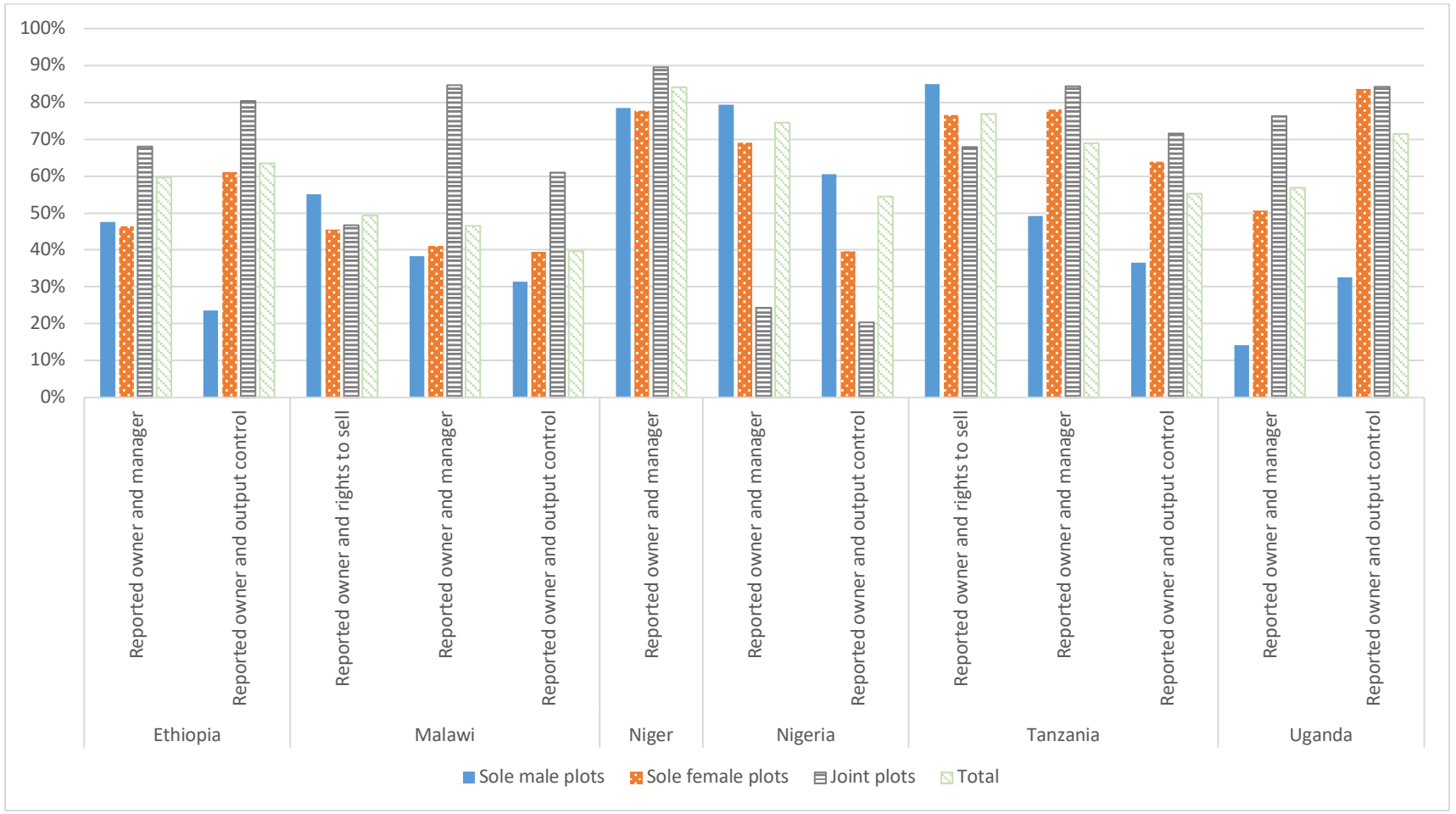
Thus far, the indicator of land ownership has been reported ownership as defined above. It may include the person reported as the owner, or when that data is not collected, the person reported as having the right to sell or use the plot as collateral. However, in the surveys from Malawi and Tanzania, questions on both ownership and the right to sell the plot are included. In these instances, we can analyse the extent to which these two are held by the same person. Figure 3 presents the percentage of (currently cultivated) plots for which the owner or owners hold the other specified rights.[21]

In both Malawi and Tanzania, the overlap between the indicators of reported ownership and the right to sell or use as collateral is not complete. In Malawi, where much of the land is under customary tenure, on just over 50% of the plots, the reported owners do not have the right to sell the land or use it as collateral. And there is a gender gap. Sole men owners have the right to sell 55% of their plots, while the comparable figure for women is 46%, reflecting a gender gap in transfer rights, even among reported owners.

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 plots owned solely by a man and 76% of those owned solely by a woman, the reported owners have the rights to sell the plots or use them as collateral. Although the legal framework guarantees the same transfer rights to men and women, in practice, women owners are less likely to be reported as having these rights. Moreover, of the jointly owned plots, the data indicates that 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 a gender gap in the transfer rights evident, but women who are joint owners may be vulnerable in that the man is reported to be able to transfer the plot without her involvement.

[21] If the one right is held solely and the other is held jointly, we do not consider these as being held by the same person.

Figure 3. Percentage of plots, by sex of reported owner, for which the reported owner also holds the other indicated rights - cultivated plots only.



d. Relationship of agricultural land ownership and plot management

Ownership and management are the two most common land rights discussed in the literature. Figure 3 shows the percentage of plots where the reported is the same person as the manager or person who controls the output. It clearly shows that the indicators for these rights do not overlap perfectly. The overlap is highest in Niger where 84% of plots are managed by the owners. This overlap is also strong in Nigeria where about 75% of plots are managed by the owners. It is smaller in the East/Southern African countries: 69% in Tanzania and 47% in Malawi.

Figure 3 also disaggregates the data by the form of reported ownership, whether by a sole man, sole woman, or joint. In all countries, except Nigeria, the overlap is the greatest for jointly owned plots and is lower (or equal) for sole male owned plots than for sole female owned plots. The larger overlap between ownership and other rights on sole female owned plots is largely due to the fact that most of those plots are in households headed by a single woman.

Table 1 provides additional insights into the gendered patterns of ownership and management. For all the plots that are owned and cultivated within surveyed households, it identifies the gender of the owner and manager.[22] Of 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 the West African countries, 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 stylized fact that women are given plots to manage by their husbands is not visible in the data. It may be that when a man allocates a plot to his wife, it is reported as jointly managed, rather than managed solely by her.

Finally, who manages plots owned solely by women? . In Niger, Nigeria, and Tanzania, 72-80% of women's plots are managed by a woman alone. In Ethiopia and Malawi, 40% and 46% respectively are managed jointly. 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 two or more women). Thus, sole ownership by a woman does not mean that she is the sole manager. Again, many of these women who are both the sole owner and manager are also the sole household head.

[22] The table simply tabulates the gender of the plot owner and plot manager, but in almost all cases where the gender is the same between the owner and manager, it is the same person.

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

		Reported ownership					Reported ownership				
		Ethiopia					**Malawi**				
		Sole man	**Sole woman**	**Joint, M & W**	**Other**	**Total**	**Sole man**	**Sole woman**	**Joint, M & W**	**Other**	**Total**
Management	**Sole man**	48.0%	5.1%	17.1%	0.3%	22.6%	38.5%	9.3%	11.9%	3.9%	20.5%
	Sole woman	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**				
		Sole man	**Sole woman**	**Joint, M & W**	**Other**	**Total**	**Sole man**	**Sole woman**	**Joint, M & W**	**Other**	**Total**
Management	**Sole man**	78.9%	5.5%	5.1%		48.4%	80.3%	7.9%	52.9%	84.4%	72.3%
	Sole woman	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**				
		Sole man	**Sole woman**	**Joint, M & W**	**Other**	**Total**	**Sole man**	**Sole woman**	**Joint, M & W**	**Other**	**Total**
Management	**Sole man**	49.3%	2.2%	10.4%	5.3%	24.4%	14.5%	0.6%	1.9%	5.0%	5.0%
	Sole woman	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 by the survey sample weights.

e. Relationship of agricultural land ownership and economic control

The overlap between the indicators of reported ownership and economic rights,[23] (Figure 3) 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 plots owned by men. For example, in Ethiopia, men decide alone what to do with the output from only a quarter of the plots they own; 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 regarding the output in almost all remaining plots. Again, this does not necessarily mean that the women have equal voice in deciding what to do with the produce from their husband's plot but suggests that they are involved.[24]

f. Relationship between plot management and economic rights

The FAO definition of a holder assumes that decisions about agricultural production and the use of the output are done by the same person. Yet, this pattern is not reflected in our findings.

As seen in Table 2, the relationship between plot management and the control of output does not follow a clear pattern across countries. The strongest overlap between plot management and control of output is in Uganda; in 82-83% of the plots, the plot manager 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 plots managed by men. This is particularly pronounced in Ethiopia, where women and men jointly decide how to use the output from 61% of plots managed by a sole man. Generally, the overlap between joint management and joint 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.

[23] 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, except in Uganda where information on the control of output was collected at the plot level regardless of whether or not crops were harvested.

[24] As the responses about the control of the output of each crop were aggregated from the plot-crop level to the plot level (except in Uganda), the aggregated statistics show if women are involved in the decision about the use of at least some crops, but not necessarily all crops.

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

		Management					Management				
		Ethiopia					Malawi				
		Sole man	Sole woman	Joint, M & W	Other	Total	Sole man	Sole woman	Joint, M & W	Other	Total
Economic control	Sole man	22.6%	1.3%	5.1%	12.8%	9.0%	41.7%	2.8%	23.0%	1.0%	22.0%
	Sole woman	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 man	Sole woman	Joint, M & W	Other	Total	Sole man	Sole woman	Joint, M & W	Other	Total
Economic control	Sole man	69.2%	4.7%	23.5%	34.5%	54.6%	50.8%	0.9%	7.1%	3.3%	16.5%
	Sole woman	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 man	Sole woman	Joint, M & W	Other	Total					
Economic control	Sole man	83.3%	1.2%	8.6%	4.6%	10.7%					
	Sole woman	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 use survey sample weights.

g. Land Rights and Tenure Security

Surveys generally do not provide much information about land tenure security. Formal land ownership 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 addition, few surveys ask whose names are listed on the documents as owners or rights holders. Of our analyzed countries, only the Ethiopia and Malawi surveys ask whose names are included on the land documentation. Others simply ask who the owner is and whether there is a document, but do not clarify whether the owner's name is on the document. It may be the case that both spouses are reported as owners, but only the husband's name is on the document (see Doss et al. (2014)). In Ethiopia, a larger share of plots solely-owned by a woman is documented (58%) than that of plots either owned by a sole man or jointly.

In all countries analyzed, 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 10% in Niger and 15% in Tanzania and Uganda. In these four countries, women's plots are less likely than men's plots to have documents but the gender gap is generally small. The patterns in Ethiopia are reversed: 58% of sole woman owned plots compared to 46% of plots owned by men have a certificate in the name of the owner. This is likely a result of Ethiopia's extensive gender-sensitive land certification program.

Farmers' own perceptions of land tenure security are addressed directly in four of the surveys analyzed here. Respondents 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 7% of plots in Uganda, 11% of plots in Malawi and 40% of plots in Nigeria.[25] In Tanzania respondents were asked whether they felt comfortable leaving the plot fallow as a proxy for tenure security. For 96% of the plots owned by households, the response was positive, indicating a relatively high level of tenure security. The evidence thus suggests that titles may not be necessary for tenure security in some customary settings. In Nigeria, a larger share of plots is perceived to be tenure insecure. With the slow, but growing, development of land markets in Sub-Saharan Africa, land conflicts and concerns over land dispute are likely to increase.

Because of the structure of the surveys, typically 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 people 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.

[25] There is a small gender gap in the perceptions of land security in Nigeria, with reports for concerns of disputes for 41% of sole man plots and 36% of sole woman owned plots.

Table 3. Concerns about disputes or plot ownership or use rights (the analysis is restricted to plots that are owned regardless of whether they are cultivated)

	Malawi						Nigeria				
Have you ever been concerned that somebody might dispute your ownership of this plot?						**How likely is it that someone will dispute your ownership or use rights over this plot? ***					
	Sole man	**Sole woman**	**Joint, M & W**	**Other**	**Total**		**Sole man**	**Sole woman**	**Joint, M & W**	**Other**	**Total**
Yes	11.72%	11.43%	7.14%	9.40%	10.92%	**Yes**	41.08%	36.25%	34.47%	44.96%	40.43%
No	85.59%	85.82%	91.53%	90.60%	86.56%	**No**	58.92%	63.75%	65.53%	55.04%	59.57%
no response	2.69%	2.75%	1.33%	0.00%	2.51%	**no response**					
Obs.	2,152	2,430	882	33	5,497	**Obs.**	2,575	311	384	351	3,621

	Tanzania						Uganda				
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?**					
	Sole man	**Sole woman**	**Joint, M & W**	**Other**	**Total**		**Sole man**	**Sole woman**	**Joint, M & W**	**Other**	**Total**
Yes	95.91%	94.60%	95.73%	98.21%	95.58%	**Yes**	7.09%	8.62%	5.89%	10.01%	6.84%
No	4.09%	5.40%	4.27%	1.79%	4.42%	**No**	91.93%	90.81%	93.26%	89.99%	92.37%
no response						**no response**	0.97%	0.57%	0.85%	0.00%	0.01%
Obs.	2,601	1,354	2,300	58	6,313	**Obs.**	858	547	1,781	153	3,339

* In the Nigeria survey, there were six possible responses to the question. We have combined responses of 'extremely likely', 'very likely', 'moderately likely', 'somewhat likely; or 'slightly likely' as the *yes* category. Those responding 'not at all likely' are treated as *no*.

V. Discussion and Conclusion

Gender gaps in land rights have gained both research and policy attention, but often the definitions of land rights are not clearly specified. Given the challenges of defining ownership in places with complex tenure systems, the lack of empirical information on the different land rights that men and women may have is a serious omission. This issue is particularly relevant in Africa, where customary land tenure systems govern access to and use of much of the agricultural land. Most land remains unregistered and without formal ownership documents. At the same time, African tenure systems are changing due to rising population pressures, changes in land allocation institutions, and the introduction of land registration programs, all of which may stimulate land rental and sales markets (Jayne et al., 2014). To develop appropriate agricultural development policies and monitor the status of women's land rights globally, we need to develop indictors of land rights that are easily captured in nationally representative multi-purpose household surveys.

This study fills the gap by developing indicators of three dimensions of land rights including ownership, management, and economic rights based on large-sample household survey data from six African countries. It also analyzes the gender gaps in land rights using the constructed indicators and demonstrates that for the same plot, the various land rights may be held by different people. When land rights are not all vested in the same person, understanding who holds the different rights provides insights into the intricate 'web of land interests' (Meinzen-Dick & Mwangi, 2009).

While these indicators of land rights are often used interchangeably by both researchers and policy-makers, they provide different insights. Data on land ownership are necessary to understand the gendered patterns of asset holding and wealth. Knowing who manages the land is necessary to understand agriculture production and to develop and monitor interventions to increase agricultural productivity. Finally, the control over output is an indicator of women's economic empowerment and may be related to household welfare, including food security and nutrition.

We find significant gender gaps in a number of land rights indicators, beyond reported ownership. In five of the six countries analyzed, fewer women than men are reported as land owners. Most striking is women's disadvantage in land ownership in Nigeria and Niger compared to the other four African countries. While some variation may be due to different conceptualizations of ownership in each of the countries and slight variations in the data used to construct the indicators, these variations should not be sufficient to account for the large differences between these countries. These differences may be due to fewer protections for women's land rights in the statutory and customary systems of Niger and Nigeria. In countries where women's land rights are better protected, the gender gaps in land ownership are smaller. For example, in Ethiopia, Tanzania and Uganda women have relatively strong legal rights in the formal system. While there is often a lack of awareness about women's rights, provisions in the legal system may help explain the smaller gender gaps in land rights. In Ethiopia and Uganda, where there have been efforts encouraging joint titling, 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 (Holden et al., 2011). This may suggest that gender inclusive legal frameworks and programs strengthen women's land rights. We find that 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 land ownership are larger than the gender gaps in plot management, 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 plot managers. The opposite is true for Malawi and Uganda – more women than men are reported as plot 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 plot 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 own and manage plots, they may still participate in the decisions about the use of (at least some of) the harvest from the plot.[26]

In addition, rights that are commonly conflated in the literature and in development practice, such as ownership and the right to sell land, plot ownership and management, and plot management and control of output – are often vested in different household members and therefore, should not be used interchangeably.

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.

[26] 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.

Efforts to improve women's land rights require a clear understanding of the legal and customary laws governing the range of land tenure rights, marital regimes and inheritance practices. It is critical to move beyond simply considering land titling and to consider the range of land rights, beyond ownership. It is also critical to consider the rights held both individually and those held jointly. In addition, we are focusing on land rights for agricultural production. A more comprehensive understanding of rural land rights would also need to incorporate rights to common and communal lands.

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 indicators 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, under what circumstances do women landowners also manage production and control the output? And under what circumstances 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. Evidence suggests that reports of land rights depends on the gender of the respondent (Kilic & Moylan, 2016; Twyman et al., 2015). Experiments conducted in Uganda (Kilic & Moylan, 2016) also find that the reported patterns of asset ownership differ depending on who is interviewed within the household. We are not able to analyse how interviewing individuals about their rights would provide different information and affect the patterns of rights.

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 analyze 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 analyzed here, what is consistent is that, regardless of how the questions are asked, the responses indicate that the land rights do not fully overlap.

Approaches are needed to monitor progress on the SDGs. 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 on the land tenure system under which the land is 'owned'.

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Annex

Table A1. Formulation of survey questions about land rights in each country

Indicators	Ethiopia*	Malawi	Niger	Nigeria	Tanzania	Uganda
Proxy for land ownership: reported ownership	Does your household have a certificate for this [PARCEL]? Under whose name(s) is the certificate issued for this [PARCEL]? 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	Who is the owner of this plot? (two IDs from roster could be listed) 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	Who in this household can decide whether to sell this [PARCEL] or use it as collateral?	Who in the household can decide whether to sell this [PLOT] or use it as collateral?	n/a	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?	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)

*The survey for Ethiopia also contains questions regarding use rights for rented-in plots but these are beyond the focus of the discussion.