# The Persistence of Customary Norms: Women's Land Rights and Village Institutions in Tanzania

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Abstract

Women's ownership of and control over land is of primary importance for international development. In Tanzania, an inherent tension lies in the recognition of customary laws, that explicitly discriminate against women, and statutory laws that establish equal rights for men and women. This paper shows that women in rural Tanzania still own very little land without their husbands and their rights over the jointly owned land are limited. We show that customary patrilineal practices persist. In particular, we find that sons are more likely than daughters to inherit land, and widows' inheritance rights are affected by the gender of their children. Importantly, women's tenure security in case of divorce or inheritance remains fragile. Village institutions play a key role in the management of land rights and the mediation of land disputes though little is known about them. We find that the members of village institutions have more pro-women views on land rights than the average household respondent. However, using randomized vignettes to measure gender bias, we show that they do not always make gender-neutral recommendations in case of land disputes.

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# 1 Introduction

Land is often considered the most important asset in rural areas, as it is the foundation for agricultural production. A society's ability to define and, within a broad system of the rule of law, establish institutions that can enforce property rights to land, as well as to other assets, has been deemed a critical precondition for social and economic development (Deininger 2003 p.7). Improved access to markets and increased population density have only raised the value of private property rights for land. It is within this context that recent studies have looked at women's access to land and the effect of improved property rights for women.

Despite being heavily involved in agricultural production, women in most of Sub-Saharan Africa own little land (Doss et al. 2015; Gaddis, Lahoti, and Li 2018) and are concerned about tenure security (Prindex 2019). A number of studies provide evidence that there are benefits, not just in terms of equity, but potential efficiency gains from strengthening property rights for women. Land ownership is associated with higher decision-making and bargaining power (Agarwal 1997; Fafchamps and Quisumbing 2002; Allendorf 2007; Wiig 2013; Menon, van der Meulen Rodgers, and Nguyen 2014; Meinzen-Dick et al. 2017; Muchomba 2017), and better nutrition among widows (Milazzo and van de Walle 2021). Strengthening women's inheritance rights have been found to improve educational attainment of daughters and female health outcomes in India (Deininger, Goyal, and Nagarajan 2013; Calvi 2020) and in Kenya (Harari 2019), though in India it may also have strengthened son preference (Bhalotra, Brulé, and Roy 2018), and led to higher suicide rates (Anderson and Genicot 2015). More investment in land has been found in areas of Zambia where widows have the right to inherit (Dillon and Voena 2018). Evidence from randomized-controlled trials show land demarcation in Benin allowed women to reduce land-guarding practices (Goldstein et al. 2018), and that providing land titles increased investments and soil conservation measures, especially among female headed households, in Rwanda (Ali, Deininger, and Goldstein 2014).

Despite its importance, land ownership in Sub-Saharan-Africa is often hard to measure due to the lack of land titling, the prevalence of joint ownership, and the existence of partial land rights (Doss et al. 2015). This paper uses a unique dataset (*Village Institutions and Land Rights in Tanzania, VILART*) to study women land property rights and village institutions in three regions of rural Tanzania. This survey provides us with plot-level information, from both husbands and wives, about ownership, land rights and expectation in the event of divorce or widowhood. Recent research stresses the importance of collecting data on land rights, not just ownership (Doss et al. 2015; Kang, Schwab, and Yu 2020) and of interviewing each owner separately (Doss, Kieran, and Kilic 2020; Deininger et al. 2021). Beyond ownership and rights, tenure security is of primary importance and little is known (Doss and Meinzen-Dick 2020). To the best of our knowledge, no other survey provides information on tenure security in the face of divorce or widowhood, two key sources of insecurity for women.

Our data first show that married women own very few acres of land without their husbands (4% of total household acreage), and that their lack of inheritance rights as daughters limits their capacity to bring land to the marriage. Women's ownership is mostly through joint plots purchased after marriage. Even for plots jointly owned with their husband, women do not always have a say regarding its sale, to whom to give it out as inheritance, and whose names would be listed on a hypothetical land title. Women's overall low ownership puts them at risk in case of divorce or widowhood. These findings are consistent with previous research in Sub-Saharan Africa showing land rights do not always overlap (Slavchevska et al. 2021).

A number of recent papers show that traditional norms have long lasting effects (among others Nunn 2009; Lambrecht 2016; La Ferrara and Milazzo 2017; Dillon and Voena 2018; Milazzo and van de Walle 2021). Our paper contributes to this literature by showing that customary patrilineal practices still play a large role in matter of inheritance in rural Tanzania. Among first born children, a sample among which the gender of the child is reasonably exogenous, girls, are expected

to receive less land than boys if their father dies. Interestingly, we find that this translates into widows inheriting more with a female first born than with a male first born. This suggests a potential trade-off between daughters' and mothers' rights, in line with other research documenting possible counter-intuitive effects of improved mother outcomes on daughters (Jayachandran 2017; Kang, Schwab, and Yu 2020). Our work also shows that women's inheritance rights are limited and fragile against claims from male members of the deceased husband's clan.[1] *Partial* property rights— such as the right to keep the land only until remarriage; or the right to cultivate it while alive, but not to sell it—prevail. In the event of divorce, the expectations of the distribution of joint land also fall short of an equal share. About 35% of the household respondents expect that the wife would get less than 50% of the joint land in case of a mutually agreed divorce. These expectations are very similar to what household members think would have happened under their traditional clan laws.

Finally, little is known about the Tanzanian's village institutions and their role in securing women's property rights. In Tanzania, an inherent tension lies in the recognition of customary laws, that explicitly discriminate against women, and statutory laws that establish equal rights for men and women. A series of legal reforms in the 1990s gave tremendous power to village institutions (VIs) to influence women's *de facto* land rights, as they were made responsible for adjudicating, registering, and titling all local holdings. Our survey confirm that a majority of household members report that they would seek the advice of VI leaders in case of land dispute or disagreement over land ownership in a divorce. VI leaders have therefore a key role in the interplay between customary and statutory laws. The question is whether their views on land property rights are gender neutral. In our survey, members of the Village Councils report more progressive views on women's land rights than household members. However, using *vignettes* about women's inheritance rights where we randomized the gender of the child, we show that the recommendations from VI

[1] A clan is an extended lineage within a tribe.

members, of both genders, still fall short of the gender egalitarian standards promoted by the statutory law. These findings are consistent with the literature on legal dualism in Africa (Platteau 2000; Aldashev et al. 2012a,b), growing evidence that unmarried women, divorcees, and widows are particularly vulnerable (Fafchamps and Quisumbing 2002; van de Walle 2013; Milazzo and van de Walle 2017; Lambert, van de Walle, and Villar 2017).

The remainder of the paper is structured as follows. In Section 2, we present a background section on Tanzania's land practices. Section 3 introduces the study context. In Section 4 we present the results on women's land ownership and rights using plot-level data and section 5 analyzes women's tenure security using expectations in case of inheritance and divorce. Section 6 summarizes the views of members of the village institutions on women's land rights. Finally, section 7 concludes.

## 2 Background

Tanzania is a highly diverse country inhabited by more than 120 ethnic groups and tribes. Historically, land rights were based on customary laws that differed from tribe to tribe, but most ethnic groups in Tanzania are of Bantu origin and share customary patrilineal and primogeniture land inheritance practices.[2] Ownership of land was communal—owned by family, clan or tribe—and customary laws tended to discriminate against women in terms of access, control and inheritance of land.

Widows generally did not have direct inheritance rights under the Tanzanian Bantu tribes customs (Knight 2010). Within these patrilineal societies, property is inherited through the male line, and the primogeniture distribution rule gives preference in inheritance to the eldest son. As a result, women's access to land is traditionally tied to their relationships to a male member of their household, and holding on to land in the event of the spouse's death or separation can be difficult (Deininger and

[2]Source: University of Zurich's Atlas of Pre-colonial Societies.

Castagnini 2006; Lambert, van de Walle, and Villar 2017). In addition, the prevalence of patrilocality, whereby married couples reside near the husband's family, and polygyny can further fragilize women's access to land. Tanzania's Local Customary Law (Declaration) Order in 1963 (Government Notices 279 and 436) codified many of these features. For instance, a widow "has no share of the inheritance if the deceased left relatives of his clan; her share is to be cared for by her children, just as she cared for them" (Government Notice 436).

In recent decades, Tanzania has transitioned to a legal framework that integrates aspects of customary tenure but also recognizes private property rights (Bourguignon 2018; Rwegasira 2012). This new approach was embodied in the National Land Policy of 1995, and later codified in the Land Act and the Village Land Act of 1999 (VLA). The Land Acts provided the legal framework for land rights while recognizing customary tenure. It set up the institutional infrastructure for the issuance of land titles called *Certificates of Customary Rights of Occupancy* (CCROs).[3] The administration of land was also substantially decentralized at the village level. The VLA devolved substantial authority to the Village Council (VC) which has the responsibility and authority to manage village land as a trustee managing property on behalf of the beneficiaries, the villagers. VCs are responsible for adjudicating, registering, and issuing CCROs within their area. The VLA also mandated the establishment of other land-related village institutions such as a dispute settlement body (Village Land Council) and a land adjudication committee (see Appendix D for a more detailed description).

Importantly, the new Tanzanian statutory law made provisions to support equal property rights for women. The Constitution, ratified in 1977, already recognized equal rights and contains non-discrimination provisions (Giovarelli, Richardson, and Scalise 2016). The land law upholds customary rules for land, but requires them

[3]CCROs are permanent, and are governed by local/village customary law. Despite being rights of "occupancy," customary rights of occupancy are like ownership in that they include the full bundle of rights of freehold title: citizens may freely sell, gift, bequeath, rent and mortgage their right of occupancy to others (Knight 2010).

to be consistent with the non-discrimination clause in the Constitution (Hallward-Driemeier and Hasan 2012).[4] The VLA also introduced female quotas in the village institutions with the potential to reduce discriminatory land allocation practices.

Despite the legal efforts towards a gender-neutral rule of law, there are important tensions remaining between the recognition of customary law and the promotion of equal rights. These tensions are particularly acute when it comes to protecting the property rights of widows and divorcees. The Constitution of Tanzania states that all are equal before the law. However, it also states clearly that in matters concerning family situations and marriages, the court must consider the customs of the parties involved. The VLA, for instance, never explicitly addressed the question of inheritance. This legal vacuum leaves enormous room for interpretation to local judges and village institutions.

# 3 Data: the VILART survey

This paper uses data from the *Village Institutions and Land Rights in Tanzania* (*VILART*) survey, a diagnostic survey that we conducted in 45 villages distributed evenly across 3 regions in Tanzania (Katavi, Kigoma and Mwanza).[5] These three regions were selected based on their low levels of distribution of land titles. Specifically, the regions were chosen based on records from the National Land Use Planning Commission (NLUPC) on the distribution of CCROs by March 2017. But the distribution of land titles remains quite low across the whole country (Hasanbasri et al. 2021). Appendix B provides some information on how comparable these regions are to the rest the country. In each region, 15 villages were randomly selected from the 2012 Tanzanian census list of villages. The random selection of villages spans 13

[4]Customary rule, or any action dependent on the rule, shall be deemed void to the extent to which it denies women, children, or persons with disabilities lawful access to ownership, occupation, or use of any customary land.

[5]For more information see `http://faculty.georgetown.edu/gg58/VILART.html`.

districts evenly distributed across the 3 regions and 90 enumeration areas (2 enumeration areas per village). Figures A1a and A1b plot the location of the surveyed regions and districts. The interviews were conducted during July and August in 2018. The primary units of analysis are members of households and members of the village institutions (VI hereafter).

**Household Interviews** In each village, around 10 households were randomly selected resulting in a sample size of 912 respondents.[6] Qualifying household respondents had to be married,[7] either the man or the woman must have lived in the village for at least 10 years, must own and use land, be age 18 or higher, fluent in Swahili, and non-refugees.[8] Both the household head and the spouse were interviewed. In the case of polygamous households, only one of the wives were interviewed. Appendix Table A1 provides basic descriptive statistics on the households. Given the sampling design, exactly 50% of respondents are female. On average, the men are 48 years old and have completed 6 years of schooling. The women are 40 years old and have completed an average of 5 years of education. About 10% of the sample belongs to a polygamous household, and men and women have 6 and 5 children on average. They have very limited access to electricity (10%), bank accounts (10%) or internet (2%).

**Members of the Village Institutions Interviews** In each village, 10 members of the VIs were interviewed individually for a total of 450 interviews. The 10 respondents were randomly selected based on the full roster of individuals belonging to the village council and other village institutions relevant for land-related practices (see Appendix D). The randomization procedure aimed a representative sample in terms of both council membership and gender. The interviews included questions

[6]The intended sample was 150 households by region, the extra 6 interviews from Mwanza and Kigoma were conducted to replace cases where households did not own land.

[7]Couples that had been living together as a married couple for at least two years also qualified.

[8]27 and 24 of the men and women interviewed were born in Burundi.

about their knowledge of the land law and their perceptions on women's land rights. Table A2 presents summary statistics on the VI members and compares them with the average household member. Both men and women of the VIs are more educated than the household members. The VI women are also older and more likely to have been born in the village than the average female villagers.

**Village Institutions Community Survey** A community survey through a group interview with VI members collected data on the socioeconomic and demographic characteristics of the village, VIs composition and functioning, and village land rules. Table A3 provides basic descriptive statistics of the village characteristics. On average, the villages have 631 households and 4,000 residents. Agriculture is the main economic activity for the majority of the villages. It represents, on average, the main source of income for almost 90% of households in a given village. Pastoralism is the second most important income generating activity, but it is considerably less important than agriculture. The villages are also far from economic markets. The average distance to the nearest market outside the village is almost 6 hours walking. In 75% of the villages, the most common mode of transport to this market is either walking or biking, and only half of the villages have some sort of financial access located in the village.

**Customary Practices.** More than 30 ethnicities are present in the villages surveyed in the VILART survey. But the Sukuma, Ha, and Hutu constitute about three quarters of our villages' population (see Table A4). During the community survey, the VI members were asked to identify the 5 largest ethnic groups in their village (in population size) and to provide information about their population, main economic activity, historic presence in the village, and customary land practices. In total, data was collected for 157 ethnicity-village observations.

Table 1 presents summary statistics for all the ethnicity-village observations weighted by their population share in the village. It shows that there is very little or null variation in male land rights and other non-gendered land practices. For example, only

Table 1: Traditional Land Practices

| Practice | Mean | Std. Dev. |
|---|---|---|
| Individuals to own land | 0.98 | 0.14 |
| Individuals to rent out land | 1.00 | 0.02 |
| Individuals to sell land to other members of the tribe | 1.00 | 0.02 |
| Individuals to sell land to non tribe members | 1.00 | 0.06 |
| Sons to inherit land | 1.00 | 0.02 |
| Women to own land | 0.81 | 0.39 |
| Daughters to inherit land | 0.79 | 0.41 |
| Women to inherit land from their husbands with full rights | 0.51 | 0.50 |
| Women to inherit land from husbands until remarriage | 0.38 | 0.49 |

Notes: The summary statistics are based on the 157 ethnic-village observations collected during the VI community survey. Each observation is weighted by the population of that particular ethnic group in the village.

one ethnic group in one village would not customarily permit sons to inherit land. But there is much more variation when it comes to women's rights. For instance, only 51% of the VILART villages' population belong to ethnic groups whose clan law would permit widows to inherit land with full rights. The customary practices reported are consistent with the available information on ancestral cultural practices in Tanzania. In Table A4, we combine the list of ethnic groups in the VILART data with Murdock's 1967 Ethnographic Atlas.[9] Most of these ethnic groups traditionally had customary patrilineal and primogeniture land inheritance practices, as well as patrilocal and polygamous marital practices.

# 4 Women's Land Ownership and Land Rights

Women's land ownership is associated with a number of positive outcomes as discussed in the introduction, e.g. poverty reduction, better nutrition, human capital intergenerational effects, etc. However, in the context of Tanzania and other sub-Saharan African countries, measuring ownership is not as straightforward as identifying whose name is included on the land deed. Beyond the low distribution of land titles, women can have partial ownership rights (Doss et al. 2015), and own land jointly with others. Using plot level information collected separately from both

[9] J. Patrick Gray. 1999. A Corrected Ethnographic Atlas. World Cultures 10(1):24-85.

husbands and wives (see Appendix C for more information on how these data were collected), this section provides information on the extent of women's land ownership and rights.

## 4.1 Women's Land Ownership

For each plot, we first asked both the husband and the wife "who is the owner of this plot?". They were allowed to select multiple options: myself, my spouse, sons, daughters, my extended family, spouse extended family, other.[10] We define "joint ownership" as any land for which there is no disagreement between the partners that both the husband and wife own that land. "Male" ("female") land is defined as plots for which the husband (wife) has ownership and the partner does not. In all the categories, there may be other owners of the land too (e.g. sons, extended family).

Figure 1 plots the distribution of land acreage across type of ownership.[11] Only 4% of the total land acreage is owned by women without their spouses, of which half of it was acquired through inheritance. Moreover, more than half of the land that women own without their partners is co-owned with either their sons (23%), daughters (8%), or extended family (28%). The share of acres that is considered jointly owned by both the husband and the wife is 33%. But 29% the land is considered jointly owned by either the husband (13%) or the wife (16%). This is consistent with previous research documenting substantial spousal disagreement in what constitutes joint ownership in Sub-Saharan Africa (Jacobs and Kes 2015; Kilic and Moylan 2016).

Women's access to land not only differs from their husbands' in quantity, but also in

[10]The husband answered this question for every land plot that he listed. The wife answered this question for every plot she additionally listed, and for every plot her husband had previously listed and that he had reported she knew about the existence of this plot.

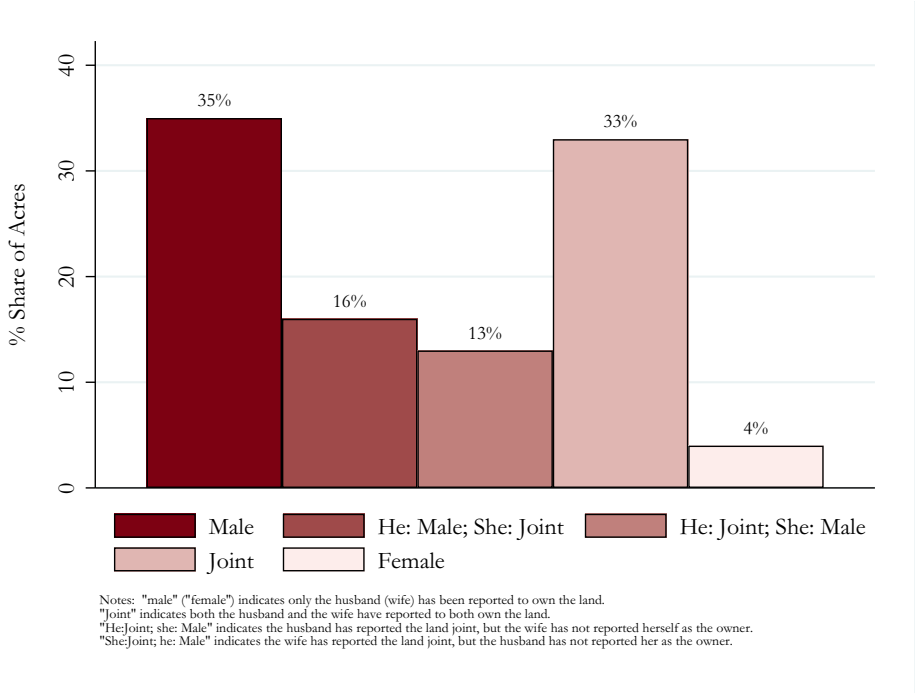
[11]The distribution based on number of plots provides a very similar picture, except for a more equal distribution of male and joint plots: male plots tend to be larger.

Table 2: Household Land Plots by Type of Ownership

| | | | | Difference with Male plots | |
|---|---|---|---|---|---|
| | (1) Male | (2) He/She/Both Joint | (3) Female | (4) He/She/Both Joint | (5) Female |
| **Plot Characteristics** | | | | | |
| Area | 3.57 | 2.86 | 1.87 | 0.72 | 1.70*** |
| | | | | (0.56) | (0.63) |
| Cultivated | 0.45 | 0.52 | 0.61 | –0.06* | –0.16* |
| | | | | (0.04) | (0.09) |
| Residential | 0.41 | 0.34 | 0.16 | 0.07** | 0.25*** |
| | | | | (0.03) | (0.05) |
| Distance | 28.12 | 38.58 | 70.35 | –10.46 | –42.24*** |
| | | | | (7.30) | (14.72) |
| Wife works | 0.57 | 0.78 | 0.80 | –0.21*** | –0.23** |
| | | | | (0.06) | (0.09) |
| Husband works | 0.86 | 0.87 | 0.27 | –0.01 | 0.59*** |
| | | | | (0.04) | (0.10) |
| **Acquisition** | | | | | |
| Post-marriage | 0.50 | 0.69 | 0.63 | –0.19*** | –0.13 |
| | | | | (0.04) | (0.11) |
| Purchased | 0.40 | 0.51 | 0.31 | –0.12*** | 0.09 |
| | | | | (0.04) | (0.09) |
| Inherited | 0.41 | 0.23 | 0.55 | 0.18*** | –0.14 |
| | | | | (0.04) | (0.10) |
| Gift | 0.08 | 0.08 | 0.06 | 0.01 | 0.02 |
| | | | | (0.02) | (0.04) |
| Local government | 0.06 | 0.09 | 0.02 | –0.03** | 0.04 |
| | | | | (0.02) | (0.02) |
| Other mode of acq. | 0.02 | 0.05 | 0.02 | –0.03*** | –0.00 |
| | | | | (0.01) | (0.02) |
| **Land documents** | | | | | |
| Use as collateral | 0.40 | 0.52 | 0.45 | –0.12*** | –0.05 |
| | | | | (0.04) | (0.12) |
| Any document | 0.27 | 0.33 | 0.31 | –0.06 | –0.04 |
| | | | | (0.04) | (0.09) |
| Purchase document | 0.14 | 0.23 | 0.18 | –0.09** | –0.05 |
| | | | | (0.04) | (0.09) |
| Any government right of occupancy | 0.08 | 0.07 | 0.00 | 0.00 | 0.08** |
| | | | | (0.03) | (0.03) |
| CCRO | 0.01 | 0.02 | 0.00 | –0.00 | 0.01 |
| | | | | (0.01) | (0.01) |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The summary statistics are based on the household interviews. Columns (1) to (3) report sample means for the whole sample of land plots in each ownership category. Columns (4) and (5) report the difference between (1) and (2), and (1) and (3), respectively. The difference is estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level. The wife/husband works plot characteristic only includes cultivated plots. The wife/husband works plot characteristic only includes cultivated plots. Other modes of acquisition include: used for many years, moved in without permission, rented in, and other. Any document includes: granted right of occupancy, letter of offer, CCRO, purchase agreement, gift agreement, inheritance letter, rental agreement, other government document, utulity bill or other bill, and other. Any government right of occupancy includes: granted right of occupancy, letter of offer, and CCRO.

Figure 1: Distribution of Land Acreage by Type of Ownership




the type of land that they own. Table 2 reports sample means of plots characteristics by type of ownership, and the difference between "male plots" with "joint" and "female" plots. We merge the three types of joint ownership. In Table A5, the "joint plots" are divided in both joint," "he joint," and "she joint". The summary statistics are similar when presented in terms of land acreage (Table A6).

Women's land plots are on average smaller, more likely to be cultivated instead of residential, and further away from homestead. Not surprisingly, women also work substantially more on the land they own. The female plots are also more likely to have been acquired through inheritance than the plots they own jointly with their spouses. Similar patterns emerge when comparing the joint land with the male plots—the land that husbands own without their spouses. Joint plots are more likely to be cultivated than residential, and are more likely to have been acquired through purchase and after the current marriage.[12] As a consequence, these joint

[12]There is an active land market in Tanzania, though land markets may not operate in a gender-neutral manner (Wineman and Liverpool-Tasie 2017).

Table 3: Women's Land Rights by Type of Ownership

| | Male | He Male, She Joint | He Joint, She Male | Joint | Female |
|---|---|---|---|---|---|
| Husband's answer | | | | | |
| Right to sell | 0.07 | 0.22 | 0.64 | 0.75 | - |
| Right to bequeath | 0.08 | 0.25 | 0.54 | 0.64 | - |
| Right to decide on title | 0.04 | 0.18 | 0.30 | 0.33 | - |
| Wife's answer | | | | | |
| Right to sell in husband's absence | - | 0.03 | - | 0.04 | 0.47 |
| Right to bequeath | - | 0.20 | - | 0.32 | 0.63 |
| Right to decide on title | - | 0.46 | - | 0.59 | 0.78 |
| Right to keep at least 50% if divorce | - | 0.19 | - | 0.32 | 0.65 |

plots more frequently have some sort of ownership document and are perceived as valid to be used as collateral to borrow money.[13]

## 4.2 Women's Land Rights

One might wonder what is the meaning of "ownership" of land in a household.[14] In general, ownership is thought of as a collection of rights such as the right to the product of the land, the right to use, the right to manage, or the right to sell or bequeath of the land (Doss, Kieran, and Kilic 2020; Doss and Meinzen-Dick 2020). Within a household, owning land may come with a variety of rights such as selling, deciding on inheritance, or deciding whose names would be registered during a land titling process (Doss et al. 2015).

We collected information on both the husbands' and wives' beliefs on women's land rights at the plot level. Table 3 presents the share of plots over which they believe the wife would hold rights. In each of them, there may also be other individuals who jointly hold the right. The findings presented in this paper are consistent with previous research documenting that ownership and rights over land do not always overlap in Sub-Saharan Africa (Slavchevska et al. 2021).

[13]Overall, 70% of the land plots do not have any type of ownership document, but there are substantial differences depending on how the land was acquired. Among purchased plots, 49% have no document, as compared to 89% of the inherited plots.

[14]Especially in a country where, technically, all the land belongs to the president, though it is not clear that state expropriation is more of a risk in Tanzania than elsewhere.

Men report their wives to enjoy greater rights on the land they define as jointly owned with them. But still, they do not always think their wives would have decision making power regarding the sale or inheritance of joint plots. They seem to especially grant their spouses little decision making power (33% of the joint plots) in terms of having a say in whose names would be registered as claimant/owners in case they obtained a land title.[15]

Notice that women's rights over the land they own without their spouses are also limited. They do not always think they would have the right to sell the land in their husbands' absence (47% of the plots), and their rights on deciding on inheritance and land titling are also restricted, possibly reflecting the fact that women the ownership of most of these plots with other people.

There are also differences by gender on the beliefs over women's rights. Women are half as likely than men to think they could decide on the inheritance of the joint land (32% vs. 64% of the plots). In contrast, they are twice as likely than their husbands to think they could have a say on whose name would be on the title (59% vs. 33% of the joint plots), but the gap in expectations is maller in terms of total joint land acreage (Table A7). Finally, it is interesting to note that disagreement over joint ownership is correlated with the rights that women self-report. Among all the plots that women report as jointly owned with their husbands, women report more rights when the husband agrees that the plot is jointly owned .

# 5 Women's Tenure Security and Customary Law

Overall, we see that most of the land owned by women is jointly owned with their husbands and that women have some, but limited, decision making power regarding these jointly owned plots. Understanding women's land rights also means assessing

[15]The question was framed in terms of certificates of right of occupancy (CCROs), see section 2.

the strength and security of those property rights (Doss and Meinzen-Dick 2020). A global report on perceptions of tenure security in 33 Countries, including Tanzania, describes how widowed and divorced female respondents show much lower rates of tenure security than their male counterparts do (Prindex 2019). This section confirm this by analyzing husbands and wives' expectations in case of divorce or his death. We also present evidence showing that adherence to customary practices is still an important barrier to women's access to land.

## 5.1 Inheritance Expectations

The extent and security of inheritance rights is of primary importance for married women. Our survey collected information regarding inheritance expectations from both husbands and wives. With respect to the land jointly owned by the husband and the wife, we asked the husband to estimate the share of land that he would expect to go to each of the current household members in the hypothetical case that he died intestate. In addition, we asked the wife about the share that she would expect to get if he died intestate, and, if she expected to own the land alone or jointly with others.

The majority of male respondents, 91.2%, expect some share of the joint land to go to the wife. Most women also expect to inherit some of the land (92.6% report a positive share), but only 8% of them say they would be the only owner of that land. The rest expect to own the land jointly with their children.[16]

Although these numbers are encouraging in terms of women's inheritance expectations, we show next that women's inheritance rights seem to still be linked to their children, especially to the existence of sons, and that tenure security remains fragile.

[16] After reporting the share of land they expected to get, we asked them: "Do you expect to own that share of land alone or jointly?" The answer options were: only owner; jointly with sons and/or daughters; jointly with spouse extended family; other.

### 5.1.1 The persistence of patrilineality

Inherited land represents about 30% of the total household land,[17] but only 4.70% of the acres were inherited by the wife as compared to 87.11% by the husband. This shows how the weak claim that women have as daughters to their family clan's land is an initial and quantitatively important barrier to women's ownership. This descriptive evidence is in line with the traditional patrilineal practices to which the household members' ethnic groups subscribe. This section shows that patrilineal customs influence both daughters' inheritance expectations from their father and women's inheritance expectations from their husbands.

We start with the former. Though we may be tempted to compare inheritance expectation of girls and boys, doing so would be problematic. This is because a body of evidence shows that fertility decisions, such as the number of children or birth spacing, often depend on the sex of previous children (Milazzo 2014, Rossi and Rouanet 2015). Recent work has therefore focused on the gender of the first born as a source of variation to show the impact of a child's gender on family structure and fertility (Dahl and Moretti 2008, Jayachandran and Kuziemko 2011, Milazzo 2014, Ichino, Lindstrom, and Viviano 2014, Genicot and Hernandez-de Benito 2020), and on individuals views on gender issues (Oswald and Powdthavee 2010, Washington 2008). The idea is that the sex of the first born qualifies as a random event, after controlling for the decision to be a parent. In rural Tanzania, sex-selective abortion does not seems to be not a concern and sex ratios at birth are unbiased.[18]

We therefore ask whether being female makes a difference in terms of the first born child's inheritance expectation. Husbands in our sample were asked about who they expect would inherit the joint land if they passed away without a will. Exact shares

[17] Among those whose husband reported less than 6 *shambas*.

[18] In a large comprehensive exercise, Chao et al. (2019) finds that sex ratios at birth are not significantly different from the commonly assumed historical norm of 1.05 in Sub-Saharan Africa (see also Anderson and Ray 2017).

were reported for each individual member of the household.[19] We can therefore look at households where the first born child is still living in the household and estimate:

$$Y_{hv} = \alpha + \beta FFB_{hv} + \gamma X_{hv} + \delta_v + \epsilon_{hv} \quad (1)$$

where $Y_{hv}$ is share of joint land the husband expects to go to the first born if he dies intestate, and $FFB_{hv}$ is an indicator equal to 1 if the first born child of a husband from household $h$ living in village $v$ is female. The vector $X_{hv}$ is a set of household controls: wife's and husband's age and education; wife's ethnicity and religion dummies; and total acreage of household's land. Finally, $\delta_v$ are village fixed effects, and $\epsilon_{hv}$ is a conditionally mean-zero error term which we cluster at the enumerating area level. Given that the number of clusters is only 52, we present the p-values after wild bootstrapping the standard errors. Note that we first checked that the gender of the first born has no noticeable effect on the household acreage acquired either before or after the current marriage.

Table 4 shows that the share of the joint land inherited by the first born child is 9 to 12 percentage points lower (60% less) if the first born is a girl. This finding highlights that patrilineal traditions are still strong today. This is consistent with Wineman and Liverpool-Tasie (2019) who finds that both men and women favor their sons in bequest decisions in Kagera, Tanzania (though the favoritism is more pronounced among men). Table A8 in the appendix shows that results are robust, although more imprecise, to restricting the sample further to households whose first born is less than 17 (after which girls are more likely to leave the household).

Given that inheritance rights favor boys, we may expect the distribution of inheritable land to widows to also depend on the gender of her children. A woman might be less likely to inherit if she has sons, who inherit more, as opposed to daughters. To see this, we run a specification similar to equation (1) to test whether having a female first born (irrespective of whether this child is currently alive, living inside

[19]For children living outside of the household we do not know how much goes to each child.

Table 4: Effect of Female First Born on Expectations of First Born's Inheritance

| | (1) | (2) | (3) | (4) | (5) | (6) Women $\leq 45$ |
|---|---|---|---|---|---|---|
| Female FB | -9.35** | -9.99* | -8.13 | -9.99* | -9.34 | -12.13* |
| | (4.37) | (5.61) | (4.92) | (5.64) | (5.71) | (6.63) |
| Household controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Children controls | | | ✓ | | | |
| Prev. children controls | | | | ✓ | | |
| Polygamous control | | | | | ✓ | |
| Village FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife ethnicity FE | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife muslim | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife christian | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wild Bootstrap p-value | 0.02 | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 |
| N | 125 | 125 | 125 | 125 | 125 | 100 |
| adj. $R^2$ | 0.24 | 0.17 | 0.27 | 0.16 | 0.17 | 0.18 |
| Baseline | 17.60 | 18.17 | 20.38 | 17.74 | 17.58 | 20.41 |
| Percent Effect | -53.15 | -55.02 | -39.88 | -56.32 | -53.12 | -59.43 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include the husband's number of sons, husband's number of daughters, and the wife's number of children. The previous children controls are two indicator variables equal to 1 if the husband or the wive had had children previous to the current marriage. The polygamous control is an indicator variable equal to 1 if the husband has multiple wives. The full table is available upon request.

or outside of the household) makes a difference in terms of the wive‘'s inheritance expectation. We consider two different outcome variables $Y_{hv}$: the share of joint land the husband expects to go to their interviewed spouse, and the share of joint land the wife expects to inherit. Both questions were hypothetical scenarios in case the husband happened to die intestate.

The first set of columns of Table 5 presents the husbands' expectation regarding the joint land. In columns (5) to (10) the outcome variable is the wive' expectations on the share of joint land she would expect to inherit, but this land could be jointly owned with others or not (only 8% report this share to be owned alone). The results from having a female first born are both economically and statistically significant: an 8.4% and 9.2% increase for males and females, respectively, on the share of joint land they would expect to go to the hypothetical widow. Notice that the magnitude of the effect is very comparable to the estimates in Table 4 suggesting a possible tension

Table 5: Effect of Female First Born on Expectations of Wife's Inheritance

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Husband's Expectations** | | | | | **Wife's Expectations** | | | | |
| | | | | | Women $\leq 45$ | | | | | Women $\leq 45$ |
| Female FB | 8.36* | 9.01 | 8.60* | 8.84* | 12.96** | 9.17** | 8.75* | 9.64** | 9.28** | 7.68 |
| | (4.69) | (6.03) | (4.85) | (4.93) | (6.43) | (3.97) | (4.80) | (3.98) | (3.99) | (4.73) |
| Household controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Children controls | | ✓ | | | | | ✓ | | | |
| Prev. children controls | | | ✓ | | | | | ✓ | | |
| Polygamous control | | | | ✓ | | | | | ✓ | |
| Village FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife ethnicity FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife muslim | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife christian | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wild Bootstrap p-value | 0.06 | 0.10 | 0.07 | 0.07 | 0.03 | 0.02 | 0.06 | 0.02 | 0.02 | 0.07 |
| N | 314 | 314 | 314 | 314 | 198 | 379 | 379 | 379 | 379 | 251 |
| adj. $R^2$ | 0.16 | 0.15 | 0.15 | 0.16 | 0.21 | 0.12 | 0.12 | 0.11 | 0.11 | 0.04 |
| Baseline | 55.67 | 55.48 | 55.59 | 55.75 | 50.51 | 73.56 | 73.56 | 73.51 | 73.57 | 74.08 |
| Percent Effect | 15.01 | 16.25 | 15.47 | 15.86 | 25.65 | 12.46 | 11.90 | 13.11 | 12.61 | 10.37 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include the husband's number of sons, husband's number of daughters, and the wife's number of children. The previous children controls are two indicator variables equal to 1 if the husband or the wive had had children previous to the current marriage. The polygamous control is an indicator variable equal to 1 if the husband has multiple wives. The full table is available upon request.

between the inheritance of daughters and mothers. Under various customs sons are expected to care for their mother, so inheriting less does not always necessarily mean that they would be worse off.

These results show that customary patrilineal practices play an important role in rural Tanzania: widows' access to land is dependent on the presence of male children, and daughters are less likely to inherit land from their fathers than sons.

**Robustness checks** For each regression, we test whether the female first-born effect is partially explained by posterior fertility decisions (total number of children) or a change in the probability of polygamy, since both could be affected by the gender of the first born.[20]

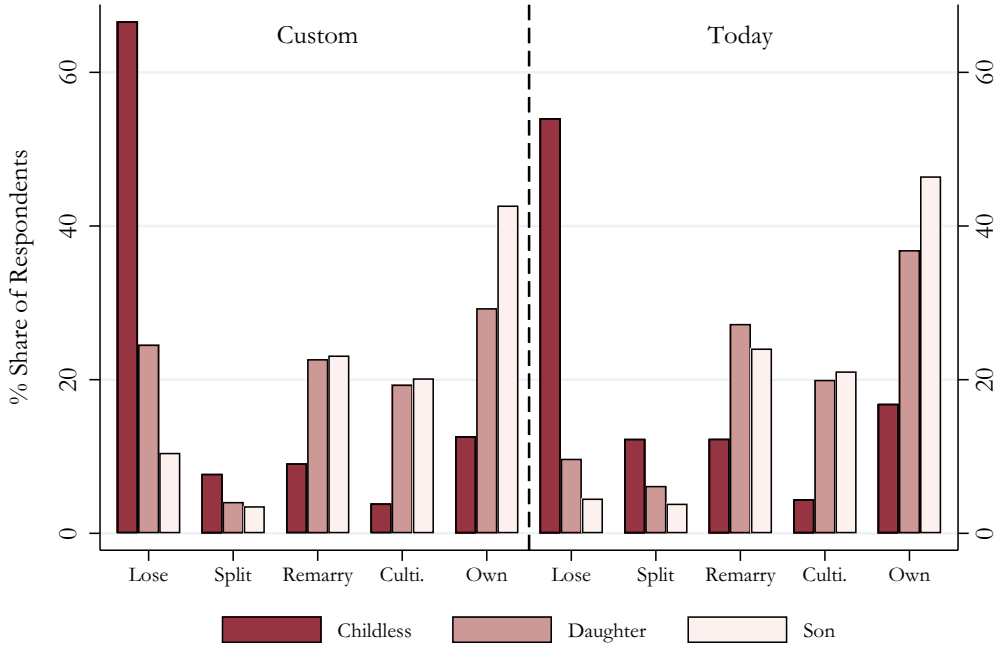
[20]The results also survive restricting the sample to non-polygamous marriages, although the estimates are more imprecise in these last ones (see Tables A9 and A10).

Note that, even if sex ratios at birth are unbiased, using the gender of the first child can be problematic if it affects the likelihood of selection in the sample. For instance, selective mortality of women could be an issue. If having a girl results in outcomes that have negative consequences for women's health (such as lower birth spacing or higher likelihood of being unmarried), this could result in higher mortality rates among women with a female first born as seen in Nigeria by Milazzo (2014). We find no correlation between the gender of the first born and being born outside the village, family size, ethnicity or religious affiliation. We also do not find any sign of selection among males. Among women, the sex ratio of the first born is overall not statistically different from the natural ratio, but, women above 45 are more likely to have first born boys. The source of selection in our sample seems to come from the likelihood of remarriage. Women over 45 with a girl are less likely to have been married before. To address the selection issue among older women, we test if results are robust to controlling for having children prior to the current marriage and to dropping women over 45. The results are also robust to restricting the samples to households whose first-born is alive (see Table A11). Finally, Figures A2 and A3 show the results are robust to a randomization inference exercise (Young 2019).

### 5.1.2 Women's inheritance rights are fragile

We also presented household members with different *vignettes* assessing their expectations on women's tenure security in case of inheritance disputes. Specifically, we asked them to predict what they expect to happen (today) and what would have happened under their own clan customs under three different hypothetical scenarios. Respondents were first asked to imagine a woman who inherited a plot (*shamba*) from her husband, which she was cultivating and there was no land title, and a male member of his clan claimed the land. We then asked them what they thought would happen under three potential scenarios: the wife had no children, the wife had a daughter from the husband, and the wife had a son from the husband. Figure 2 reports both the "today" and the "clan custom" household answers to the three

Figure 2: Household's Inheritance Views




Notes: "Lose" (She would lose the shamba); "Split" (They would split the shamba); "Remarry" (She could keep it but would lose it if she remarries); "Culti." (She could cultivate it all her life---even if she remarries---but she could not sell it); and "Own" (She would be the owner: cultivate, sell, decide who inherits).

different vignettes. See Appendix C for the exact wording of the questions.

Overall, the evidence suggests that women's inheritance rights have strengthened over time, but are still greatly influenced by customary laws that strongly favor men. About half of respondents still believe the wife would lose the land plot if she had no children (down from 67%). The non-childless vignettes portray a more optimistic evolution with only 10% and 5% of respondents thinking she would lose the *shamba* if she had a daughter or a son from him, respectively—as compared to 25% and 10% under their traditional customary law. Even under the most favorable scenario (with a son), less than half of respondents expect the wife to be able to fully keep the plot.

Land rights are often more complex than just insecure or secure. It is useful to think of the level of security of land rights in terms of a continuum moving from weak/insecure to strong/secure. Our survey let respondents choose from a range

of intermediate ownership choices, in addition to the two extreme options of losing or fully keeping the land. Specifically, the possible answers were: "*they would split the land*;" "*she could keep it but would lose it if she remarries*;" and "*she could cultivate it all her life (even if she remarries) but she could not sell it.*"[21] First, it is noticeable that, both in the "today" and under the "clan custom" vignettes, a large proportion believe the woman would obtain partial rights to the land. These range from 20% to 46% in both the without and with children vignettes. Second, and most importantly, a large part of the progress made from the strict customary law application to today's household expectations are in the form of partial rights—rather than expecting the hypothetical widow to get full ownership over the land. Approximately a quarter of the respondents believes the woman could keep the land as long as she does not remarry if she has children, 20% expects she could continue cultivating the plot all her life even if she marries again, and 4 -6% believes she could own a portion of the land. In total, half of the individuals think the hypothetical widow would obtain partial rights if she had children. The proportion goes down in the childless *vignette* but still represents almost a third of the sample.

It is also worth noting though that there are systematic differences across genders in perceived inheritance rights. To show clearly the intra-household differences in opinion, we estimate:

$$V_{ih} = \alpha + \beta W_{ih} + \delta_h + \epsilon_{ih} \tag{2}$$

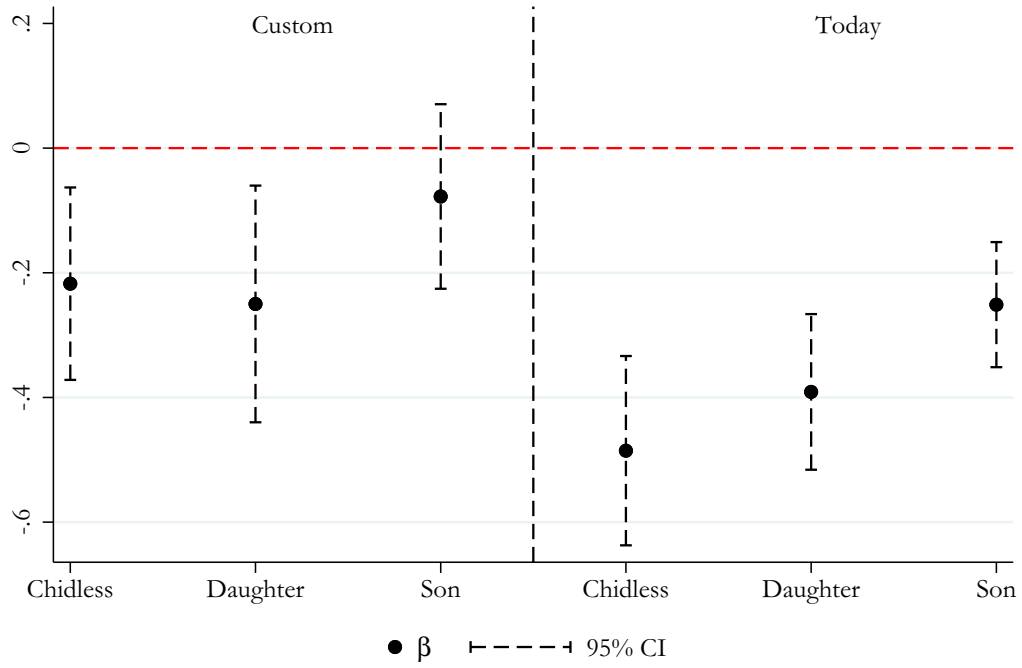
where $V_{ih}$ is the answer to the vignette by individual $i$ from household $h$;[22] $\delta_h$ are household fixed effects; $W_{ih}$ is a wife dummy; and standard errors are clustered at the enumerating area level.[23] The coefficient $\beta$ captures the average difference in

[21]Levirate marriage was an additional possible answer for the clan custom practice: "She could keep it only if she marries the brother of the husband." In Figure 2, the levirate option was added to "Lose the *shamba*". The share of respondents that chose this answer in the 3 vignettes were 3.10% (childless), 2.7% (daughter) and 2.32% (son).

[22]The outcome is discrete: 1 *"She would lose the shamba"*, 2 *"They would split the shamba"*, 3 *"She could keep it but would lose it if she remarries"*, 4 *"She could cultivate it all her life (even if she remarries) but she could not sell it"*, 5 *"She would be the owner (cultivate, sell, decide who inherits)."*

[23]The results are robust to wild boot-strapping the standard errors.

Figure 3: Wife-husband coefficient on Inheritance Vignettes




Notes: the Figure plots β and 95% confidence intervals of equation (2). All regressions include household fixed effects and standard errors are clustered at the enumerating area level. Each β comes from a different regression where the outcome variable is the answer to a household inheritance *vignette*.

expectations of widows' inheritance rights between a wife and her husband.

Figure 3 plots the estimated $\beta$s for each of the inheritance vignettes survey questions. The *Custom* and *Today* panels refer to the inheritance vignettes previously described. We see that wives report less pro-women outcomes under their clan customary laws than husbands. However, the difference of opinion between wives and husbands is even more pronounced when it comes to imagining what would happen today. Women have much more pessimistic expectations on widows' capacity to protect the inherited land.

A greater share of female respondents think that the woman would lose the shamba as compared to the males, irrespective of the presence of children. In fact, in the childless scenario, women provide a remarkably similar answer to both vignettes indicating a large share of the respondents expect traditional customary law to be applied, see Appendix Tables A12 and A13, which highlights the strong attachment

Table 6: Current Inheritance Views. Wife Coefficient

| | *Vignettes* | | |
|---|---|---|---|
| Outcome variable | Childless | Daughter | Son |
| Lose the plot | 0.14*** | 0.03* | 0.02** |
| | (0.03) | (0.02) | (0.01) |
| Partial rights | -0.04 | 0.09*** | 0.07*** |
| | (0.03) | (0.02) | (0.02) |
| Keep the plot | -0.10*** | -0.12*** | -0.09*** |
| | (0.02) | (0.02) | (0.02) |
| N | 890 | 900 | 900 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the enumerating area level. The results are robust to wild boot-strapping the standard errors. All regressions include household fixed effects.

of women's land rights to male descendance expected in patrilineal societies. We present further evidence of the importance of having children for women's inheritance rights is presented in Table 6. The table shows the results of estimating equation (2) for three different binary outcome variables: lose the plot, partial rights, and keep the plot. The negative wife coefficient on the childless vignette seems to be driven by women assigning a lower probability to the wife keeping the plot rather than losing it completely. In the children vignettes, the tradeoff comes from women assigning a higher probability to partial rights rather than ensuring full ownership.

## 5.2 Divorce expectations

Divorce is also often viewed as an important source of vulnerability for women. Women's limited access to land within marriage can be exacerbated upon divorce if they lack the means to secure a fair share of the assets for themselves. The 1971 Law of Marriage Act grants the court the power to order the division of any assets jointly acquired during the marriage between the parties. In practice however, the capacity of the statutory law to actually influence the division of assets upon divorce is limited, especially in rural areas. Marriages are predominantly customary to begin with, and are not commonly officially registered (only 26% of the marriages in tour sample are registered). When asked who would they go for help in case of

Table 7: Expectations of Wife's Access to Joint Land upon Divorce

| | Women | | | Men | | |
|---|---|---|---|---|---|---|
| | Expectations | | | Expectations | | |
| | Mutual | Her fault | Vignette | Mutual | Her fault | Vignette |
| 0% | 22.02 | 30.41 | 25.83 | 29.10 | 37.36 | 32.52 |
| Less than 50% | 4.27 | 4.15 | 6.18 | 6.08 | 6.32 | 5.75 |
| 50% | 42.70 | 38.48 | 65.78 | 34.92 | 30.22 | 59.29 |
| If children/remarriage | 26.29 | 23.04 | NA | 23.81 | 20.88 | NA |
| More than 50% | 4.72 | 3.92 | 2.21 | 6.08 | 5.22 | 2.43 |

Notes: The numbers reflect the percentage of respondents per answer choice. The number of valid answers per column from left to right are: 445, 434, 453, 378, 364, and 452. Only men currently holding joint land were asked about their own divorce expectations. The answer "if children/answer" includes respondents who answered "Yes, she would be the owner if we have children living at home" and "She would be the only owner until she remarries. The children/remarriage options were not provided in the custom questions."

disagreements on land ownership upon divorce, only 8.1% of men and 5.7% of women mention any supra-village institutions such as the ward and district tribunal, or the high court.

At the plot level, women would expect to keep at least 50% in the event of divorce in only 31% of the joint land (Table 3). In addition, our survey also collected information on both husbands' and wives' expectations regarding the distribution of jointly owned land under two hypothetical scenarios: what would the wife own if the couple mutually agreed to get a divorce; and what would the wife own if she were at fault in the divorce. In addition, household members were presented with the following *vignette*: what would have happened under their customary law if a husband and a wife who jointly own and cultivate a *shamba* mutually agree to divorce[24]. Table 7 summarizes the answers.

Three interesting facts emerge from the respondents' divorce expectations. First, about 30% of women[25] and 40% of the men believe that the woman would get less than an equal share over the joint land in case of divorce. In fact, the majority of the 0–50% answers are "she would not be the owner." Notice that there is a substantial agreement between men and women's expectations but women are more optimistic.

[24]The description of all the vignettes are in Appendix C.

[25]This number is in line to the divorce expectations women reported at the plot level summarized in section 4.2.

The difference between their answers is statistically significant at the 5% level in the three divorce scenarios.

Second, both men and women are about 8% more likely to think the woman would get nothing if she were at fault as opposed to a mutually agreed divorce. The difference in means is also statistically significant at the 5% level, and it is mainly driven by the "she will never be the owner" answer choice. In order to understand better what would qualify as "fault" in a divorce, we asked the wife and husband separately what they considered a fault of the husband or the wife to justify a change in land ownership (see Figures A4 and A5). The respondents are more likely to believe a change in ownership is justified when the wife is at fault in the divorce. Among women (men), 18% (34%) of them believe there is nothing a husband could do to justify the change in ownership, in contrast with the 13% (24%) who believe so when the divorce is considered the wife's fault.

Finally, both men and women provide remarkably similar answers to the expectations about their own divorce and what they believe would have happened under their clan law. This evidence suggests that the clans' customary laws are still largely at play when it comes to post-divorce property arrangements. Among the Sukuma, the largest ethnic group in our sample, the wife is customarily allowed to retain possession of whatever property she brought to the marriage. But our data shows that women own very little land acquired before the marriage and therefore bring little land into the marriage as compared to their husbands. The Sukuma's practices also state that any property jointly purchased by the husband and wife must go to the husband, unless there were any agreements before witnesses (Cory 2018). Among the Ha, the second largest ethnic group in the sample, divorce has traditionally been treated as a private affair between parties and their families, not a matter to be discussed in court (Scherer 1959).

# 6 The Role of Village Institutions

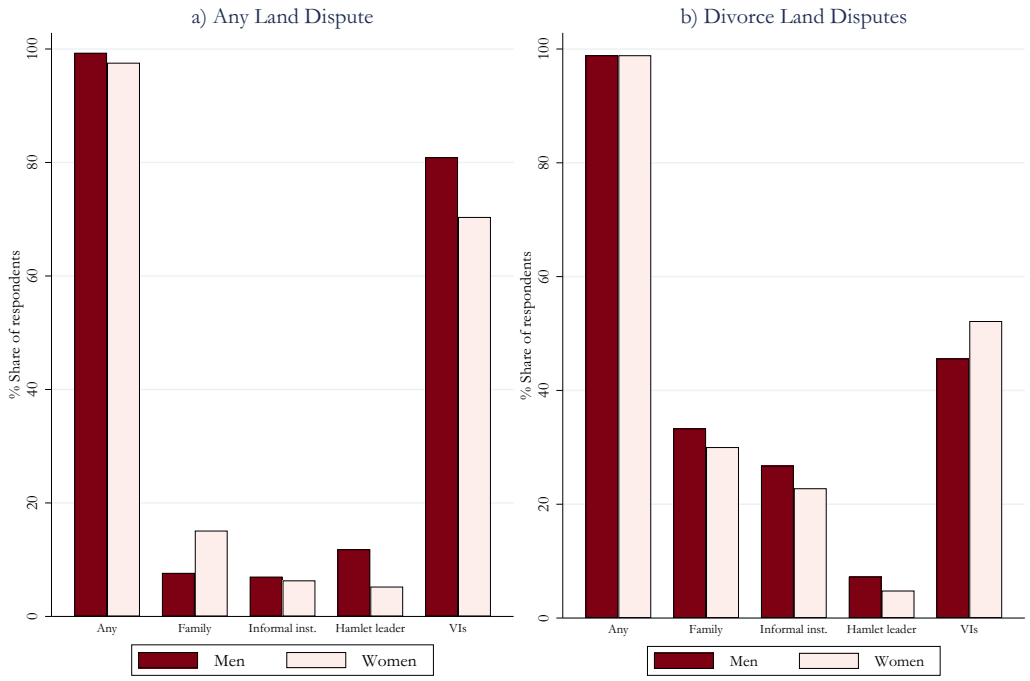
The previous section made amply clear that women's inheritance rights in rural Tanzania remain fragile. As discussed in section 2, the village institutions (VIs hereafter) have a key role in securing property rights and enforcing gender neutrality. The administration of land is heavily decentralized at the village level and village councils are legally responsible for the management of the village land, as well as for the registration, adjudication, and titling of the land. Importantly, the VIs also play a key role as arbitrators in case of disputes. Figure 4 shows that 80% of men and 70% of women say they would seek help from the VIs in case of land disputes. In contrast, only 15% of men and 21% of women mention family, friends, or informal village institutions (religious leaders and village elders). When it comes to divorce land disputes, the importance of the VIs decreases but it remains substantial (46% of men and 52% of women).

The relevance of the VIs reflected by these statistics showing most household members would seek their opinion is further confirmed by the fact that, at the same time, very few respondents report they would seek help from higher supra-village institutions (7% of men and 5% of women).[26] Therefore, the knowledge and interpretation of the law by the local VI members is of primary importance for the protection of women's land rights.

To assess the adherence of VI members to the gender-neutral statutory law, we collected information on what they would recommend in case of inheritance land disputes presented as *vignettes* (see description on Table 8). Table 9 summarizes the answers where each number represents the share of VI members that answer the woman would keep the land. Across the board, we do not find evidence of statistically significant differences by gender which may suggest that the strong gender quota on VIs put in place by the Tanzanian Law would not suffice to enforce

[26]These higher supra-village institutions include the Ward Tribunal, the District Tribunal, and the High Court.

Figure 4: Whose help would households seek in case of land disputes?




Notes: "Any" if they mentioned anyone at all; "Family" includes own and extended family, children, and friends; "Informal institutions" include religious leaders and village elders; "Hamlet leader" stands for the leader of their hamlet (Kitongoji Leader/Chair); "VIs" include Village Council/chairman, Village Land Council, and VLUM; "Higher institutions" include Ward Tribunal, District Tribunal, High Court.

gender egalitarian views (Yngstrom 2002).

The first vignette (V1) poses an inheritance dispute between a child (whose father intended to leave the land to) and a brother of her father. To investigate the presence of an implicit gender bias, we randomized whether the child in vignette V1 was said to be a daughter or a son. The randomization, instead of asking both vignettes to each respondent, mitigates concerns about social desirability bias when eliciting data on gender norms (Nillesen et al. 2021). According to Tanzanian statutory law, there should not be any difference between the two versions of the vignettes. But the results suggest that VI members are about 10% more likely to recommend the child to own the land when the child is a son as opposed to a daughter (column 1 of Table 10). This "daughter" effect is as pronounced among female VI members as among male VI members. These results are in line with the household expectations on daughters having a harder time to inherit land than sons (Table 4).

Table 8: VI-Members Vignettes: Description

| Vignette | Answers |
|---|---|
| **V1**: Imagine that a father dies without a will. The mother died a few years ago. The father intended to leave a shamba in the village to his only [daughter/son]. The [daughter/son], an adult, lives in Dar Es Salam. The brother of the father who lives in the village is claiming the land. **Who would you recommend to be the owner?** | 1. The brother of the father 2. The [daughter/son] |
| **V2**: Imagine that a wife has cultivated for 15 years a shamba that her husband had inherited from his dead father prior to marriage. She has one [daughter/son] from him. Her husband dies. The brother of the husband is claiming the land. **Would you recommend that she keeps the shamba?** | 1. Yes 2. No |
| **V3**: Imagine that a childless woman inherited from her husband a shamba (without CCRO) that she was cultivating, and that a male member of his clan claims the land. **What do you think would happen if the village land council made a recommendation?** | 1. She would lose the shamba 2. She could keep it but would lose it if she remarries 3. She could cultivate it all her life (even if she remarries) but she could not sell it 4. She would be the owner (cultivate, sell, decide who inherits) 5. They would split the shamba. |

Table 9: VI-Members Vignettes: Would Women Keep the Land?

| Vignette | (1) All VI respondents | (2) Men | (3) Women | (4) Diff. |
|---|---|---|---|---|
| V1: daughter | 0.80 | 0.81 | 0.78 | 0.03 |
| V2 | 0.87 | 0.87 | 0.87 | 0.01 |
| V3 | 0.37 | 0.37 | 0.37 | –0.00 |

When it comes to widows' inheritance rights, VI members also fall short of full recognition and as households, see Figure 2, they would expect *partial* land rights to be key. Vignettes V2 and V3 present scenarios about women's rights to inherit land from their deceased husbands. V2 shows that most of the VI members (87%) would recommend the wife keeping the land if she inherited it from her husband and a brother of the husband claimed the land. The answer is not statistically different if the woman in the vignette has a son or a daughter. But the answers to V3 suggest that this would not necessarily mean the woman would actually fully own the land. When the inheritance rights are not presented bimodally (keep/lose land), most of the VI members would anticipate the VIs recommending women having limited rights.[27] While 37% of the respondents think the VI would recommend that the

[27]The vignette asks "what would you recommend if the village land council (VLC) made a recommendation?" The Village Land Act mandates that every village must establish a dispute settlement body named the VLC. Its goal is to mediate and assist parties to find an agreement in land related disputes.

Table 10: VI Vignette 1: Gender Bias and Customary Law

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Gender Bias | -0.11*** | -0.10*** | -0.07* | -0.08* |
| | (0.033) | (0.038) | (0.036) | (0.040) |
| Village characteristics | | | | |
| Pro-women custom index | | | 0.17*** | 0.14*** |
| | | | (0.047) | (0.044) |
| Ln(pop) | | | | -0.01 |
| | | | | (0.022) |
| Ln(minutes to market) | | | | -0.04* |
| | | | | (0.020) |
| % Primary income: agriculture | | | | 0.16 |
| | | | | (0.110) |
| % Primary income: wage employment | | | | 0.03 |
| | | | | (0.665) |
| % Primary income: pastoralism | | | | -0.25*** |
| | | | | (0.076) |
| % Primary income: non-farm enterprise | | | | -0.02 |
| | | | | (0.120) |
| Financial access | | | | 0.05 |
| | | | | (0.039) |
| Individual controls | ✓ | ✓ | ✓ | ✓ |
| Ethnicity FE | | | ✓ | ✓ |
| Village FE | | ✓ | | |
| Observations | 403 | 403 | 373 | 373 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the village level. All regressions include the following individual controls: gender, education, age and age square, as well as ethnicity fixed effects. The full table is available upon request.

woman is the full owner[28] in V3, 52% would expect the recommendation to be that she gets partial rights as opposed to full or null rights (Figure A6).

Overall, we find strong evidence that, though VI members hold more progressive views on female property rights than household members do, they fall short of the gender egalitarian standard held by the statutory law. These findings partially reflect the inherent tension in protecting women's land rights when customary laws are recognized. In fact, we find suggestive evidence that the recommendations from the VI members are correlated with how progressive, in terms of women's land rights, their clan laws are. Column (3) of Table 10 augments the specification

[28]Including the right to cultivate, to sell, and to bequeath.

of column (1) including a "pro-women" village custom index.[29] We find that VI members who live in villages whose ethnic groups hold more "pro-women" customs are more likely to recommend that the child, rather than the uncle, inherits the land. Appendix Table A14 shows that the positive and statistically significant effect is only present among those VI respondents who answered the "daughter" version of V1. In contrast, column (4) shows that other village-level economic variables, such as the share of village households whose primary income comes from wage employment or the presence of a financial institution in the village, has very little to null prediction power on the VI recommendations. An interesting exception is the share of villagers whose primary income derives from pastoralism which negatively predicts how much VI members expect daughters to inherit. This finding provides further evidence on the importance of gender norms in women's access to land as pastoralism has been previously associated with worse outcomes for women including lower levels of female entrepreneurship, higher prevalence of female genital cutting, and more restrictions on women's mobility and sexuality (Becker 2019, 2020).

# 7 Conclusion and Policy Implications

In this paper, we examined the extent of women land rights in a unique dataset in rural Tanzania. We find that women's property rights have strengthening, but only up to a point, and that patrilineal customary land practices continue to prevail.

More than 90 percent of the land over which women have rights is jointly owned with their husband. Most wives and husbands expect the wife to have inheritance

[29]The "Pro-women" clan law village-level index is built taking the population-weighted average of the following practices: women can own land, daughters can inherit land, and widows can inherit land (either with full rights or until remarriage). The index is by definition between 0 and 1. The following two practices get a value of 1 if true and of 0 if false: women can own land, daughters can inherit land. The answers to whether women can inherit land from their husbands are assigned the following values: 0 (no), 0.5 (inherit until remarriage), 1 (full rights). The data comes from the customary practices collected at the village-ethnicity level as described in section 3 (see Table 1). In 50% of the villages, all of the five most-populated ethnic groups in the villages are reported to have clan laws that allow the three land practices and therefore Pro-women" index equal to 1.

rights over a substantial share of the joint land if she became a widow. However, patrilineal practices still matter in terms of inheritance expectations and the fragility of land rights. We find that inheritance rights are often partial and the gender of the children matter. Wives inherit land jointly with their children, and sons are more likely to inherit land than daughters. In addition, women's rights are fragile and they may not be able to hold on to the land in case of dispute with a male member of the husband's clan, especially if she is childless or only has daughters.

Traditional views may retain a significant role and influence in part due to the functioning and views of village institutions. We find that village leaders of both genders hold more progressive views on women's land rights than household members do, but fall short of the gender neutral standard held by the statutory law. This is likely to play a role in the persistence of discriminatory practices.

As Tanzania is promoting the issuance of land titles (CCROs), it is an open question whether land titling would strengthen or weaken the rights of women who would have otherwise benefited from partial rights. Recent interventions incentivizing co-titling of joint land and educating household on the benefits of co-titling are promising: Ayalew et al. (2016) and Cherchi et al. (2018) in urban Tanzania and Uganda respectively find that such interventions raise demand for joint titles without dampening overall demand.

Finally, our findings suggest that attention should be paid to educating *both* households and VI members about women's rights to strengthen their *de facto* rights. Interventions targeting household members alone (Mueller et al. 2018) may not suffice. This policy implication is particularly relevant to the design of the educational component of village land use planning and systemic adjudication programs.

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# A Appendix Figures and Tables

## A.1 Appendix Figures

Figure A1: VILART Survey

(a) Tanzania

(b) Regions Surveyed

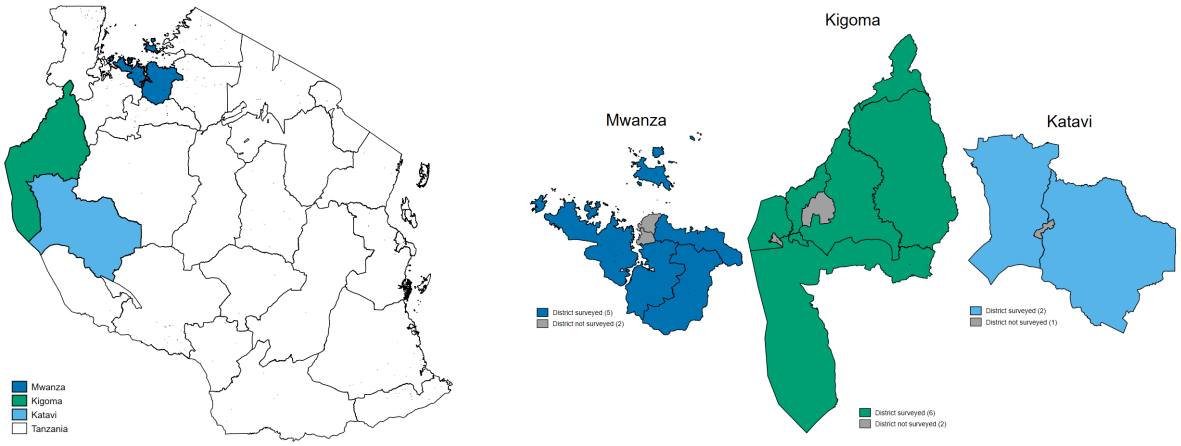
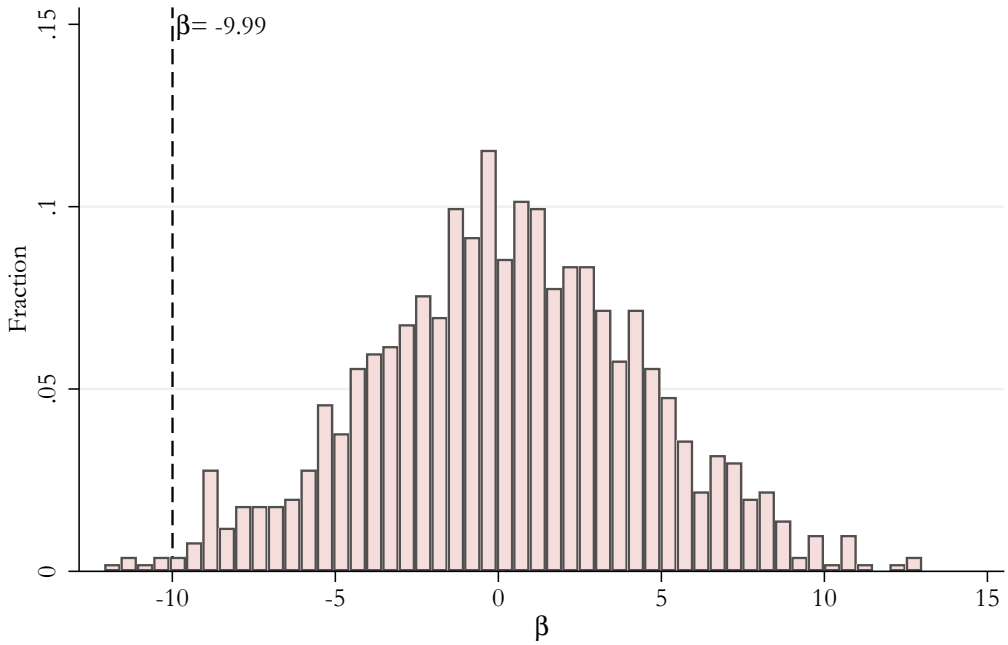


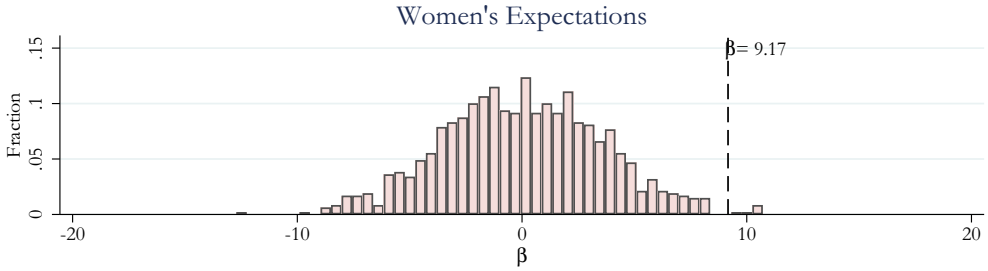

Figure A2: Randomization Inference: Effect of Female First Born on Expectations of First Born's Inheritance




Notes: randomization inference based on 1000 replications, p-value=.017
The regressions includes wife controls: education, age, and religion; husband controls: education and age; and total household acreage. Standard errors clustered at the enumerating area level.

Figure A3: Randomization Inference: Effect of Female First Born on Expectations of Wife's Inheritance


Notes: randomization inference based on 1000 replications, p-value=.054
The regressions includes wife controls: education, age, and religion; husband controls: education and age; and total household acreage. Standard errors clustered at the enumerating area level.




Notes: randomization inference based on 1000 replications, p-value=.008
The regressions includes wife controls: education, age, and religion; husband controls: education and age; and total household acreage. Standard errors clustered at the enumerating area level.

Figure A4: Divorce. What would constitute "a fault" of the husband that would justify a change in the ownerhsip?

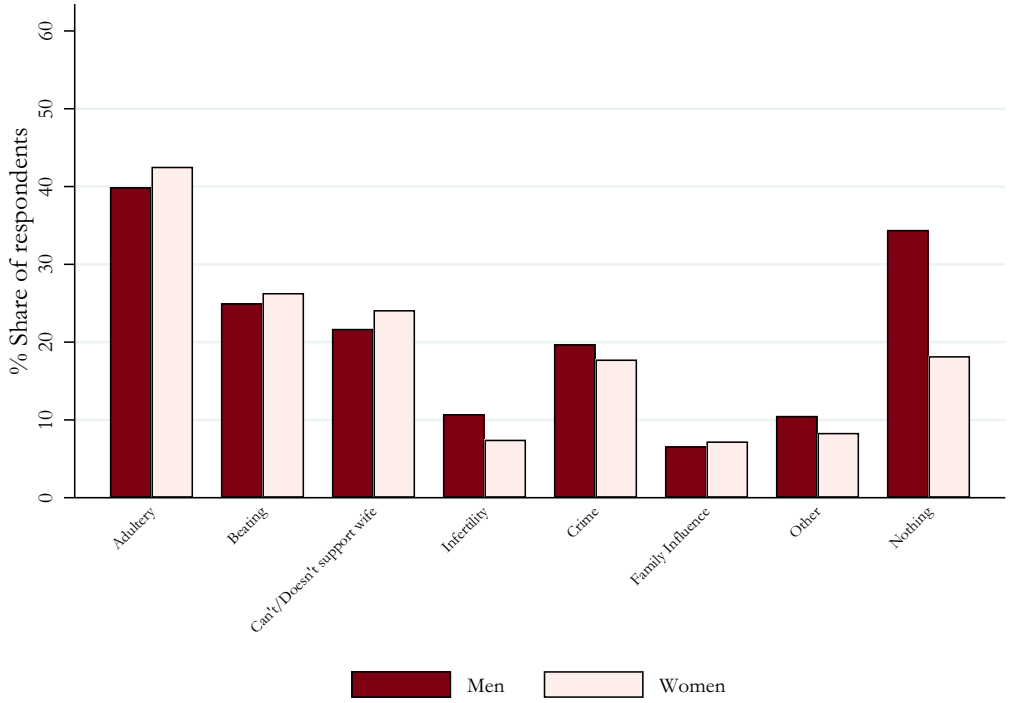


Figure A5: Divorce. What would constitute "a fault" of the wife that would justify a change in the ownerhsip?

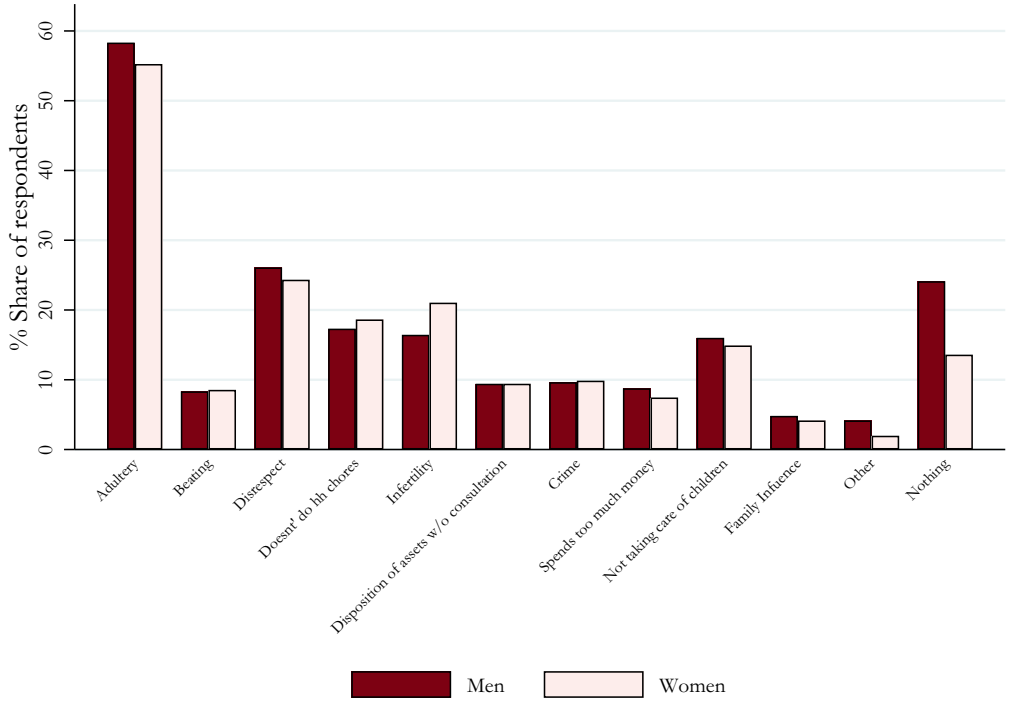
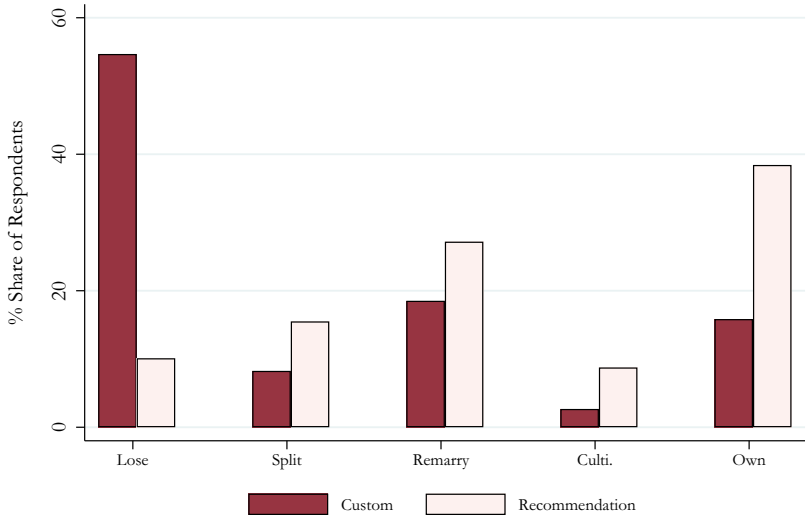



Figure A6: VI's Inheritance Views




Notes: "Lose" (She would lose the shamba); "Split" (They would split the shamba); "Remarry" (She could keep it but would lose it if she remarries); "Culti." (She could cultivate it all her life---even if she remarries---but she could not sell it); and "Own" (She would be the owner: cultivate, sell, decide who inherits).

## A.2 Appendix Tables

Table A1: Household Summary Statistics

| | Mean | Std. Dev. | Min | Median | Max | Obs. |
|---|---|---|---|---|---|---|
| **Husband** | | | | | | |
| Age | 47.64 | 15.03 | 19.00 | 46.00 | 96.00 | 439 |
| Years of education | 6.11 | 3.60 | 0.00 | 8.00 | 18.00 | 456 |
| No education | 0.19 | 0.39 | 0.00 | 0.00 | 1.00 | 456 |
| Primary or less | 0.74 | 0.44 | 0.00 | 1.00 | 1.00 | 456 |
| Polygamous | 0.12 | 0.33 | 0.00 | 0.00 | 1.00 | 456 |
| Number of spouses | 1.16 | 0.46 | 1.00 | 1.00 | 4.00 | 456 |
| Children | 6.00 | 3.50 | 0.00 | 6.00 | 21.00 | 456 |
| **Wife** | | | | | | |
| Age | 39.57 | 12.77 | 17.00 | 39.00 | 86.00 | 402 |
| Years of education | 5.02 | 3.87 | 0.00 | 8.00 | 16.00 | 456 |
| No education | 0.33 | 0.47 | 0.00 | 0.00 | 1.00 | 456 |
| Primary or less | 0.64 | 0.48 | 0.00 | 1.00 | 1.00 | 456 |
| Children | 5.14 | 2.90 | 0.00 | 5.00 | 14.00 | 456 |
| **Household** | | | | | | |
| Animals | 17.27 | 40.16 | 0.00 | 7.00 | 510.00 | 456 |
| Electricity | 0.13 | 0.33 | 0.00 | 0.00 | 1.00 | 456 |
| Radio | 0.48 | 0.50 | 0.00 | 0.00 | 1.00 | 456 |
| Television | 0.08 | 0.26 | 0.00 | 0.00 | 1.00 | 456 |
| Mobile | 0.80 | 0.40 | 0.00 | 1.00 | 1.00 | 456 |
| Bank account | 0.09 | 0.28 | 0.00 | 0.00 | 1.00 | 456 |
| Internet access | 0.02 | 0.15 | 0.00 | 0.00 | 1.00 | 456 |

Notes: The summary statistics are based on the household interviews. The total number of animals owned by the household includes cows, bulls, pigs, chicken/poultry, goats, sheeps, donkeys, and horses.

Table A2: Summary Statistics of Households and Village Institutions' members

| | Male | | | | | Female | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variable | VI | HH | Diff | p-value | N | VI | HH | Diff | p-value | N |
| Age | 48.92 | 47.22 | 1.69 | 0.12 | 655 | 46.29 | 39.45 | 6.84*** | 0.00 | 552 |
| Education | 7.92 | 5.97 | 1.95*** | 0.00 | 672 | 7.63 | 5.01 | 2.61*** | 0.00 | 611 |
| Born in village | 0.65 | 0.62 | 0.03 | 0.50 | 672 | 0.54 | 0.45 | 0.09** | 0.05 | 611 |
| N. of children | 7.81 | 5.91 | 1.90*** | 0.00 | 672 | 6.63 | 5.13 | 1.50*** | 0.00 | 611 |
| Female First Born | 0.48 | 0.48 | 0.00 | 0.98 | 660 | 0.49 | 0.48 | 0.02 | 0.69 | 589 |
| Pastor | 0.71 | 0.61 | 0.09** | 0.01 | 672 | 0.69 | 0.67 | 0.02 | 0.65 | 611 |
| Imam | 0.11 | 0.11 | 0.00 | 0.98 | 672 | 0.11 | 0.10 | 0.01 | 0.66 | 611 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The summary statistics are based on the household and VI members' interviews.

Table A3: Village Summary Statistics

| | Mean | Std. Dev. | Min | Max | Obs. |
|---|---|---|---|---|---|
| Number of people | 4048.33 | 2610.12 | 605.00 | 12,864.00 | 45 |
| Number of households | 631.38 | 293.32 | 230.00 | 1506.00 | 45 |
| % Agriculture | 86.40 | 21.37 | 10.83 | 100.00 | 45 |
| % Pastoralism | 7.95 | 18.58 | 0.00 | 83.33 | 45 |
| % Wage employment | 2.75 | 2.04 | 0.00 | 9.62 | 45 |
| Walking hours to nearest market | 5.82 | 5.68 | 0.33 | 20.00 | 45 |
| Bus per day to district capital | 1.45 | 1.73 | 0.00 | 6.00 | 45 |
| Financial access | 51.11 | 50.55 | 0.00 | 100.00 | 45 |

Notes: the summary statistics are based on the community surveys. The % agriculture/pastoralism/wage employment statistics represent the share of households that derive their primary source of income from each economic activity. A village has financial access if any of the following organizations were located inside the village: SACCOS, Village Community Bank (VICOBA), Faith Based Organizations (FBO), Community Based Organizations (CBO), and "other financial institutions such empowerment council, microcredit, etc."

Table A4: Ethnic Groups

| Ethnicity | Population | Pop. share | +3 Villages | +1 Majority | Share VCs | Inheritance Rule | Inheritance Distribution | Marital Residence | Marital Composition |
|---|---|---|---|---|---|---|---|---|---|
| Sukuma | 9029 | 32.2 | 1 | 1 | 29.3 | Patrilineal | Primogeniture | Patrilocal | Polygynous |
| Ha | 8983 | 32.0 | 1 | 1 | 34.8 | Patrilineal | Primogeniture | Patrilocal | Polygynous |
| Hutu* | 2295 | 8.2 | 1 | 1 | 8.6 | Patrilineal | Equal/relatively equal | Patrilocal | Polygynous |
| Bembe | 1207 | 4.3 | 1 | 0 | 1.3 | | | | |
| Kara | 1100 | 3.9 | 1 | 0 | 2.6 | Patrilineal | Equal/relatively equal | Patrilocal | Polygynous |
| Fipa | 737 | 2.6 | 1 | 0 | 4.3 | | | Patrilocal | Polygynous |
| Bende | 708 | 2.5 | 1 | 0 | 2.3 | Matrilineal | Equal/relatively equal | Patrilocal | Polygynous |
| Tongwe | 589 | 2.1 | 1 | 0 | 2.4 | | | | |
| Jita | 593 | 2.1 | 1 | 0 | 2.7 | | | | |
| Manyema | 559 | 2.0 | 0 | 0 | 0.5 | | | | |
| Pimbwe | 483 | 1.7 | 1 | 0 | 2.1 | | | Patrilocal | Polygynous |
| Zinza | 476 | 1.7 | 1 | 0 | 1.1 | Patrilineal | Primogeniture | Patrilocal | Polygynous |
| Kerewe | 391 | 1.4 | 1 | 0 | 2.5 | | | Patrilocal | Polygynous |
| Rwila | 292 | 1.0 | 1 | 0 | 0.4 | | | | |
| Konongo | 150 | 0.5 | 1 | 0 | 0.2 | | | | |
| Sumbwa | 49 | 0.2 | 0 | 0 | 0.2 | Patrilineal | Equal/relatively equal | Patrilocal | Polygynous |
| Nyamwezi | 48 | 0.2 | 1 | 0 | 1.4 | Patrilineal | Equal/relatively equal | Patrilocal | Polygynous |
| Lamba | 58 | 0.2 | 0 | 0 | 0.1 | | | Matrilocal | Polygynous |
| Bwali | 56 | 0.2 | 0 | 0 | . | | | | |
| Baruuli | 35 | 0.1 | 0 | 0 | 0.1 | | | | |
| Nyakyusa | 38 | 0.1 | 1 | 0 | 0.1 | Patrilineal | Primogeniture | Neolocal | Polygynous |
| Rungwa | 40 | 0.1 | 0 | 0 | 0.2 | | | | |
| Kuria | 22 | 0.1 | 0 | 0 | . | | | | |
| Kwaya | 30 | 0.1 | 0 | 0 | 0.3 | | | | |
| Tutsi | 40 | 0.1 | 0 | 0 | 0.5 | | | | |
| Chagga | 32 | 0.1 | 0 | 0 | 0.5 | Patrilineal | Primogeniture | Patrilocal | Polygynous |
| Kinga | 2 | 0.0 | 0 | 0 | . | | | | |
| Haya | 9 | 0.0 | 0 | 0 | 0.1 | Patrilineal | Primogeniture | Patrilocal | Polygynous |
| Hehe | 10 | 0.0 | 1 | 0 | . | | | Patrilocal | Polygynous |
| Gogo | 1 | 0.0 | 0 | 0 | 0.1 | N/A | N/A | Patrilocal | Polygynous |
| Ngoni | 1 | 0.0 | 0 | 0 | 0.2 | Patrilineal | | Patrilocal | Polygynous |
| Luguru | 1 | 0.0 | 0 | 0 | . | Matrilineal | Equal/relatively equal | Matrilocal | Polygynous |
| Bena | 4 | 0.0 | 0 | 0 | 0.1 | Patrilineal | Equal/relatively equal | Neolocal | Polygynous |

Source: Ethnographic Atlas by George P. Murdock. *Assigned the customary practices of the Ruandan ethnic group.

Table A5: Household Land Plots by Type of Joint Ownership

| | | | | | Difference with Male plots | | |
|---|---|---|---|---|---|---|---|
| | (1) Male | (2) He Male, She Joint | (3) He Joint, She Male | (4) Joint | (5) He Male, She Joint | (6) He Joint, She Male | (7) Joint |
| **Plot Characteristics** | | | | | | | |
| Area | 3.57 | 2.60 | 2.44 | 3.15 | 0.97 | 1.14 | 0.43 |
| | | | | | (0.60) | (0.69) | (0.67) |
| Cultivated | 0.45 | 0.59 | 0.44 | 0.51 | -0.14*** | 0.01 | -0.06 |
| | | | | | (0.05) | (0.05) | (0.04) |
| Residential | 0.41 | 0.31 | 0.48 | 0.30 | 0.11*** | -0.06 | 0.11*** |
| | | | | | (0.03) | (0.04) | (0.04) |
| Distance | 28.12 | 28.20 | 43.22 | 41.91 | -0.08 | -15.10 | -13.79 |
| | | | | | (5.51) | (18.98) | (9.77) |
| Wife works | 0.57 | 0.59 | 0.84 | 0.88 | -0.02 | -0.27*** | -0.31*** |
| | | | | | (0.08) | (0.08) | (0.06) |
| Husband works | 0.86 | 0.75 | 0.88 | 0.94 | 0.10* | -0.02 | -0.08** |
| | | | | | (0.06) | (0.06) | (0.04) |
| **Acquisition** | | | | | | | |
| Post-marriage | 0.50 | 0.65 | 0.65 | 0.73 | -0.15*** | -0.15*** | -0.23*** |
| | | | | | (0.05) | (0.05) | (0.04) |
| Purchased | 0.40 | 0.43 | 0.46 | 0.58 | -0.04 | -0.06 | -0.18*** |
| | | | | | (0.06) | (0.06) | (0.05) |
| Inherited | 0.41 | 0.27 | 0.30 | 0.19 | 0.14*** | 0.11** | 0.22*** |
| | | | | | (0.04) | (0.05) | (0.05) |
| Gift | 0.08 | 0.12 | 0.08 | 0.05 | -0.03 | 0.00 | 0.03 |
| | | | | | (0.03) | (0.02) | (0.02) |
| Local government | 0.06 | 0.10 | 0.09 | 0.09 | -0.04 | -0.03 | -0.03 |
| | | | | | (0.03) | (0.03) | (0.02) |
| Other mode of acq. | 0.02 | 0.06 | 0.04 | 0.04 | -0.04** | -0.02 | -0.02** |
| | | | | | (0.02) | (0.02) | (0.01) |
| **Land documents** | | | | | | | |
| Use as collateral | 0.40 | 0.50 | 0.47 | 0.55 | -0.10* | -0.07 | -0.15*** |
| | | | | | (0.05) | (0.06) | (0.04) |
| Any document | 0.27 | 0.32 | 0.30 | 0.35 | -0.06 | -0.03 | -0.08* |
| | | | | | (0.06) | (0.06) | (0.04) |
| Purchase document | 0.14 | 0.23 | 0.20 | 0.24 | -0.09* | -0.06 | -0.10*** |
| | | | | | (0.05) | (0.05) | (0.04) |
| Any government right of occupancy | 0.08 | 0.08 | 0.05 | 0.08 | 0.00 | 0.02 | -0.00 |
| | | | | | (0.04) | (0.03) | (0.03) |
| CCRO | 0.01 | 0.02 | 0.01 | 0.02 | -0.01 | 0.00 | -0.01 |
| | | | | | (0.02) | (0.02) | (0.01) |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The summary statistics are based on the household interviews. Columns (1) to (4) report sample means for the whole sample of land plots in each ownership category. The differences between column (1) and (2), (3) and (4), are reported in columns (5), (6), and (7), respectively. The difference is estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level. The wife/husband works plot characteristic only includes cultivated plots. The wife/husband works plot characteristic only includes cultivated plots. Other modes of acquisition include: used for many years, moved in without permission, rented in, and other. Any document includes: granted right of occupancy, letter of offer, CCRO, purchase agreement, gift agreement, inheritance letter, rental agreement, other government document, utulity bill or other bill, and other. Any government right of occupancy includes: granted right of occupancy, letter of offer, and CCRO.

Table A6: Household Land Acreage by Type of Ownership

| | | | | Difference with Male plots | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| | Male | He/She/Both Joint | Female | He/She/Both Joint | Female |
| **Plot Characteristics** | | | | | |
| Cultivated | 0.62 | 0.72 | 0.79 | -0.10 | -0.17* |
| | | | | (0.06) | (0.10) |
| Residential | 0.10 | 0.10 | 0.07 | 0.00 | 0.04 |
| | | | | (0.02) | (0.04) |
| Distance | 34.84 | 29.44 | 89.23 | 5.40 | -54.39* |
| | | | | (10.52) | (30.51) |
| Wife works | 0.47 | 0.79 | 0.77 | -0.32*** | -0.29*** |
| | | | | (0.11) | (0.10) |
| Husband works | 0.74 | 0.87 | 0.25 | -0.13 | 0.49*** |
| | | | | (0.09) | (0.15) |
| **Acquisition** | | | | | |
| Post-marriage | 0.42 | 0.68 | 0.56 | -0.26*** | -0.14 |
| | | | | (0.10) | (0.16) |
| Purchased | 0.42 | 0.49 | 0.29 | -0.07 | 0.13 |
| | | | | (0.07) | (0.13) |
| Inherited | 0.43 | 0.20 | 0.63 | 0.23*** | -0.21 |
| | | | | (0.06) | (0.15) |
| Gift | 0.06 | 0.08 | 0.04 | -0.02 | 0.03 |
| | | | | (0.03) | (0.04) |
| Local government | 0.05 | 0.11 | 0.01 | -0.07 | 0.04* |
| | | | | (0.04) | (0.02) |
| Other mode of acq. | 0.02 | 0.03 | 0.02 | -0.01 | -0.00 |
| | | | | (0.01) | (0.02) |
| **Land documents** | | | | | |
| Use as collateral | 0.42 | 0.57 | 0.47 | -0.16*** | -0.06 |
| | | | | (0.06) | (0.14) |
| Any document | 0.24 | 0.34 | 0.33 | -0.10 | -0.09 |
| | | | | (0.07) | (0.14) |
| Purchase document | 0.13 | 0.24 | 0.07 | -0.11 | 0.06 |
| | | | | (0.07) | (0.08) |
| Any government right of occupancy | 0.08 | 0.07 | 0.00 | 0.00 | 0.08** |
| | | | | (0.04) | (0.04) |
| CCRO | 0.03 | 0.01 | 0.00 | 0.01 | 0.03 |
| | | | | (0.02) | (0.02) |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The summary statistics are based on the household interviews. Columns (1) to (3) report sample means for total land acreage in each ownership category. Columns (4) and (5) report the difference between (1) and (2), and (1) and (3), respectively. The difference is estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level. The wife/husband works plot characteristic only includes cultivated plots. Other modes of acquisition include: used for many years, moved in without permission, rented in, and other. Any document includes: granted right of occupancy, letter of offer, CCRO, purchase agreement, gift agreement, inheritance letter, rental agreement, other government document, utulity bill or other bill, and other. Any government right of occupancy includes: granted right of occupancy, letter of offer, and CCRO.

Table A7: Women's Land Rights by Type of Ownership in Acres

| | Male | He Male, She Joint | He Joint, She Male | Joint | Female |
|---|---|---|---|---|---|
| Husband's answer | | | | | |
| Right to sell | 0.03 | 0.21 | 0.74 | 0.78 | - |
| Right to bequeath | 0.03 | 0.27 | 0.49 | 0.68 | - |
| Right to decide on title | 0.02 | 0.16 | 0.35 | 0.27 | - |
| Wife's answer | | | | | |
| Right to sell in husband's absence | - | 0.02 | - | 0.01 | 0.56 |
| Right to bequeath | - | 0.26 | - | 0.27 | 0.67 |
| Right to decide on title | - | 0.39 | - | 0.37 | 0.79 |
| Right to keep at least 50% if divorce | - | 0.11 | - | 0.32 | 0.47 |

Table A8: First born $\leq$ 17. Effect of Female First Born on Expectations of First Born's Inheritance

| | (1) | (2) | (3) | (4) | (5) | (6) Women $\leq$ 45 |
|---|---|---|---|---|---|---|
| Female FB | -8.32 | -12.19 | -6.61 | -11.64 | -11.19 | -12.09 |
| | (5.89) | (8.31) | (5.69) | (8.07) | (8.41) | (8.48) |
| Household controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Children controls | | | ✓ | | | |
| Prev. children controls | | | | ✓ | | |
| Polygamous control | | | | | ✓ | |
| Village FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife ethnicity FE | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife muslim | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife christian | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wild Bootstrap p-value | 0.12 | 0.07 | 0.11 | 0.07 | 0.08 | 0.07 |
| N | 89 | 89 | 89 | 89 | 89 | 84 |
| adj. $R^2$ | 0.20 | -0.02 | 0.36 | -0.08 | -0.02 | -0.03 |
| Baseline | 17.68 | 17.90 | 23.32 | 17.64 | 17.16 | 19.22 |
| Percent Effect | -47.06 | -68.10 | -28.34 | -66.01 | -65.21 | -62.89 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include the husband's number of sons, husband's number of daughters, and the wife's number of children. The previous children controls are two indicator variables equal to 1 if the husband or the wive had had children previous to the current marriage. The polygamous control is an indicator variable equal to 1 if the husband has multiple wives. The full table is available upon request.

Table A9: Effect of Female First Born on Expectations of First Born's Inheritance. Non-Polygamous Households.

| | (1) | (2) | (3) | (4) | (5) Women $\leq 45$ |
|---|---|---|---|---|---|
| Female FB | -8.59* | -9.47 | -7.41 | -9.73 | -11.82* |
| | (4.65) | (5.85) | (5.39) | (5.85) | (6.85) |
| Household controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Children controls | | | ✓ | | |
| Prev. children controls | | | | ✓ | |
| Village FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife ethnicity FE | | ✓ | ✓ | ✓ | ✓ |
| Wife muslim | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife christian | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wild Bootstrap p-value | 0.04 | 0.05 | 0.09 | 0.04 | 0.05 |
| N | 116 | 116 | 116 | 116 | 91 |
| adj. $R^2$ | 0.20 | 0.14 | 0.23 | 0.12 | 0.14 |
| Baseline | 17.15 | 17.51 | 16.12 | 17.32 | 19.38 |
| Percent Effect | -50.06 | -54.08 | -45.97 | -56.19 | -60.97 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include the husband's number of sons, husband's number of daughters, and the wife's number of children. The previous children controls are two indicator variables equal to 1 if the husband or the wive had had children previous to the current marriage. The polygamous control is an indicator variable equal to 1 if the husband has multiple wives. The full table is available upon request.

Table A10: Effect of Female First Born on Expectations of Wife's Inheritance. Non-Polygamous Households.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| | **Husband's Expectations** | | | | **Wife's Expectations** | | | |
| | | | | Women $\leq 45$ | | | | Women $\leq 45$ |
| Female FB | 7.33 | 7.77 | 7.16 | 11.02 | 7.54* | 5.53 | 7.62* | 6.32 |
| | (5.24) | (6.35) | (5.36) | (7.17) | (4.45) | (5.25) | (4.42) | (5.05) |
| Household controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Children controls | | ✓ | | | | ✓ | | |
| Prev. children controls | | | ✓ | | | | ✓ | |
| Village FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife ethnicity FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife muslim | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife christian | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wild Bootstrap p-value | 0.13 | 0.18 | 0.15 | 0.09 | 0.08 | 0.26 | 0.07 | 0.17 |
| N | 287 | 287 | 287 | 179 | 344 | 344 | 344 | 227 |
| adj. $R^2$ | 0.17 | 0.17 | 0.17 | 0.20 | 0.12 | 0.13 | 0.12 | 0.13 |
| Baseline | 54.68 | 54.44 | 54.69 | 49.47 | 75.11 | 75.25 | 75.03 | 74.82 |
| Percent Effect | 13.40 | 14.28 | 13.10 | 22.27 | 10.04 | 7.34 | 10.15 | 8.44 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include the husband's number of sons, husband's number of daughters, and the wife's number of children. The previous children controls are two indicator variables equal to 1 if the husband or the wive had had children previous to the current marriage. The polygamous control is an indicator variable equal to 1 if the husband has multiple wives. The full table is available upon request.

Table A11: Effect of Female First Born on Expectations of Wife's Inheritance. First Born Alive.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Husband's Expectations** | | | | | **Wife's Expectations** | | | | |
| | | | | | Women $\leq 45$ | | | | | Women $\leq 45$ |
| Female FB | 9.59* | 10.09 | 9.77* | 10.19* | 13.23** | 8.19* | 7.80 | 8.41** | 8.44** | 4.68 |
| | (4.98) | (6.74) | (5.15) | (5.23) | (6.54) | (4.09) | (5.02) | (4.03) | (4.10) | (4.91) |
| Household controls | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Children controls | | ✓ | | | | | ✓ | | | |
| Prev. children controls | | | ✓ | | | | | ✓ | | |
| Polygamous control | | | | ✓ | | | | | ✓ | |
| Village FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife ethnicity FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife muslim | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wife christian | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wild Bootstrap p-value | 0.04 | 0.10 | 0.04 | 0.04 | 0.03 | 0.04 | 0.10 | 0.03 | 0.04 | 0.30 |
| N | 285 | 285 | 285 | 285 | 183 | 345 | 345 | 345 | 345 | 232 |
| adj. $R^2$ | 0.17 | 0.16 | 0.16 | 0.17 | 0.20 | 0.11 | 0.10 | 0.10 | 0.11 | 0.06 |
| Baseline | 54.43 | 54.26 | 54.39 | 54.56 | 49.49 | 74.13 | 74.14 | 74.11 | 74.17 | 76.37 |
| Percent Effect | 17.62 | 18.60 | 17.96 | 18.67 | 26.74 | 11.05 | 10.52 | 11.34 | 11.38 | 6.12 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include the husband's number of sons, husband's number of daughters, and the wife's number of children. The previous children controls are two indicator variables equal to 1 if the husband or the wive had had children previous to the current marriage. The polygamous control is an indicator variable equal to 1 if the husband has multiple wives. The full table is available upon request.

Table A12: Male Household Inheritance Vignettes

| | **No children** | | **Daughter** | | **Son** | |
|---|---|---|---|---|---|---|
| Woman ownership | Today | Custom | Today | Custom | Today | Custom |
| Lose the shamba | 46.7 | 62.61 | 8.13 | 23.12 | 3.51 | 10.55 |
| Less than 50% | 2.42 | 1.77 | .44 | .22 | | .22 |
| Keep until remarried | 12.11 | 9.73 | 26.15 | 21.15 | 22.81 | 21.76 |
| 50% | 10.13 | 6.86 | 1.76 | 2.2 | 1.75 | 2.2 |
| More than 50% | .44 | .44 | .22 | 0 | .44 | .66 |
| Cultivate, not sell | 5.95 | 3.1 | 20.44 | 20.48 | 20.61 | 20 |
| Owner | 22.25 | 15.49 | 42.86 | 32.82 | 50.88 | 44.62 |

Table A13: Female Household Inheritance Vignettes

| | **No children** | | **Daughter** | | **Son** | |
|---|---|---|---|---|---|---|
| Woman ownership | Today | Custom | Today | Custom | Today | Custom |
| Lose the shamba | 61.52 | 70.66 | 11.31 | 26 | 5.56 | 10.4 |
| Less than 50% | 2.46 | 1.78 | 2 | .89 | .44 | 0 |
| Keep until remarried | 12.53 | 8.44 | 28.38 | 24.22 | 25.33 | 24.56 |
| 50% | 8.72 | 4.67 | 7.32 | 4.89 | 4.22 | 3.32 |
| More than 50% | .45 | 0 | .67 | 0 | .89 | .66 |
| Cultivate, not sell | 2.91 | 4.67 | 19.51 | 18.22 | 21.56 | 20.35 |
| Owner | 11.41 | 9.78 | 30.82 | 25.78 | 42 | 40.71 |

Table A14: Vignette 1: Correlates with Customary Law

| | Son Vignette | | Daughter Vignette | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Village characteristics | | | | |
| Pro-women custom index | 0.07 | 0.06 | 0.30*** | 0.28*** |
| | (0.300) | (0.371) | (0.002) | (0.005) |
| Ln(pop) | | -0.02 | | -0.05 |
| | | (0.498) | | (0.344) |
| Ln(minutes to market) | | -0.04 | | -0.07** |
| | | (0.226) | | (0.046) |
| % Primary income: agriculture | | 0.45*** | | -0.35 |
| | | (0.000) | | (0.193) |
| % Primary income: wage employment | | 0.41 | | 0.51 |
| | | (0.613) | | (0.755) |
| % Primary income: pastoralism | | 0.16* | | -1.08*** |
| | | (0.069) | | (0.000) |
| % Primary income: non-farm enterprise | | 0.07 | | -0.49* |
| | | (0.797) | | (0.095) |
| Financial access | | 0.07 | | 0.02 |
| | | (0.101) | | (0.842) |
| Individual controls | ✓ | ✓ | ✓ | ✓ |
| Ethnicity FE | ✓ | ✓ | ✓ | ✓ |
| Observations | 202 | 202 | 164 | 164 |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors, in parentheses, are clustered at the village level. All regressions include the following individual controls: gender, education, age and age square, as well as ethnicity fixed effects. The full table is available upon request.

# B 2012 Census

Besides being far from Dar es Salaam, the table below provides some information on how comparable our three regions, Katavi, Kigoma and Mwanza are to the rest of the country. To do so, we use the 0.1% sample from the 2012 Tanzanian National Census made available by IPSUM at the Minnesota Population Center (Integrated Public Use Microdata Series, International). One issue that arises to carry the exercise is

that regional boundaries have changed over time. Both Mwanza and Katavi were until recently part of bigger administrative units. To alleviate this issue, we use the regions' classification based on consistent boundaries from 1988 to 2012. Table B1 presents sample means for a series of household and individual characteristics using sampling weights. The variables summarized at the household level (electricity, owns dwelling) are calculated using household weights. The variables at the individual level are calculated using individual weights. The variable "child ever born" is calculated as the average number of ever born children for all women 12 years old or above. The "child survival" variable is calculated as the share of children ever born that are currently alive for all women 12 years old or above. The "literacy" and "primary completed" variables include every individual 4 and 12 years old or above, respectively. The "Agric./Fisher" variable represents the share, among the employed, of individuals working in skilled agriculture or fishery activities. We see that the region containing Mwanza is very similar to the average mainland Tanzania (excluding Dar es Salaam). Katavi and Kigoma appear to have lower than average access to electricity and literacy rate. Katavi has also a slightly larger immigrant population (3% compared with 1%).

Table B1: 2012 Census Summary Statistics by Region

| Region | Electricity | Own dwelling | Foreign born | Literacy | Primary | Child born | Child survival | Agric./Fisher |
|---|---|---|---|---|---|---|---|---|
| Mainland Tanzania | 0.14 | 0.75 | 0.01 | 0.64 | 0.50 | 3.17 | 0.85 | 0.73 |
| Mainland Tanzania - excl: Dar es Salaam | 0.10 | 0.79 | 0.01 | 0.62 | 0.49 | 3.27 | 0.85 | 0.78 |
| Arusha, Manyara | 0.15 | 0.73 | 0.00 | 0.64 | 0.50 | 2.92 | 0.91 | 0.69 |
| Dar es Salaam | 0.50 | 0.42 | 0.01 | 0.85 | 0.59 | 2.13 | 0.89 | 0.18 |
| Dodoma | 0.09 | 0.85 | 0.00 | 0.57 | 0.46 | 3.44 | 0.82 | 0.81 |
| Geita, Kagera, **Mwanza**, Shinyanga, Simiyu | 0.09 | 0.78 | 0.01 | 0.59 | 0.48 | 3.38 | 0.85 | 0.76 |
| Iringa, Njombe | 0.11 | 0.80 | 0.00 | 0.71 | 0.54 | 3.14 | 0.83 | 0.80 |
| **Katavi**, Rukwa | 0.06 | 0.77 | 0.03 | 0.54 | 0.44 | 3.46 | 0.84 | 0.80 |
| **Kigoma** | 0.06 | 0.85 | 0.01 | 0.58 | 0.47 | 3.41 | 0.85 | 0.82 |
| Kilimanjaro | 0.20 | 0.76 | 0.00 | 0.80 | 0.60 | 3.20 | 0.90 | 0.70 |
| Lindi | 0.08 | 0.83 | 0.01 | 0.56 | 0.44 | 3.21 | 0.80 | 0.85 |
| Mara | 0.09 | 0.81 | 0.01 | 0.66 | 0.56 | 3.52 | 0.83 | 0.80 |
| Mbeya | 0.10 | 0.79 | 0.01 | 0.67 | 0.53 | 3.15 | 0.83 | 0.75 |
| Morogoro | 0.13 | 0.73 | 0.00 | 0.65 | 0.51 | 3.17 | 0.83 | 0.77 |
| Mtwara | 0.05 | 0.83 | 0.02 | 0.58 | 0.45 | 3.04 | 0.80 | 0.86 |
| Pwani | 0.11 | 0.74 | 0.01 | 0.59 | 0.45 | 3.22 | 0.83 | 0.76 |
| Ruvumba | 0.09 | 0.81 | 0.01 | 0.71 | 0.59 | 3.13 | 0.84 | 0.84 |
| Singida | 0.08 | 0.85 | 0.00 | 0.61 | 0.50 | 3.45 | 0.86 | 0.80 |
| Tabora | 0.09 | 0.78 | 0.01 | 0.50 | 0.40 | 3.28 | 0.86 | 0.75 |
| Tanga | 0.13 | 0.77 | 0.00 | 0.67 | 0.51 | 3.25 | 0.86 | 0.80 |

Source: 2012 Tanzania National Census. Notes: The columns present sample means using sampling weights.

# C Data and Variables Description

## Land Data

We first asked the husband how many plots (*shambas* and *kiwanjas*[30]) he owned both independently and jointly with the interviewed spouse. The husband was allowed to list up to 5 *shambas* and 2 *kiwanjas*, as long as the total number of *shambas* was

[30]Shambas are cultivated plots and kiwanjas are plots with a dwelling.

less than 6.[31] We collected data on land characteristics for each individual plot (e.g., size, quality, use); ownership, selling, inheritance and divorce rights; and existence and demand for land titles. We also asked the husband if the wife knew about the existence of each plot to avoid disclosing any confidential information (only 1.08% of the plots are not known to the wife). Then, we showed the wife the list of land parcels listed by the husband and asked her if there were any other plots that she owned with or without her husband which were missing from the husband's list. Again, if the number of *shambas* was less than 6, we allowed her to list 5 extra *shambas* and 2 *kiwanjas*.[32] The same information was collected on these additional plots. For those already listed by the husband, the wife only answered questions on ownership and other land rights. In total, we collected data on 692 *shambas* and 517 *kiwanjas* listed by husbands and 68 *shambas* and 49 *kiwanjas* additionally listed by wives.

## Ethnic Characteristics

During the group VI interview, we asked: *What are the 5 most common ethnicity by population size in this village?* Then for each ethnicity we asked them whether the ethnic group traditionally allows for some practices. Here are the gender related such questions.

*Do the traditional clan law of the XX permit*

1. Women to own land ?
2. Sons to inherit land?
3. Daughters to inherit land ?
4. Women to inherit land from their husbands?

[31]Only 39 respondents (8.5% of the sample) reported more than 5 *shambas*, in which case they were asked a series of questions about their land holdings characteristics in general.

[32]None of the female respondents listed more than 5 new *shambas*.

(a) Yes, inherit full rights

(b) She can use land until remarries

(c) No

## Vignettes for Individual VI members

**Randomized Gender**

In the following 2 vignettes, whether the scenario involved a "daughter" or a "son" was randomized:

The first vignette (V1) says: *Imagine that a father dies without a will. The mother died a few years ago. The father intended to leave a shamba in the village to his only daughter/son. The daughter/son, an adult, lives in Dar Es Salam. The brother of the father who lives in the village is claiming the land. Who would you recommend to be the owner?* The possible answers were:

1. The daughter/son;
2. The brother of the husband.

The second vignette (V2) says: *Imagine that a wife has cultivated for 15 years a shamba that her husband had inherited from his dead father prior to marriage. She has one daughter/son from him. Her husband dies. The brother of the husband is claiming the land. Would you recommend that she keeps the shamba?*

The possible answers were:

1. Yes;
2. No.

If respondents randomly got the "daughter" version for the first vignette, then they were asked the "son" version for the second one, and vice versa.

**Inheritance** *For the following questions 5-7 imagine that a childless woman inherited from her husband a shamba (without CCRO) that she was cultivating, and that a male member of his clan claims the land.*

*What do you think would happen if the village land council made a recommendation?* and *What do you think would have happened under your own clan customs?*

The possible answers were:

1. She would lose the shamba
2. She could keep it but would lose it if she remarries
3. She could cultivate it all her life (even if she remarries) but could not sell it
4. She would be the owner (cultivate, sell, decide who inherits)
5. They would split the shamba (followed up by *What share would the woman own?* Less than half ($< 50\%$); Half ($50\%$); More than half ($> 50\%$))

## Household Vignettes

**Selling** *Assume that a husband and a wife jointly own a shamba/kiwanja of the household. Suppose that the wife is temporarily away. Could the husband sell the land without the written consent of his wife?*

**Wife inheritance**

*For the following questions 2-7, imagine that a woman inherited from her husband a shamba (without any land title/ownership document) that she was cultivating, and that a male member of his clan claims the land.*

Today: *What do you think would happen if*

1. she had no children?
2. she had a daughter from him?
3. if she had a son from him?

Custom: *What do you think would have happened under your clan customs?* under these three scenarios.

The possible answers to the "Today" and "Custom" inheritance vignettes were:

1. She would lose the shamba
2. She could keep it but would lose it if she remarries
3. She could cultivate it all her life (even if she remarries) but could not sell it
4. She would be the owner (cultivate, sell, decide who inherits)
5. They would split the shamba (followed up by *What share would the woman own?* Less than half ($< 50\%$); Half ($50\%$); More than half ($> 50\%$))

with one additional option "She could keep it only if she marries the brother of the husband" for the "clan custom" questions.[33]

CCRO: *Suppose a husband and a wife own a shamba. Their names are the only ones on the CCRO. The husband dies. Could his brothers claim ownership of the land?*

1. No;
2. Yes.

**Divorce**

Custom: *Imagine a husband and a wife own a shamba jointly and they both cultivate it. Suppose they mutually agree to divorce. What would have happened under your clan customary law to the ownership of the shamba?*

[33]During focus group discussion, we were discouraged to put levirate as a possible contemporaneous option.

1. He would be the owner
2. She would be the owner
3. Split the shamba (followed up by *What share would the woman own?* Less than half ($< 50\%$); Half ($50\%$); More than half ($> 50\%$))
4. Sell the shamba

In addition, the same "CCRO joint title" and "CCRO husband title" vignettes as to the individual VI members were asked to household members.

## Expectations for household members

### Wife Inheritance Expectation

*If you did not have a will and (god forbid) you die, what share of the land you own without spouseID would you expect to go to the following household members?*

1. share to the wife >50%
2. share to the wife >50%
3. share to the wife 50%

### Divorce Expectation

*Would she be the owner over the shambas you own without spouseID if she made improvements?*
*Would she be the owner over the shambas you and spouseID own jointly?*
*Would she be the owner over the shambas your spouseID owns without you?*

1. No, she will never be owner
2. Yes, she would be the owner if we have children living at home

3. Split the shamba (followed up by *What share would the woman own?* Less than half ($< 50\%$); Half ($50\%$); More than half ($> 50\%$))
4. She would be the only owner until she remarries
5. She would be the only owner

*Would "the interviewed spouse" be the owner over the kiwanja where she currently resides?*

1. Yes, she will be the owner;
2. No, but she could continue living even if she remarries;
3. No, but she could continue living until she remarries
4. No, she will have to leave

Fault: *Would the ownership of the shambas be different in the case your spouse were at fault?*

## Plots ownership rights questions

1. Who is the owner? (for joint ownership: check all that apply)
2. Who has the right to sell it? (check all that apply)
3. Who has the right to give it out as inheritance? (check all that apply)

with the following options

1. Myself
2. My spouse
3. Me and spouse jointly
4. Sons

5. Daughters
6. Whole family
7. My extended family
8. Spouse extended family
9. Nobody
10. Other

Who would decide on who would be registered as claimant/owner for this shamba?s CCRO? [Select one]

1. Myself alone
2. Spouse alone
3. Jointly me and spouse
4. Sons alone
5. Daughters alone
6. Jointly me and Sons
7. Jointly me and daughters
8. Jointly with sons/daughters and spouse
9. Jointly with my extended family
10. Spouse extended family
11. Jointly with sons & daughters

# D Village Institutions in Tanzania

## The Composition of Village Councils

Once a village registration has taken place, the Village Assembly (VA) (an organ composed of all adult villagers) elect every 5 years a *Village Council (VC)* composed of 15 to 25 members. VC members must be above 21 years old, be residents of the village, and be able to write. 25% of the seats must be reserved for women. We see in Table C1 that both the average and the median share of women in the VCs is 30%, but 25% of the villages do not meet the one quarter threshold.

Table C1: Village Institutions

| | Number of Members | | | | | Share of Women | | | |
|---|---|---|---|---|---|---|---|---|---|
| Village Institution | Obs. | Mean | Std. Dev. | Min | Max | Mean | Std. Dev. | Min | Max |
| Village Council | 45 | 18.98 | 3.47 | 12.00 | 26.00 | 29.29 | 7.26 | 8.33 | 41.18 |
| Village Land Council | 26 | 6.81 | 1.23 | 4.00 | 10.00 | 34.90 | 10.19 | 16.67 | 57.14 |
| Village Adj. Comm./VLUM | 19 | 7.79 | 2.78 | 4.00 | 16.00 | 38.24 | 21.20 | 0.00 | 71.43 |

The Village Land Act mandates that every village must establish a dispute settlement body named the *Village Land Council (VLC)*. Its goal is to mediate and assist parties to find an agreement in land related disputes. Under the 1999 Act, the VLC should consist of 4 to 7 members, of which at least 2 should be women. The most recent 2002 Land Disputes Settlements Act required the VLC to consist of 7 members and a minimum of 3 women. Table C1 shows that in practice not every village has established a VLC. Only 57% of our sampled villages ever had one, and 54% of them have only 1 or 2 women in the council.

The Village Land Act also demands that the VC establishes a *Village Adjudication Committee (VAC)* with 6 to 9 members, and at least 3 women. Additionally, it recommends that the VCs create a *Village Land Use Management (VLUM)* committee, ideally gender balanced. Table C1 shows that, when a village has VLUM, it

does average 7 to 8 members, but is still far from equal gender representation.

### The Village Assembly

The Village Assembly (VA) may also have a role to play in women's land rights. VCs are not allowed to allocate land or grant a customary right of occupancy without prior approval of the VAs. The VA is composed of all adult villagers, men and women, above 18 years. Given this inclusiveness, the relevant question is whether men and women participate to the same extent in the VA meetings. When asked, VI members claimed that men and women are equally represented at the VA meetings. However, household interviews painted a different picture. Table C2 shows that male and female household members are strongly statistically different in terms of attendance, participation, and beliefs that their opinion matters. The share of household males who attended the last meeting were 53% as compared to 26% of females.[34] We measured both participation and self-valuation of individual's opinions being heard by asking "Do you actively participate in the VA?" and "Do you believe your opinion is heard in the VA?". We provided 3 possible answers ranging from low to high participation/opinion and assign values from 1 to 3 to value the answers numerically.[35] In both measures, men average above 2.1 and women below 1.7, suggesting that men still dominate the issues discussed in the meetings and the resolutions ruled by the VA.

[34]These numbers could only match the 50%-50% male-female attendance reported by the VIs if the number of eligible females were approximately 4 times as large as the number of men which is extraordinarily unlikely and not supported by the Tanzanian 2012 Census population data `https://www.nbs.go.tz/`.

[35]The participation options were: 1) No, I attend but usually remain silent; 2) Yes, I attend and raise my opinion in the matters that affect me directly; 3) Yes, I attend and I raise my opinion with respect to most issues that affect my village. The opinion options were: 1) No, I don't think it is heard; 2) Sometimes; 3) Always.

Table C2: Village Assembly Participation

| | Men | Women | Difference | Obs. |
|---|---|---|---|---|
| # Times last 12 months | 2.85 | 1.60 | 1.26*** | 911 |
| | | | (0.11) | |
| Attended last meeting | 0.53 | 0.26 | 0.27*** | 912 |
| | | | (0.03) | |
| Participation | 2.15 | 1.43 | 0.72*** | 706 |
| | | | (0.06) | |
| Opinion heard | 2.12 | 1.66 | 0.46*** | 714 |
| | | | (0.05) | |

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The summary statistics are based on the household interviews. Columns (1) and (2) report sample means. Column (3) reports the difference between (1) and (2) estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level.