

# Women's Land Rights and Village Councils in Tanzania

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## ABSTRACT

This paper studies the land property rights of married women using a diagnostic survey on women's land property rights and Village Councils in rural Tanzania (VILART). Our paper provides evidence that, despite statutory laws providing for gender neutral rights, customary patrilineal practices favoring men still play a large role in rural Tanzania. Women in our sample own little property independently of their husbands which puts them at particular risk of property deprivation in the event of divorce or widowhood. We find that sons are more likely than daughters to inherit land, and women's inheritance expectations are affected by the gender of their children. In addition, women's inheritance rights remain fragile against claims from male members of the deceased husband's clan. We show that village leaders of both genders have non-gender neutral views, and are therefore likely to reinforce traditional patrilineal practices.

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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.

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 bargaining power (Agarwal 1997, Fafchamps and Quisumbing 2002, Meinzen-Dick et al. 2017, Allendorf 2007, Menon, van der Meulen Rodgers, and Nguyen 2014), less poverty, and better nutrition among widows (Milazzo and van de Walle forthcoming). 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 2019) and in Kenya (Harari 2019), though in India it may also have strengthened son preference (Bhalotra, Brul, 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 being heavily involved in agricultural production, women in most of Sub-Saharan Africa seem to own little land (Doss et al. 2015) and they are concerned about tenure security (Prindex 2019). However, land ownership is often hard to

measure due to the lack of land titling, and the prevalence of joint ownership and partial rights (Doss et al. 2015). This paper describes findings from the *Village Institutions and Land Rights in Tanzania (VILART)* dataset: a diagnostic survey on women’s land property rights and Village Institutions that we conducted in three regions of rural Tanzania (Katavi, Kigoma, and Mwanza). One of the strengths of the survey is that it captures, at the plot level, joint and partial ownership rights.

The first important fact deriving from our survey is that married women own very few acres of land without their husbands (4% of total household acreage). Their lack of inheritance rights as daughters limits their capacity to bring land to the marriage. Women’s access to ownership is mostly through joint plots purchased after marriage. Strikingly, 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.

Looking at inheritance expectations if the husband were to die, we find that the gender of children matters. Looking at first born children, we find that girls are expected to receive less land than male. Interestingly, this means that wives with a female first born have higher inheritance expectations in case of widowhood. These results suggest that customary patrilineal practices still play a large role in rural Tanzania.

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.

Our survey also shows that women’s inheritance rights are limited and fragile against claims from male members of the deceased husband’s clan.<sup>1</sup> *Partial* property rights—

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<sup>1</sup>A clan is an extended lineage within a tribe.

such as the right to keep the land only until remarriage; or the right to cultivate it while alive, but not to sell it—prevails.

Ensuring strong property rights for women is not an easy task, and both formal and informal institutions play important roles. Tanzania had a series of legal reforms in the 1990s that aimed to both establish strong property rights for occupiers of customary land and to ensure gender equity. However, an inherent tension lies in the recognition of customary laws, that often discriminates against women, and the stated will to establish equal rights for men and women. The reforms gave tremendous power to Village Councils (VCs) to influence women’s *de facto* land rights, as they were made responsible for adjudicating, registering, and titling all local holdings. A majority of household members report that they would seek the advice of VC leaders in case of land dispute or disagreement over land ownership in a divorce. VC 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 Village Councils members, of both genders, still fall short of the gender egalitarian standards promoted by the statutory law.

Our findings are consistent with the literature on legal dualism in Africa (Aldashev et al. 2012a,b; Platteau 2000), growing evidence that unmarried women, divorcees, and widows are particularly vulnerable (see van de Walle 2013; Milazzo and van de Walle 2017; Lambert, van de Walle, and Villar 2017; Fafchamps and Quisumbing 2002), and a number of recent papers showing that traditional norms have long lasting effects (among others Nunn 2009, Dillon and Voena 2018, or Milazzo and van de Walle forthcoming, or Nunn 2009).

## 2 Background

Tanzania is a highly diverse country inhabited by more than 120 ethnic groups and tribes. Prior to colonization, land rights were based on customary laws that differed from tribe to tribe, but shared some commonalities. 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 (see Government Notice 436 of 1963).

The majority of the ethnic groups in Tanzania are of Bantu origin and have customary patrilineal and primogeniture land inheritance practices.<sup>2</sup> In societies with patrilineal inheritance rules, property is traditionally inherited through the male clan line. The primogeniture distribution rule gives preference in inheritance to the eldest son. Widows generally do not have direct inheritance rights under the Tanzanian Bantu tribes customs (Knight 2010). According to their traditional practice, widow's (male) children would inherit both land and property, and adopt the responsibility for taking care of her. She would have been allowed to remain in the family home as long as she does not remarry. In addition, levirate marriages (in which a widow agrees to be “inherited” by a male relative of her deceased husband) were commonly practiced.

In patrilineal societies, 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 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 in both their roles as daughters and wives.

After independence from the British in 1961, a series of legal reforms were designed to transition Tanzania to a legal framework that integrates aspects of customary

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<sup>2</sup>Source: University of Zurich's Atlas of Pre-colonial Societies.

tenure and recognizes private property rights. 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 (and the Land Regulations issued in 2001) (see Bourguignon 2018, Rwegasira 2012). 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). 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). In addition, the Village Land Act of 1999 decentralized major parts of the administration of land to the village level, and devolved substantial authority to existing village governance bodies: the Village Council and the Village Assembly. Under the Act, the Village Council (VC hereafter) 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. However, VCs are not allowed to allocate land or grant a customary right of occupancy without prior approval of the Village Assembly (VA hereafter), a supreme village organ whose members are all adult villagers (men and women) over 18 years of age.

Importantly, provisions were made to support equal property rights for women. The Constitution, ratified in 1977, recognizes equal rights and contains non-discrimination provisions (Giovarelli, Richardson, and Scalise 2016). The Village Land Act of 1999 upholds customary rules for land, but requires that customary law be consistent with the non-discrimination clause in the Constitution. 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 (Hallward-Driemeier and Hasan 2012). The Land Act recognized women’s rights and introduced provisions on the ownership rights of women

who co-reside with their husbands (Sundet 2005). The Act also established affirmative action requirements in relevant local government bodies (e.g. quotas for female membership), potentially helping to alter land allocation practices by the village institutions, which have frequently favored men.

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.

In terms of inheritance, Tanzania recognizes three parallel systems of intestate succession: the customary law (referring to traditional tribal law), the Islamic law, and the Indian Succession Act. Though the Indian Succession Act is gender neutral, the Tanzanian choice of law provisions favor the application of the discriminatory customary or Islamic laws to most Tanzanians of African origin. The (codified) customary law was largely based upon the practices of the Bantu tribes which were heavily discriminatory in terms of women's inheritance rights. Even when customary law provides certain limited inheritance rights to widows, women usually forfeit these limited rights upon remarriage.

The application of discriminatory inheritance law is clearly an important source of vulnerability for women and has been fought against by some lawyers. Some go as far as to argue that depriving widows, or divorcees, of a right to their husband's land violates the Constitution.<sup>3</sup> They also argue that the Village Land Act provides that, in the case of any inconsistency or conflict between the provisions of the Act and any other law on a matter of land law, the Land Act prevails (Duncan 2014). However,

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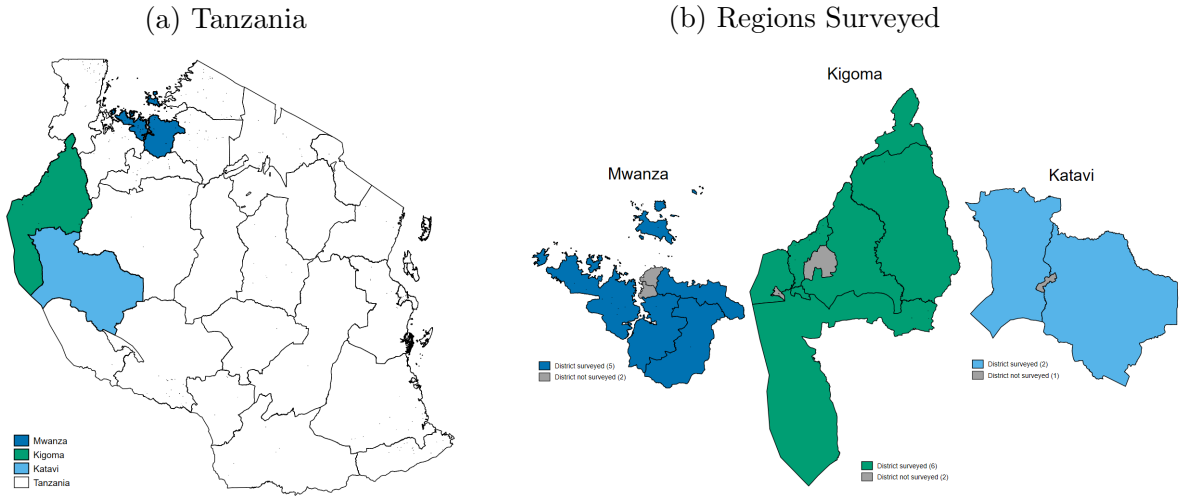
<sup>3</sup>See *Ephraim v Pastory* (2001) AHRLR 236 (TzHC 1990) Civil Appeal no 70 of 198. [https://www.uio.no/studier/emner/jus/jus/JUS5910/v13/undervisningsmateriale/ephraim-v-pastory-case\\_tanzania1990-1.pdf](https://www.uio.no/studier/emner/jus/jus/JUS5910/v13/undervisningsmateriale/ephraim-v-pastory-case_tanzania1990-1.pdf).

the Land Act never explicitly addressed the question of inheritance. This vacuum leaves enormous room for interpretation to local judges and village institutions.

### 3 Data

#### 3.1 The VILART survey

Figure 1: 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).<sup>4</sup> Figures 1a and 1b plot the location of the surveyed regions and districts. 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. Section A.2 provide some information on how comparable these regions are to the rest the country. In each region, we randomly selected 15 villages from the 2012 Tanzanian census list of villages. The specific villages are listed in the Appendix Table A1. The random

<sup>4</sup>For more information see <http://faculty.georgetown.edu/gg58/VILART.html>.



selection of villages spans 13 districts evenly distributed across the 3 regions and 90 enumeration areas (2 enumeration areas per village). 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).

## 3.2 Household Interviews

In each village, around 10 households were randomly selected resulting in a sample size of 912 respondents.<sup>5</sup> Qualifying household respondents had to be married,<sup>6</sup> 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, be fluent in Swahili, and be non-refugees.<sup>7</sup> Both the household head and the spouse were interviewed. In the case of polygamous households, only one of the wives were interviewed. Table 1 provides basic descriptive statistics on the households. Given our 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%).

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<sup>5</sup>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

<sup>6</sup>Couples that had been living together as a married couple for at least two years also qualified.

<sup>7</sup>27 and 24 of the men and women interviewed were born in Burundi.

Table 1: Household Summary Statistics

	Mean	Std. Dev.	Min	Median	Max	Obs.
<b><u>Husband</u></b>						
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
<b><u>Wife</u></b>						
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
<b><u>Household</u></b>						
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.

Beyond socio-demographic characteristics, the survey collected households' perceptions on women's land rights and village institutions through multiple hypothetical scenarios (*vignettes*). Appendix B describes the household *vignettes*. The survey also collected an extensive amount of land ownership data, through interviews with the husband and the wife separately, including expectations of women's ownership upon divorce or the husband's death.

**Land Data.** We first asked the husband how many plots (*shambas* and *kiwanjas*<sup>8</sup>)

<sup>8</sup>Shambas are cultivated plots and kiwanjas are plots with a dwelling.

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 less than 6.<sup>9</sup> 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*.<sup>10</sup> 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.

### 3.3 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 following councils: Village Council, Village Land Council, Village Adjudication Committee and Village Land Use Committee (VLUM). The randomization procedure aimed to have a representative sample in terms of both council membership and gender. The interviews included questions about the VI members' knowledge of the law and their perceptions on women's land rights. Table A3 presents summary statistics on the VI members and compares them with the average household member. Both men and women of the VIs are

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<sup>9</sup>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.

<sup>10</sup>None of the female respondents listed more than 5 new *shambas*.

more educated than the household members. The VI women are also older and more likely to have been born in the village than the household women.

### 3.4 Village Institutions Community Survey

We conducted a community survey through group interviews with VI members to collect data on the socioeconomic and demographic characteristics of the village, VIs composition and functioning, and village land rules. Table A4 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 A2). During the group VI interviews, 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 practices in terms of land rights and divorce. In total, data was collected for 157 ethnic-village observations.

Table 2 presents summary statistics for all the ethnic-village observations weighted by their population in the village. It shows that there is very little or null variation in male rights and other non-gendered concepts of land ownership. For example, only 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. The average share of the population of ethnic groups where traditional clan law would permit women to inherit land from husbands with full rights is 50%; where daughters could inherit land is 79%; and where wives could make the decision to divorce their husbands is only 23%.

Table 2: Traditional Customary Law 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
Husbands make a decision to divorce his wives	0.82	0.39
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
Wives make a decision to divorce her husband	0.23	0.42
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 in the community survey. Each observation is weighted by the population of that particular ethnic group in the village.

The customary practices reported are consistent with the available information on ancestral cultural practices in Tanzania. In Table A2, we combine the list of ethnic groups in the VILART data with Murdock's 1967 Ethnographic Atlas.<sup>11</sup> Most of these ethnic groups traditionally had customary patrilineal and primogeniture land inheritance practices, and patrilocal and polygamous marital practices.

<sup>11</sup>J. Patrick Gray. 1999. A Corrected Ethnographic Atlas. *World Cultures* 10(1):24-85.

## 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 only some of the ownership rights such as the right to cultivate, to sell, or to bequeath the land (Doss et al. 2015). In addition, women commonly own land jointly with others.

This section provides information on women’s ownership and the rights that they do have, as well as what they can expect in case of divorce and widowhood.

### 4.1 Women’s Land Ownership

The definition of ownership in this section comes from the section of the household questionnaires where we collected information for every reported land plot. We 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.<sup>12</sup>

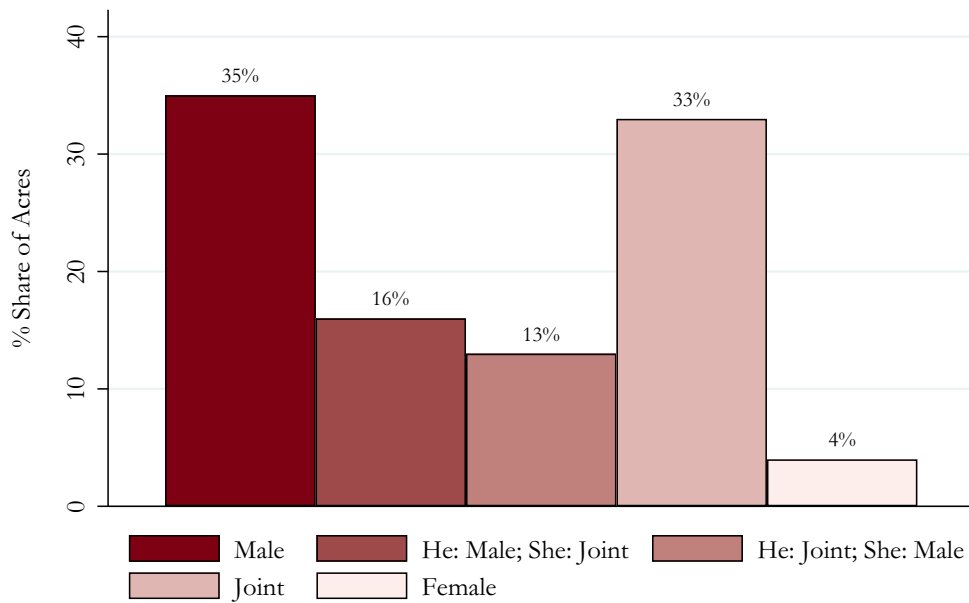
Married women mostly own land jointly with their partners. Moreover, more than half of the land that women own without their partners is co-owned with either their sons (23%), daughters (8%), or extended family (28%). We define “joint ownership” as any land for which there is no disagreement between the partners that both the husband and wife own that land. Figure 2 shows the distribution

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<sup>12</sup>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 reported she knew about the existence of this plot.

of acreage across type of ownership.<sup>13</sup> “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 2: Distribution of Acreage Ownership



Notes: "male" ("female") indicates only the husband (wife) has been reported to own the land.  
 "Joint" indicates both the husband and the wife have reported to both own the land.  
 "He: Joint; she: Male" indicates the husband has reported the land joint, but the wife has not reported herself as the owner.  
 "She: Joint; he: Male" indicates the wife has reported the land joint, but the husband has not reported her as the owner.

It is striking how little land is owned by women without their husbands. Only 4% of the acreage belongs to women but not to the husband, half of it inherited. The share of acres in our sample that are considered jointly owned by both the husband and the wife is 33%. Another 29% of acres, however, are considered jointly owned by either the husband (13%) or the wife (16%).

Women’s access to land not only differs from their husbands’ in quantity, but also in the type of land that they own. Table 3 reports sample means of several plots characteristics by type of ownership, and the difference between “male plots” with

<sup>13</sup>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.

“joint” and “female” plots. We merge the three types of joint ownership. We show the descriptive statistics by dividing the “joint” plots in: “both joint,” “he joint,” and “she joint” in Table A5. We report the statistics in terms of acres in Table A6.

Women’s land plots are on average smaller, more likely to be cultivated instead of residential, and further away from homestead (measured in walking minutes). Not surprisingly, women also work substantially more on the land they own.

The joint land is also more likely to have been purchased and to have been acquired after marriage.<sup>14</sup> As a consequence, these joint plots are also more likely to have some sort of ownership document and to be perceived as valid to be used as collateral to borrow money. Overall, 70% of the 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.

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<sup>14</sup>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: 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
<b>Plot Characteristics</b>					
Area	3.57	2.86	1.87	0.72 (0.56)	1.70*** (0.63)
Cultivated	0.45	0.52	0.61	-0.06* (0.04)	-0.16* (0.09)
Residential	0.41	0.34	0.16	0.07** (0.03)	0.25*** (0.05)
Distance	28.12	38.58	70.35	-10.46 (7.30)	-42.24*** (14.72)
Wife works	0.57	0.78	0.80	-0.21*** (0.06)	-0.23** (0.09)
Husband works	0.86	0.87	0.27	-0.01 (0.04)	0.59*** (0.10)
<b>Acquisition</b>					
Post-marriage	0.50	0.69	0.63	-0.19*** (0.04)	-0.13 (0.11)
Purchased	0.40	0.51	0.31	-0.12*** (0.04)	0.09 (0.09)
Inherited	0.41	0.23	0.55	0.18*** (0.04)	-0.14 (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** (0.02)	0.04 (0.02)
Other mode of acq.	0.02	0.05	0.02	-0.03*** (0.01)	-0.00 (0.02)
<b>Land documents</b>					
Use as collateral	0.40	0.52	0.45	-0.12*** (0.04)	-0.05 (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** (0.04)	-0.05 (0.09)
Any government right of occupancy	0.08	0.07	0.00	0.00 (0.03)	0.08** (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, utility bill or other bill, and other. Any government right of occupancy includes: granted right of occupancy, letter of offer, and CCRO.

## 4.2 Women’s Land Partial Rights

One might wonder what is the meaning of “ownership” of land in a household.<sup>15</sup> In general, ownership is thought of as a collection of rights: the right to the product of the land, the right to use and the right to sell or bequeath of the land. 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 the husband’s beliefs about their wives’ land rights at the plot level. Table 4 summarizes the answers for the right to sell, the right to bequeath, and the right to participate in the decision on whose name would be registered on a hypothetical land title. Expectedly, men report their wives to enjoy greater rights on the land they define as jointly owned with them. But even when they jointly own the land, men do not always report their wives as having decision making power regarding its sale or inheritance. Men 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.<sup>16</sup> (Table A7 paints a similar picture in terms of acres instead of plots.)

Table 5 summarizes women’s expectations about their own land rights at the plot level. Strikingly, women do not always think they would have the right to sell the land they own without their husbands in these ones’ absence (47% of the plots). Their rights on deciding on inheritance and land titling are also restricted, possibly reflecting the fact that most of these plots are jointly owned with other people. 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). Women are twice as likely than their husbands to think they could have a say on whose name would be on the title (59%

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<sup>15</sup>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.

<sup>16</sup>The question was framed in terms of certificates of right of occupancy (CCROs), see section 2.

vs. 33% of the plots), but the gap in expectations is much smaller in terms of total joint land acreage (37% vs. 27% of the joint land in acres, see Table A8).

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. The next two sections look at households' inheritance and divorce expectations.

Table 4: Husband's Answers: Women's Land Rights by Type of Ownership

	(1) Male	(2) He Male, She Joint	(3) He Joint, She Male	(4) Joint	Difference with Male plots		
					(5) He Male, She Joint	(6) He Joint, She Male	(7) Joint
Right to sell	0.07	0.22	0.64	0.75	-0.14*** (0.04)	-0.57*** (0.06)	-0.68*** (0.04)
Right to bequeath	0.08	0.25	0.54	0.64	-0.17*** (0.04)	-0.46*** (0.06)	-0.57*** (0.04)
Right to decide on title	0.04	0.18	0.30	0.33	-0.13*** (0.04)	-0.25*** (0.04)	-0.28*** (0.05)

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. Column (5) reports the difference between (1) and (2). Column (6) reports the difference between (1) and (3). Column (7) reports the difference between (1) and (4). The differences are estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level.

Table 5: Women Answers: Women’s Land Rights by Type of Ownership

	(1) Female	(2) Joint	(3) He Male, She Joint	Difference with Female plots	
				(4) He Male, She Joint	(5) Joint
Right to sell in husband’s absence	0.47	0.04	0.03	0.44*** (0.08)	0.43*** (0.07)
Right to bequeath	0.63	0.32	0.20	0.43*** (0.12)	0.32*** (0.12)
Right to decide on title	0.78	0.59	0.46	0.31*** (0.10)	0.18** (0.09)
Right to keep at least 50% if divorce	0.65	0.31	0.16	0.49*** (0.09)	0.34*** (0.09)

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. Column (4) reports the difference between (1) and (2). Column (5) reports the difference between (1) and (3). The differences are estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level.

### 4.3 Women’s Land Rights upon Divorce

Divorce is a primary 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. But in practice, the capacity of the statutory law to actually influence the division of assets upon divorce is likely to remain curtailed, especially in rural areas. Marriages are predominantly customary to begin with, and are not commonly officially registered (only 26% of the marriages in the VILART sample are registered).

At the plot level, we asked women who would they expect to keep the land in the event of divorce. The last row of Table 5 shows that women expect to keep at least 50% of the acres in only 31% of the joint plots in the sample.

In addition, we collected information from both husbands and wives about their 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<sup>17</sup>. Table 6 summarizes the answers.

Table 6: Expectations of Wife’s Access to Joint Land upon Divorce

	Women			Men		
	Expectations		Vignette	Expectations		Vignette
	Mutual	Her fault		Mutual	Her fault	
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.”

Three interesting facts emerge from the answers. First, about 30% of women<sup>18</sup> 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. 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

<sup>17</sup>The description of all the vignettes are in Appendix B.

<sup>18</sup>This number is in line to the divorce expectations women reported at the plot level summarized in section 4.2.

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 A1 and A2). 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).

#### **4.4 Women’s Inheritance Rights**

The extent and security of inheritance rights is also of primary importance for married women. The assets that women bring to and control during marriage tend to improve their intra-household bargaining power and welfare (Fafchamps and

Quisumbing 2002). In the VILART survey, inherited land represents about 30% of the total household land,<sup>19</sup> but only 4.70% of the acres were inherited by the wife compared to 87.11% by the husband. This descriptive evidence is in line with the traditional patrilineal practices to which the household members' ethnic groups subscribe. An initial and quantitatively important barrier to women's ownership comes from the weak claim they have as daughters to their family clan's land.

In addition to affecting women as daughters, the discrimination against women in inheritance practices affects women in their role as wives. Patrilineal customs imply that widows have either none or very limited access to land after the death of the husband. In our survey, we collected information regarding inheritance expectations from both husbands and wives, though the questions slightly differ. For the jointly owned land, 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. 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.

It is encouraging that the majority of husbands, 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.<sup>20</sup> The next section will show further evidence that women's inheritance rights seem to still be linked to their role as mothers, especially to the existence of sons, and that these rights remain fragile.

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<sup>19</sup>Among those whose husband reported less than 6 *shambas*.

<sup>20</sup>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 The Persistence of Customary Practices

Adherence to customary practices could be one of the most important barriers to women's access to land. In this section, we first provide empirical evidence on the persistence of patrilineality in inheritance expectations. Second, we document the fragility of the tenure security of women's land holdings: it may be hard to hold onto inherited land.

### 5.1 Patrilineality and Inheritance Expectations

We saw that women in our sample have little inherited land, and less than men. The first question that we ask is how much patrilineality still matters in terms of inheritance. Though we may be tempted to compare inheritance expectation of girls and boys, doing so would be problematic. There is indeed a body of evidence showing that fertility decisions (number of children, birth spacing, etc) 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 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 seem to be a concern and sex ratios at birth are unbiased.<sup>21</sup>

We first ask whether having a female first born 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.

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<sup>21</sup>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).



Exact shares were reported for each individual member of the household.<sup>22</sup> 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 7 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). In Appendix Table A15 we show that results are robust, although more imprecise given the smaller sample, if we restrict the sample further to household whose first born is less than 17 as after that age girls are more likely to leave the household.

Given the favorable customary inheritance rights of boys versus girls, we may expect the distribution of inheritable land to wives not to be gender neutral. If sons inherit more, a woman might be less likely to inherit if she has sons as opposed to daughters. To see this, we run a specification similar to equation (1) to test whether having a

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<sup>22</sup>For children living outside of the household we do not know how much goes to each child.

Table 7: 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** (4.37)	-9.99* (5.61)	-8.13 (4.92)	-9.99* (5.64)	-9.34 (5.71)	-12.13* (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 wife 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.

female first born (irrespective of whether this child is currently alive, living inside or outside of the household) makes a difference in terms of the wife'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 8 presents the husbands' expectation regarding the joint land. In columns (5) to (10) the outcome variable is the wife' expectations on the share of joint land she would expect to inherit, but this land could be jointly

Table 8: 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* (4.69)	9.01 (6.03)	8.60* (4.85)	8.84* (4.93)	12.96** (6.43)	9.17** (3.97)	8.75* (4.80)	9.64** (3.98)	9.28** (3.99)	7.68 (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 wife 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.

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

However, these results suggest that customary patrilineal practices still play a large role in rural Tanzania: widows' access to land is still tied to 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.<sup>23</sup>

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 A17). Finally, we checked that the results are robust to randomization inference given the small number of observations (see Figures A4 and A5).

## 5.2 Women’s inheritance rights are fragile

Understanding women’s land rights also means assessing the strength and security of those property rights. A global report on perceptions of tenure security in 33 Coun-

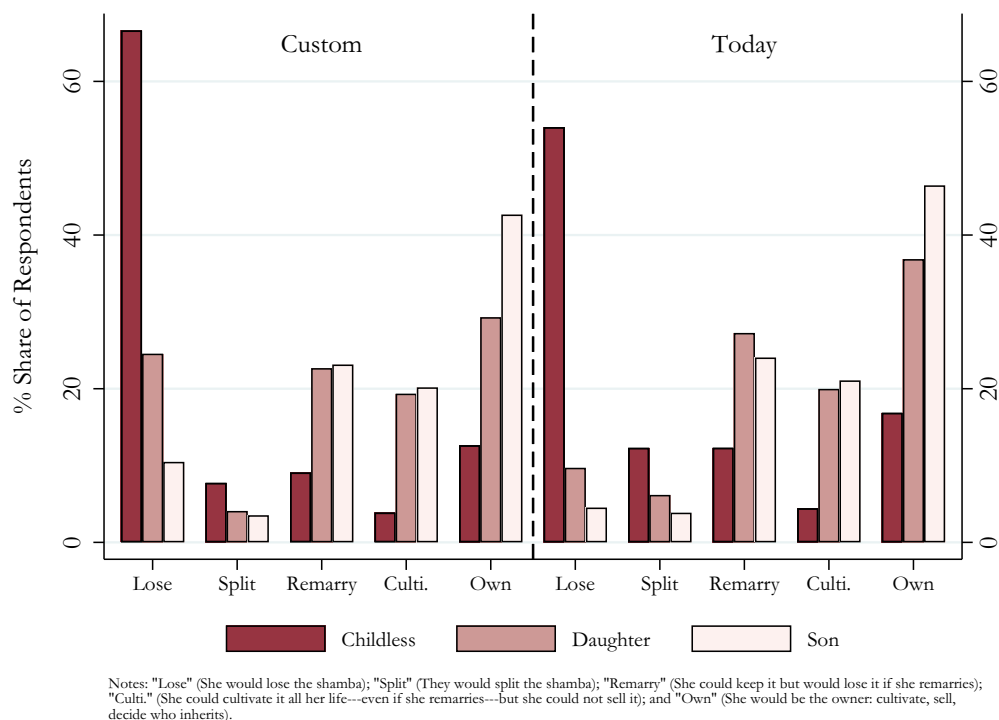
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<sup>23</sup>The results also survive restricting the sample to non-polygamous marriages, although the estimates are more imprecise in these last ones (see Tables A14 and A16).

tries (including Tanzania) reports that widowed and divorced female respondents show much lower rates of tenure security than their male counterparts do (Prindex 2019). This is also what we observe in our survey.

We presented household members with different *vignettes*: we asked them to predict what they expect to happen (today) and what would have happened under their own clan customs under 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. Village institution (VI) members were also asked, during private interviews, the childless version under their own clan customs. Figure 3 reports both the “today” and the “clan custom” household answers to the three different vignettes. See Appendix B for the exact questions.

Figure 3: Household’s Inheritance Views



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. In our survey, we 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.*”<sup>24</sup> First, it is noticeable that, both in the “today” and under the “clan custom” vignettes, a large proportion believe the woman would obtain some 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

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<sup>24</sup>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 3, 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).

the childless *vignette* but still represents almost a third of the sample.

## Difference across gender

In the previous section, we pooled husbands' and wives' answers. It is 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:

$$V_{ih} = \alpha + \beta W_{ih} + \delta_h + \epsilon_{ih} \quad (2)$$

where  $V_{ih}$  is the answer to the vignette by individual  $i$  from household  $h$ ,<sup>25</sup>  $\delta_h$  are household fixed effects;  $W_{ih}$  is a wife dummy; and standard errors are clustered at the enumerating area level.<sup>26</sup> The coefficient  $\beta$  captures the average difference in expectations of widows' inheritance rights between a wife and her husband.

Figure 4 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.

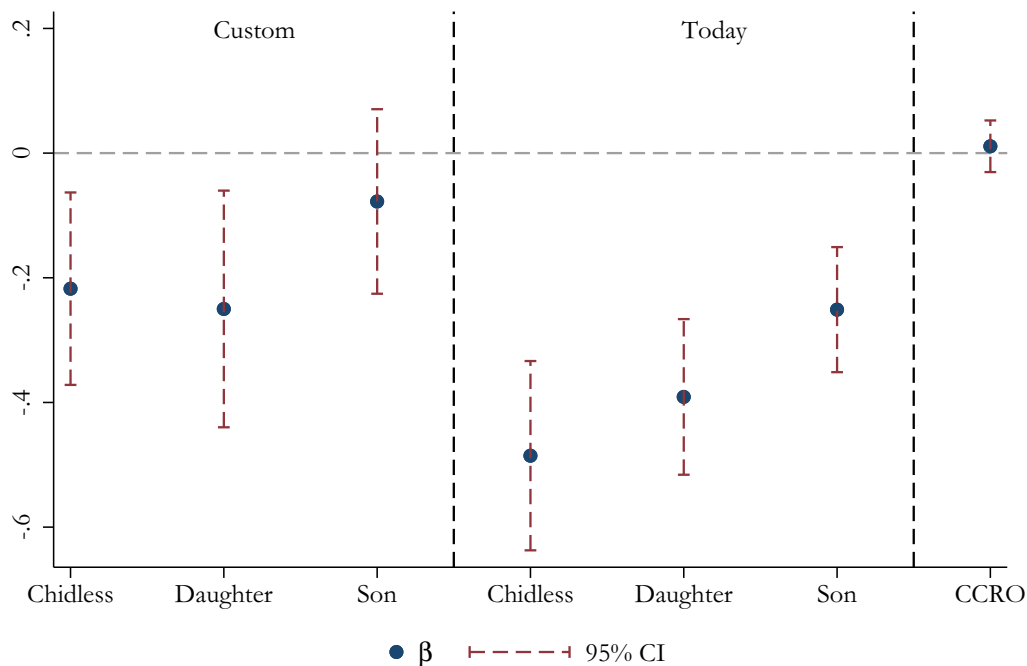
A greater share of female respondents think that the woman would lose the shamba as compared to the males, irrespective of the presence of children. In fact, in the childless scenario, women provide a remarkably similar answer to both vignettes indicating a large share of the respondents expect traditional customary law to be

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<sup>25</sup>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)*.”

<sup>26</sup>The results are robust to wild boot-strapping the standard errors.

Figure 4: Wife-husband coefficient on Inheritance Vignettes



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

applied, see Appendix A.4, which highlights the strong attachment of women's land rights to male descandancy expected in patrilineal societies. We present further evidence of the importance of having children for women's inheritance rights is presented in Table 9. 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.



Table 9: Current Inheritance Views. Wife Coefficient

Outcome variable	<i>Vignettes</i>		
	Childless	Daughter	Son
Lose the plot	0.14*** (0.03)	0.03* (0.02)	0.02** (0.01)
Partial rights	-0.04 (0.03)	0.09*** (0.02)	0.07*** (0.02)
Keep the plot	-0.10*** (0.02)	-0.12*** (0.02)	-0.09*** (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.

## 6 The Role of Village Institutions

We have seen that though norms are evolving, practices are still far from being gender neutral. Village institutions have been given an important role to play with this matter. As mentioned earlier, the Village Land Act of 1999 devolved substantial authority to the village institutions, especially the Village Council (VC) and the Village Assembly (VA). Under the Act, the VC is legally responsible for the management of village land as a trustee managing property on behalf of the beneficiaries, the villagers. Moreover, the Village Land Act not only upholds customary rules on land, but also provides that a customary rule, or any action dependent on a rule, shall be deemed void to the extent to which it denies women, children or persons with disability lawful access to ownership, occupation or use of any customary land.

In this section, we are interested in exploring whether village institutions can help in enforcing gender neutrality.

## 6.1 The Village Institutions

### 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 10 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 10: Village Institutions

Village Institution	Obs.	Number of Members				Share of Women			
		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 10 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 10 shows that, when a village has VLUM, it does average 7 to 8 members, but is still far from equal gender representation.

## 6.2 The Representativeness of Village Institutions

Elected members of the village councils are more educated and have a greater number of children than non elected villagers. The female members of these councils also tend to be older than their household counterparts and more likely to have been born in the village (see Table A3). Village Institutions (VIs) are encouraged to be representative of the different socioeconomic groups in the village. In terms of ethnicity, VIs are overall quite representative, though some of the smallest minorities may not make it on the VAC. Moreover, Appendix A.3 present evidence that relatively more “pro-women” ethnic groups are neither systematically less likely nor more likely to be represented in the VIs.

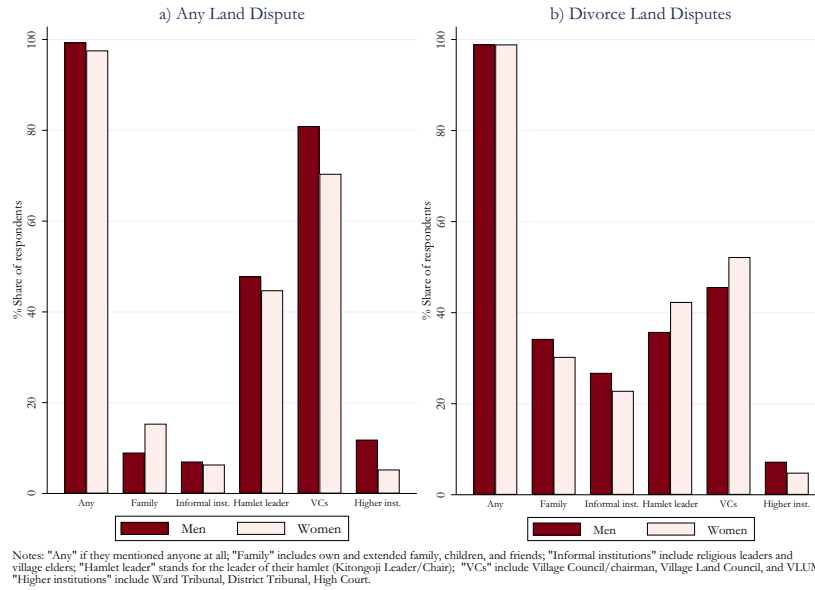
## 6.3 The Importance of Village Institutions

Our interest in the views of the village councils on women’s land rights presumes that they are in a position of influence. Are village institutions key arbitrators of the tension between customary law and statutory law? The Village Land Act formalizes their importance in the context of the adjudication and titling of the land (the CCROs mentioned in Section 2). But beyond this function, the survey provides more evidence that confirm their key role. We asked household members whose help they would seek in case of both potential land disputes, and potential disagreements with their partner about land ownership if they happened to divorce. See Appendix B for the exact wording of the questions. Figure 5 plots the proportion of individuals in the sample by the type of help they would seek (multiple answers were allowed). It shows that almost 100% of men and women reported they would seek help from someone else in the event of non-divorce and divorce land disputes. Importantly, village institutions are mentioned in larger proportions than family and informal institutions (religious leaders and village elders).<sup>27</sup> Remarkably, 80%

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<sup>27</sup>Hamlet *Kitongoji* leaders, typically members of the Village Council, are reported by around 40% of the sample as someone to whom they would ask for help, and *Kitongoji* leaders are members

Figure 5: Whose help would households seek in case of land disputes?



of men and 70% of women say they would ask for help to the village councils (VC, VLC, VLUM) in case of land disputes. The number is lower for divorce disputes, but still represent about half the sample. Finally, the share of our sample who would seek help from higher institutions (Ward tribunal, District Tribunal, High Court) is extremely low. These statistics indicate that the knowledge and interpretation of the law by the VI members is of primary importance for our households, and for progress towards a less discriminatory legal system for women.

## 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

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of at least one village council in 87% of the villages in our sample.

members claimed that men and women are equally represented at the VA meetings. However, household interviews painted a different picture. Table 11 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.<sup>28</sup> 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.<sup>29</sup> 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.

Table 11: Village Assembly Participation

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

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.

<sup>28</sup>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/>.

<sup>29</sup>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.

## 6.4 Village Institutions' Views on Property Rights

Section 6.3 confirmed that household members seek the opinion of VIs in case of disagreements about land ownership. It is therefore important to check whether VI members hold gender neutral views in terms of property rights.

Individual VI members were asked a vignette question about a childless woman who inherits a plot of land from her husband a *shamba* while a male member of his clan claims the land.” The question is very similar to the household childless inheritance *vignette* (the “today” vignette) except that VI members were asked *What do you think that the VLC would recommend?* while household members were asked *What do you think would happen?*. Both individual VI and household members were asked the “custom” vignette: *What do you think would have happened under your own clan customs?* and the same CCRO divorce vignettes. See Appendix B for the detailed questions.

Figure 6: VI's Inheritance Views

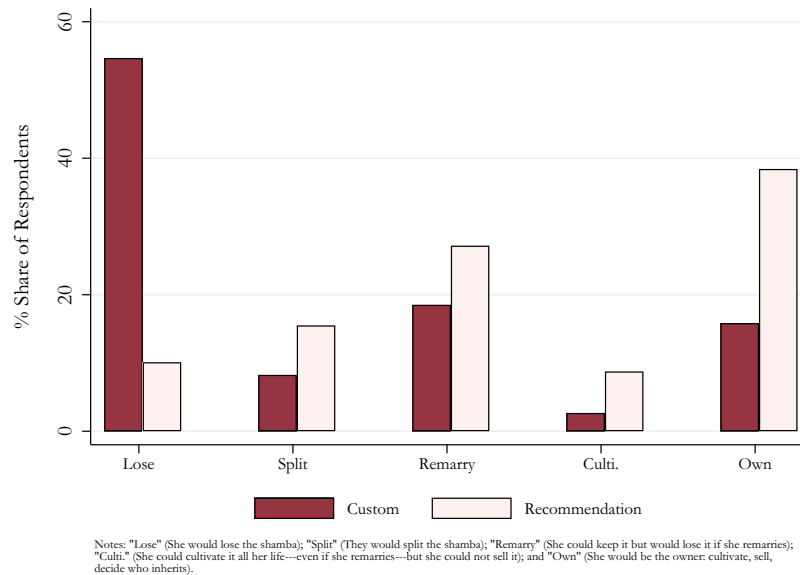


Figure 6 summarizes the VI members' answers to the childless inheritance vignettes. Only 10% think that the childless woman would lose the shamba today if the VLC

made a recommendation, and 38% think that she would fully own it. This contrasts with the much more conservative views VI members report for their clan customs: 55% think that she would lose the land under their own clan customs, and only 16% believe she would be the full owner. There is no difference in beliefs between male and female VI members.

Table 12: Vignettes. Household vs. VI members

Vignette	Men				Women			
	VI	HH	Diff	Obs.	VI	HH	Diff	Obs.
Inheritance, today	4.74	3.24	1.50*** (0.21)	668	4.56	2.37	2.19*** (0.22)	600
Inheritance, custom	3.37	2.92	0.46* (0.27)	669	2.88	2.44	0.44** (0.22)	603
Divorce, joint title	3.73	3.05	0.68*** (0.09)	657	3.51	2.89	0.62*** (0.10)	575
Divorce, male title	2.12	1.94	0.18* (0.10)	660	1.99	1.73	0.26*** (0.10)	576

Notes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The summary statistics are based on the household and VI interviews. Columns (1), (2), (6), and (7) report sample means. Columns (3) and (7) report the differences estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level.

Table 12 contrasts the answers by VI and household members to the “today” inheritance vignette, though, as just explained, the wording slightly differ. Only 10% of the VI members say the childless woman would lose the shamba today if the VLC made a recommendation as compared to 46% of the male and 62% of the female household respondents. In contrast, 38% think the VLC would recommend the wife to be a full owner as compared to the 22.5% and 11.41% of male and female household answers. These numbers suggest that local councils directly involved in inheritance land disputes resolution could reduce discrimination. We see in Table A3 that VI answers to the childless inheritance and the CCRO divorce vignettes are more optimistic about women’s land rights than households, both in contemporary views and in customary practices. Recall from Section 6.1 that this could stem from the higher level of education of VI members, but not because of any

over-representation of relatively more pro-women ethnic groups among them.

Although members of the VIs seem to provide more egalitarian answers than households, we also explicitly tested if they are subject to gender bias when it comes to their judgment as elected members. Each of the 10 individuals interviewed in a village were asked two inheritance vignettes. A first vignette (V1) concerns an hypothetical inheritance dispute between the brother of the deceased and an adult *child* living in the capital. The second vignette (V2) concerns an hypothetical inheritance dispute between the brother of the deceased and the widow with a *child*. See Appendix B for the exact wording. In both these vignettes, the gender of the *child* was randomized. Respondents who randomly got the “daughter” version for the V1 were asked the “son” version for V2 (45% of the respondents), and vice versa.

According to Tanzanian statutory law, there should not be any difference between the two versions (daughter vs. son) of the vignettes. Table 13 presents our main findings. For the second vignette, we find that on average the gender of the child does not affect the widow inheritance right that they would recommend.<sup>3031</sup> Approximately 88% answer they would recommend the wife to keep the land. In the first vignette, however, VI members are 10% more likely to recommend the child to own the land when the child is a son as opposed to a daughter.

Table 13 also reveals an interesting source of heterogeneity. For both vignettes, we interact “daughter” version with whether the ethnic group to whom the VI member belongs to is pro-women in the dimension relevant to the vignette. That is, we

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<sup>30</sup>One caveat of the question is that own/lose were the only options: there was no intermediate answers (e.g. split the *shamba*). There are reasons to believe this might undermine the capacity to capture a gender bias since approximately 50% of the household answers lied somewhere in between the two ownership extremes in Tables A12 and A13. In fact, the results for the first vignette suggest the presence of a bias at least when it comes to daughters inheritance rights.

<sup>31</sup>A second caveat that might rise concern is social desirability bias, as we did not randomize the order of the questions. Respondents were asked either daughter-V1 and then son-V2; or daughter-V2 and then son-V1. We might worry that respondents could adjust their answers to the second vignette according to their answer to their first. The fact that the two vignettes differ in whose inheritance rights are concerned, widows vs. daughters, should alleviate part of the concern. However, in the presence of behavioral effects, our results can be interpreted as a lower bound.



Table 13: VI Daughter Bias and Customary Law

	Vignette 1		Vignette 2	
Daughter Q	-0.10*** (0.002)	-0.16** (0.024)	-0.01 (0.717)	-0.16* (0.093)
Daughter Q $\times$ Inheritance Custom		0.11 (0.152)		0.15 (0.109)
Intercept	0.91*** (0.000)	0.91*** (0.000)	0.88*** (0.000)	0.90*** (0.000)
Daughter Wild Bootstrap p-value	0.00	0.04	0.72	0.10
Interaction Wild Bootstrap p-value		0.16		0.12
N	450	412	450	412
adj. $R^2$	0.02	0.02	-0.00	0.01

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . p-values in parentheses. Standard Errors are robust to heteroscedasticity.

interact “daughter” with  $C_{jvp}$  where  $p$  refers, for V1, to ethnic group  $j$  in village  $v$  traditionally allowing “Daughters to inherit land”; and, for V2, to ethnic group  $j$  in village  $v$  traditionally allowing “Women to inherit land from their husbands.” We report the p-values in parenthesis and show there is statistical evidence suggesting that VI members from ethnic groups holding more conservative views on the relevant practice are more likely to recommend that the brother-in law gets the land when the *child* in the scenario is a girl. Table 13 reports the effect of the randomized version of the vignette, an individual treatment, within our sample.<sup>32</sup>

The biased “daughter” effect is found among all village institutions, but for the VEO who is appointed by the district to the village, see Figure A6. In Appendix A.8, we also show that the “daughter” effect is as pronounced among female VI members as among male VI members. This suggests that the strong gender quota on village institutions put in place by the Tanzanian Law would not suffice to enforce gender egalitarian views. This is consistent with the beliefs expressed in Yngstrom (2002) that VIs, despite their key role, are unlikely to demonstrate particular support for

<sup>32</sup>The standard errors are robust to heteroscedasticity and we assume independence among units. If we wanted to infer the effect of our treatment within the 3 regions that our sample is representative of, we would to cluster the standard errors at the village level (Abadie et al. 2017). The results are similar.

women's land claims. In a case study, Yngstrom (2002) provides an insightful discussion in the context of two villages in Dodoma (Tanzania) that have experienced a village-wide titling intervention (involving adjudication, demarcation and registration of individual plots for the distribution of CCROs). She concludes that women have not fared well in the adjudication of titles, not because the titling process per se would prevent their rights to be recognized, but because they lack institutional support at the local level.

Overall, we find clear 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.

## **7 Conclusion and Policy Implications**

In conclusion, we find that views in terms of women's property rights have evolved, but only up to a point. Patrilineal customary land practices continue to prevail.

In the VILART survey, women own little land on their own. Most of the land over which women have rights is jointly owned with their husband. Most wives and husbands expect the wife to have inheritance rights over a substantial share of the joint land if she became a widow. However, our paper provides evidence that patrilineal practices still matter in terms of inheritance expectations and the fragility of land rights. We find that inheritance rights are often partial and that 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.

Moreover, our findings suggest that these traditional views may retain a significant role and influence in part due to the functioning and views of village institutions.

Village leaders of both genders hold more progressive views on women’s land rights than household members do, but they still fall short of the gender neutral standard held by the statutory law. This suggests that they 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 very 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.

Our finding suggest that a lot of attention should be paid to educating *both* households and VI members about women’s rights to actually 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.

In view of the tension between customary and statutory law in terms of land rights and the strength of customary inheritance patterns that we observed in our sample, we believe that any revision of the National Land Policy should explicitly address widows’ inheritance rights and the rights of divorcees. Dancer (2017) outlines several approaches for the law to improve women inheritance rights: statutory law reform, a constitutionally enshrined equal right to inherit, and a progressive interpretation of current customary law.

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## A Appendix: Tables

Table A1: List of Villages

Region	District	Ward	Village
Katavi	Mlele	Itenka	Dirifu
Katavi	Mlele	Kasansa	Iziwasungu
Katavi	Mlele	Kibaoni	Mirumba
Katavi	Mlele	Litapunga	Kaburonge B
Katavi	Mlele	Litapunga	Kambuzi A
Katavi	Mlele	Litapunga	Mnyaki A
Katavi	Mlele	Litapunga	Msaginya A
Katavi	Mlele	Litapunga	Nzaga
Katavi	Mlele	Mamba	Kanindi
Katavi	Mlele	Nsimbo	Isanjandugu
Katavi	Mlele	Sitalike	Igongwe
Katavi	Mlele	Urwila	Usense
Katavi	Mlele	Usevya	Msadya
Katavi	Mpanda	Mpandandogo	Ifukutwa
Katavi	Mpanda	Mwese	Lugonesi
Kigoma	Buhigwe	Kilelema	Kilelema
Kigoma	Kakonko	Kiziguzigu	Kiyobera
Kigoma	Kakonko	Nyamtukuza	Kinyinya
Kigoma	Kasulu	Asantenyerere	Asante Nyerere
Kigoma	Kasulu	Kurugongo	Kurugongo
Kigoma	Kasulu	Nyakitonto	Nyakitonto
Kigoma	Kibondo	Bitare	Kumhama
Kigoma	Kibondo	Bunyanbo	Samvura
Kigoma	Kibondo	Itaba	Mukabuye
Kigoma	Kibondo	Mabamba	Mukarazi
Kigoma	Kigoma	Kagongo	Kagongo
Kigoma	Kigoma	Kagongo	Mgaraganza
Kigoma	Kigoma	Kagunga	Zashe
Kigoma	Uvinza	Kalya	Kalya
Kigoma	Uvinza	Sunuka	Karago
Mwanza	Kwimba	Ilula	Ilula
Mwanza	Kwimba	Nyamilama	Mwashigi
Mwanza	Magu	Jinjimili	Jinjimili
Mwanza	Magu	Nyigogo	Sagani
Mwanza	Misungwi	Ilujamate	Nyangh'Omando
Mwanza	Misungwi	Lubili	Lubili
Mwanza	Misungwi	Mabuki	Mwanangwa
Mwanza	Sengerema	Kagunga	Nyanzumula
Mwanza	Sengerema	Kalebezo	Kalebezo
Mwanza	Sengerema	Kasungamile	Ilekanilo
Mwanza	Sengerema	Nyanzenia	Luchili
Mwanza	Ukerewe	50Bukanda	Busanda
Mwanza	Ukerewe	Bukiko	Bukiko
Mwanza	Ukerewe	Namagondo	Mukasika
Mwanza	Ukerewe	Namilembe	Bukonyo

## A.1 Summary Statistics

Table A2: Ethnic Groups

Ethnicity	Population	Pop. share	+3 Villages	+1 Majority	Share VCs	Inheritance		Marital	
						Rule	Distribution	Residence	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 A3: Summary Statistics of Households and Village Institutions' members

Variable	Male					Female				
	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 A4: 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 A5: Household Land Acreage by Type of Ownership

				Difference with Male plots	
	(1) Male	(2) He/She/Both Joint	(3) Female	(4) He/She/Both Joint	(5) Female
<b>Plot Characteristics</b>					
Cultivated	0.62	0.72	0.79	-0.10 (0.06)	-0.17* (0.10)
Residential	0.10	0.10	0.07	0.00 (0.02)	0.04 (0.04)
Distance	34.84	29.44	89.23	5.40 (10.52)	-54.39* (30.51)
Wife works	0.47	0.79	0.77	-0.32*** (0.11)	-0.29*** (0.10)
Husband works	0.74	0.87	0.25	-0.13 (0.09)	0.49*** (0.15)
<b>Acquisition</b>					
Post-marriage	0.42	0.68	0.56	-0.26*** (0.10)	-0.14 (0.16)
Purchased	0.42	0.49	0.29	-0.07 (0.07)	0.13 (0.13)
Inherited	0.43	0.20	0.63	0.23*** (0.06)	-0.21 (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 (0.01)	-0.00 (0.02)
<b>Land documents</b>					
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 (0.07)	-0.09 (0.14)
Purchase document	0.13	0.24	0.07	-0.11 (0.07)	0.06 (0.08)
Any government right of occupancy	0.08	0.07	0.00	0.00 (0.04)	0.08** (0.04)
CCRO	0.03	0.01	0.00	0.01 (0.02)	0.03 (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, utility 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 Plots by Type of Joint Ownership

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

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

	(1) Male	(2) He Male, She Joint	(3) He Joint, She Male	(4) Joint	Difference with Male plots		
					(5) He Male, She Joint	(6) He Joint, She Male	(7) Joint
Right to sell	0.03	0.21	0.74	0.78	-0.18*** (0.05)	-0.71*** (0.08)	-0.75*** (0.05)
Right to bequeath	0.03	0.27	0.49	0.68	-0.24*** (0.07)	-0.46*** (0.14)	-0.65*** (0.07)
Right to decide on title	0.02	0.16	0.35	0.27	-0.15*** (0.05)	-0.33** (0.13)	-0.26*** (0.05)

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. Column (5) reports the difference between (1) and (2). Column (6) reports the difference between (1) and (3). Column (7) reports the difference between (1) and (4). The differences are estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level.

Table A8: Women Answers: Women's Land Rights by Type of Ownership in Acres

	(1) Female	(2) Joint	(3) He Male, She Joint	Difference with Female plots	
				(4) He Male, She Joint	(5) Joint
Right to sell in husband's absence	0.56	0.01	0.02	0.54*** (0.11)	0.55*** (0.10)
Right to bequeath	0.67	0.27	0.26	0.41*** (0.15)	0.40*** (0.14)
Right to decide on title	0.79	0.37	0.39	0.40*** (0.12)	0.43*** (0.12)
Right to keep at least 50% if divorce	0.47	0.31	0.08	0.39*** (0.13)	0.16 (0.15)

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 acreage in each ownership category. Column (4) reports the difference between (1) and (2). Column (5) reports the difference between (1) and (3). The differences are estimated with an OLS regression clustering the standard errors, in parentheses, at the enumerating area level.



## A.2 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 A9 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 A9: 2012 Census Summary Statistics by Region

Region	Electricity	Own	Foreign	Literacy	Primary	Child	Child	Agric./Fisher
		dwelling	born			born	survival	
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, <b>Mwanza</b> , 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
<b>Katavi</b> , Rukwa	0.06	0.77	0.03	0.54	0.44	3.46	0.84	0.80
<b>Kigoma</b>	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.

### A.3 Variation in Customary Law

Table A10 shows the proportion of total variation in the clan customs vignettes that is explained by the individual's village, her ethnicity and/or her religion affiliation.<sup>33</sup>

For households, we see that the ethnicity and religion explains as much of the variation in answers to these questions than village affiliation: between 6 and 9% for

<sup>33</sup>Note that we only have a proxy for the religious affiliation. First we asked the individual to consider a situation where there are no formal local institutions (e.g. no VCs or VAs), except for religious leaders, for them to resort to in case of disputes in her family. Then we asked her whose individual help would she seek for in sorting a land dispute in this sort of scenario. The available answers were: i) a priest/pastor; ii) an imam; iii) other religious leader ; iv) refused to answer.

the household. For the village institutions members, the ethnic/religious affiliations explains 13% of the variations while the village affiliation captures 17% of the variation. This suggests substantial variations from one village to the next in customary law within the same ethnic and religious groups.

Table A10: Customary Law Vignettes. ANOVA.

Vignette	Village	Ethnic/Religion
HH: No children	8.66	7.08
HH: Daughter	7.97	6.48
HH: Son	6.35	9.55
HH: Divorce	9.03	9.33
VI: Custom	16.63	12.71

Table A11: Household and VI Vignettes. ANOVA.

Vignette	Village	Ethnic	Village	Ethnic	Religion	Village	Ethnic/Religion
Custom HH: No children	9.02	3.83	8.95	3.77	.17	8.66	7.08
Today HH: No children	7.52	3.54	7.31	3.68	.4	7.23	5.84
Custom HH: Daughter	7.89	4.2	7.87	4.2	.15	7.97	6.48
Today HH: Daughter	5.49	3.9	5.43	3.89	.05	5.46	7.08
Custom HH: Son	6.63	5.46	6.6	5.52	.52	6.35	9.55
Today HH: Son	6.83	4.98	6.63	5	.16	6.54	8.25
Custom HH: Divorce	8.79	6.17	8.85	6.15	.11	9.03	9.33
Custom VI: No children	16.46	7.47	17.08	8.13	.1	16.63	12.71
Today VI: No children	14.12	4.3	14.64	4.85	.59	13.39	8.22

## A.4 Inheritance Vignette: difference across gender

Table A12: Male Household Inheritance Vignettes

Woman ownership	No children		Daughter		Son	
	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

Woman ownership	No children		Daughter		Son	
	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

## A.5 Cause for divorce

Figure A1: Divorce. What would constitute “a fault” of the husband that would justify a change in the ownership?

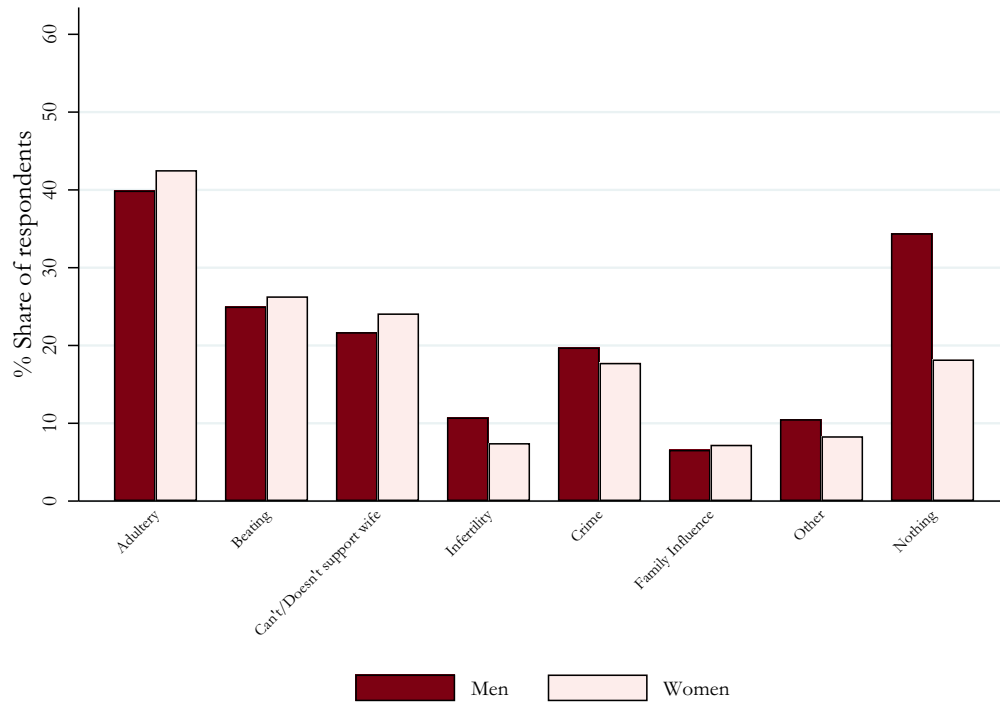
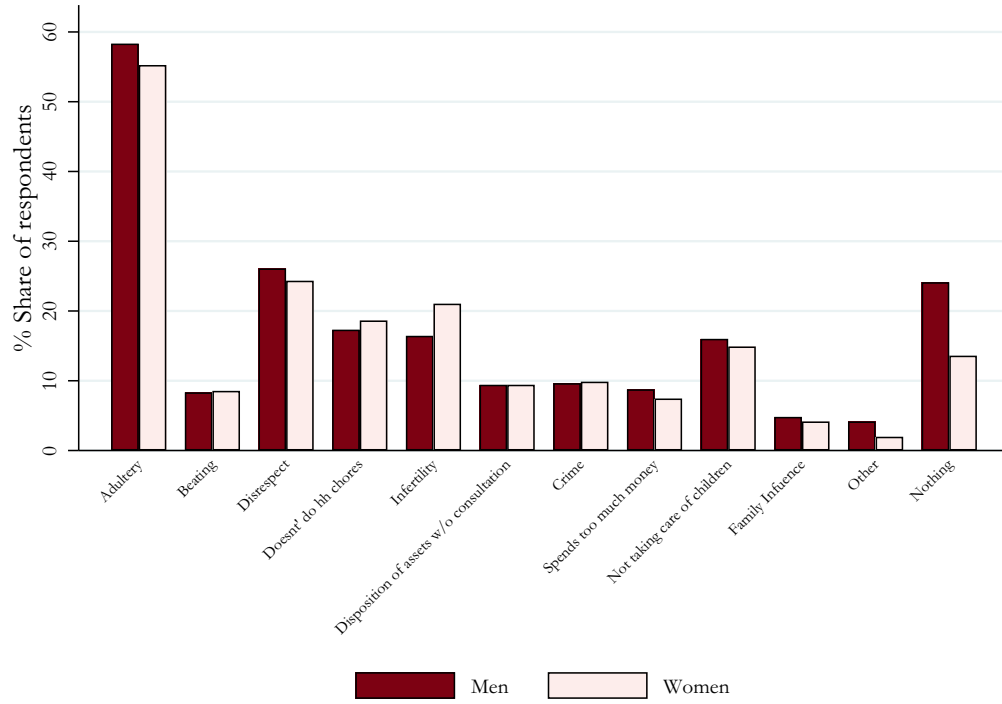


Figure A2: Divorce. What would constitute “a fault” of the wife that would justify a change in the ownership?

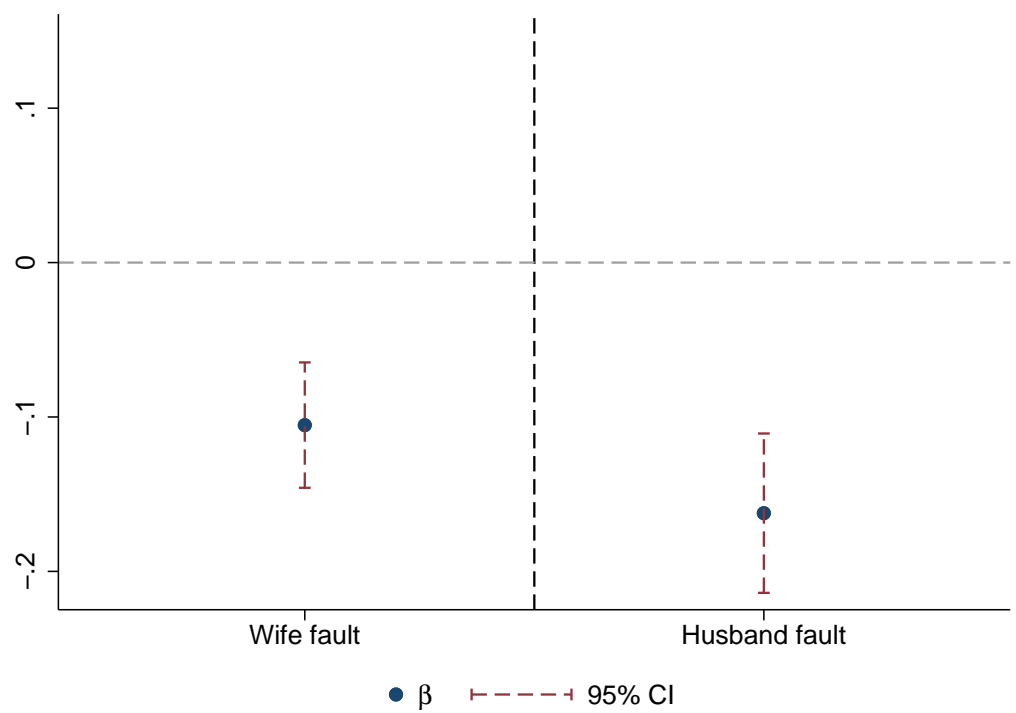


Wife coefficient on fault questions:

$$N_{ih} = \alpha + \beta W_{ih} + \delta_h + \epsilon_{ih} \quad (3)$$

where  $N_{ih}=1$  if individual  $i$  from household  $h$  says there is nothing that could be qualified as a fault from the husband(wife) that could be enough to change ownership.

Figure A3: Wife Coefficient. Nothing would constitute “a fault” of the wife/husband that would justify a change in the ownership



## A.6 Inheritance Expectations

Table A14: 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 wife 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 A15: 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 (5.89)	-12.19 (8.31)	-6.61 (5.69)	-11.64 (8.07)	-11.19 (8.41)	-12.09 (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 wife 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 A16: 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 (5.24)	7.77 (6.35)	7.16 (5.36)	11.02 (7.17)	7.54* (4.45)	5.53 (5.25)	7.62* (4.42)	6.32 (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

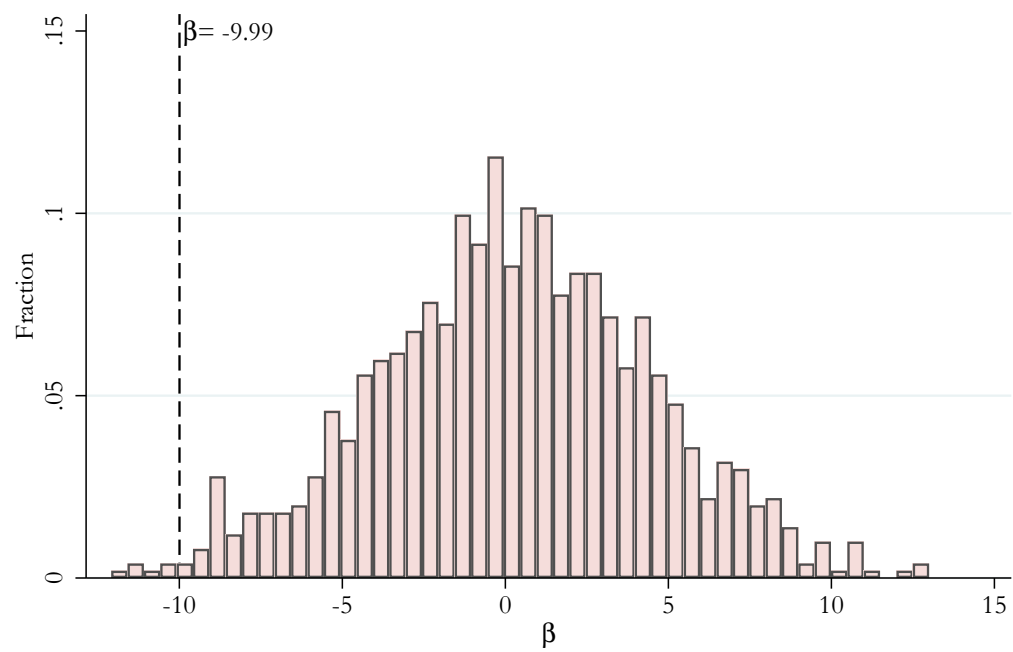
Notes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include 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 wife 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 A17: 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* (4.98)	10.09 (6.74)	9.77* (5.15)	10.19* (5.23)	13.23** (6.54)	8.19* (4.09)	7.80 (5.02)	8.41** (4.03)	8.44** (4.10)	4.68 (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

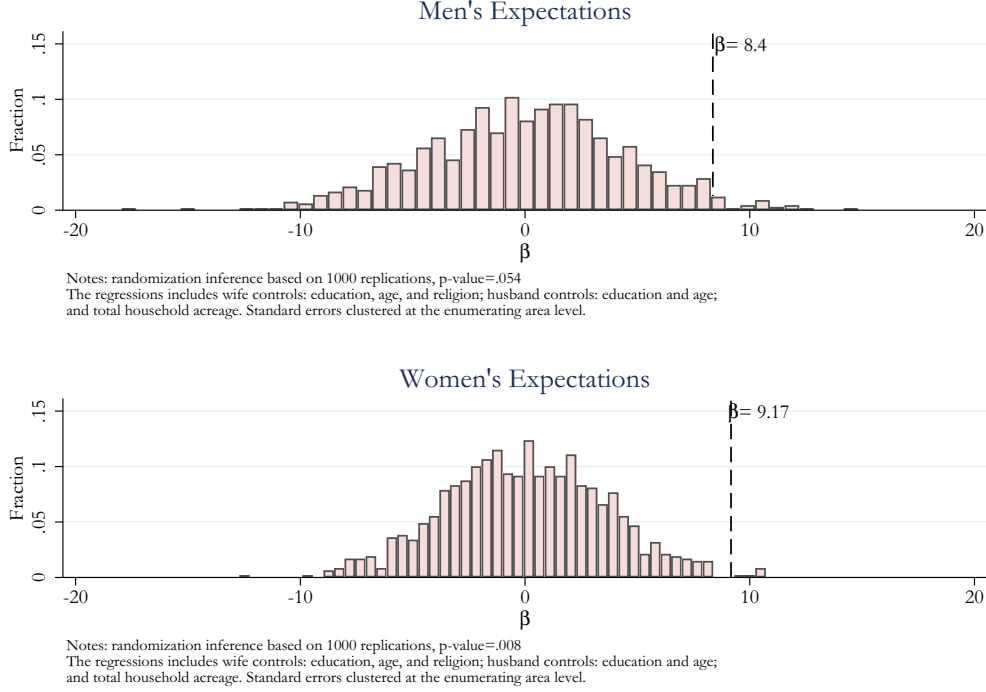
Notes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Standard errors, in parentheses, are clustered at the enumerating area level. All regressions include wife controls: education, age, and religion; husband controls: education and age; and total household acreage. The children controls include 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 wife 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.

Figure A4: 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 A5: Randomization Inference: Effect of Female First Born on Expectations of Wife's Inheritance



## A.7 Pro-women representativeness among VIs

We construct  $Prowomen_{jv}$ , a PCA index of "pro-women" pooling the 4 gendered clan custom practices (women own, wife inherit, daughters inherit, women decide on divorce) and rank by index *within* the village.

We have 182 ethnicity-village observations, though there are 25 without population data because they were not listed during the group interview. This means they also do not have clan custom practices listed. In 58% of the villages, there is variation in the PCA index, i.e. there is at least one ethnic group with  $Prowomen_{jv} = 0$ .

Let  $s_{jv}$  and  $\nu_{jv}$  be the population share of ethnic group  $j$  respectively in the population and in the VIs in village  $v$ . We denote as  $R_{jv} = s_{jv} - \nu_{jv}$  the degree of under/over representation of ethnic group  $j$  in the VI.

To check whether relatively more “pro-women” ethnic groups are systematically less likely (or more likely) to be represented in the village institutions, we run:

$$R_{jv} = \beta * Prowomen_{jv} + \delta_j + \delta_v + \epsilon_{jv}.$$

Table A18: VI Pro-Women Representativeness

	(1)	(2)	(3)	(4)	(5)
<i>Prowomen<sub>jv</sub></i>	-0.71 (1.14)				
Women own land <sub>jv</sub>		-6.08 (5.50)			
Daughters inherit land <sub>jv</sub>			2.36 (6.53)		
Wives inherit land <sub>jv</sub>				-1.26 (3.06)	
Women decide to divorce <sub>jv</sub>					0.09 (4.11)
Intercept	-1.01*** (0.18)	3.66 (4.12)	-2.56 (4.61)	0.64 (3.75)	-0.93 (1.27)
Village FE	Yes	Yes	Yes	Yes	Yes
Ethnicity FE	Yes	Yes	Yes	Yes	Yes
<i>N</i>	136	136	136	136	136
<i>R</i> <sup>2</sup>	0.262	0.270	0.261	0.261	0.260

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Under various specifications, we find no evidence of systematic under- or over-

representation of relatively pro-women ethnic groups.

## A.8 Daughter bias among VIs

### By Gender

Table A19: VI Men Daughter Bias and Customary Law

	Vignette 1		Vignette 2	
Daughter Q	-0.09** (0.02)	-0.11 (0.19)	-0.03 (0.45)	-0.19 (0.11)
Daughter Q $\times$ Inheritance Custom		0.05 (0.56)		0.15 (0.20)
Intercept	0.91*** (0.00)	0.91*** (0.00)	0.90*** (0.00)	0.92*** (0.00)
Daughter Wild Bootstrap p-value	0.03	0.23	0.47	0.12
Interaction Wild Bootstrap p-value		0.57		0.21
N	278	253	278	253
adj. $R^2$	0.02	0.01	-0.00	0.01

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . p-values in parentheses. Standard Errors are robust to heteroscedasticity.

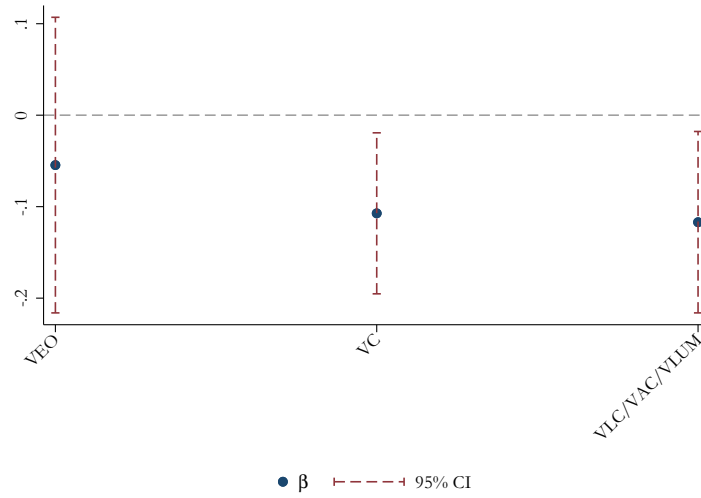
Table A20: VI Women Daughter Bias and Customary Law

	Vignette 1		Vignette 2	
Daughter Q	-0.12** (0.04)	-0.26** (0.05)	0.02 (0.68)	-0.11 (0.51)
Daughter Q $\times$ Inheritance Custom		0.21 (0.12)		0.15 (0.35)
Intercept	0.91*** (0.00)	0.91*** (0.00)	0.85*** (0.00)	0.86*** (0.00)
Daughter Wild Bootstrap p-value	0.05	0.07	0.69	0.51
Interaction Wild Bootstrap p-value		0.14		0.48
N	172	159	172	159
adj. $R^2$	0.02	0.03	-0.00	-0.00

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . p-values in parentheses. Standard Errors are robust to heteroscedasticity.

### By Council

Figure A6: Daughter bias by Institution Membership



## B Variables Description

### 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?
  - (a) Yes, inherit full rights
  - (b) She can use land until remarries



(c) No

5. Husbands make a decision to divorce his wives?

6. Wives make a decision to divorce his wives?

## 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%))

### **Divorce**

CCRO joint title: *Imagine a household where the wife and the husband own a shamba jointly. Imagine they have a CCRO with both husband and wife names written in the title. How likely do you think it is that the wife will be able to own their land if they divorce?*

and

CCRO husband title : *Imagine a household where the wife and the husband own a shamba jointly. Imagine they have a CCRO where only the husbands name is written on the title. How likely do you think it is that the wife will be able to own their land if they divorce?*

The possible answers were:

1. Impossible
2. Unlikely
3. Likely
4. Very likely
5. Extremely likely

## 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.<sup>34</sup>

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?*

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

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<sup>34</sup>During focus group discussion, we were discouraged to put levirate as a possible contemporaneous option.

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?  
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