

**GENDER, PROPERTY RIGHTS TO LAND AND ON-FARM TREE
RESOURCES. A CASE OF MULTI-ETHNIC GROUPS IN KIBAALE
DISTRICT, WESTERN UGANDA.**

BY

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DECLARATION

I, Sarah Mutonyi hereby declare that this research work is original, done by myself and has never been submitted by any person for the award of any qualification in any institution of learning.

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DEDICATION

This work is dedicated to my beloved family.

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ACRONYMS

FAO	Food Agricultural Organization
SIDA	Swedish International Development Agency
DFID	Department for International Development
MDGs	Millennium Development Goals
CIFOR	Centre for International Forestry Research
IRCW	International Centre of Research on Women
ILC	International Land Coalition
WRAP	Women's Resources Access Program
INGO	International Non Governmental Organization
GROOTS	Grassroots Organization Operating in Sisterhood
JWOP	Justice for Widows and Orphans
RWN	Rwanda Women's Network
CLEAR	Centre for Land, Economy and Rights
TRALSO	Transkei Land Service
LEMU	Land and Equity Movement of Uganda
GoU	Government of Uganda
DPU	District Planning Unit
SEEDs	Self Employment and Entrepreneur Society
ODI	Overseas Development Institute
UNU/WIDER	United Nations University/World Institute for Development Economics
IFPRI	International Food Policy Research Institute
ILO	International Labor Organization
ICRAF	International Centre of Research in Agroforestry
ISTF	International Society of Tropical Foresters
DESA	Department of Economic and Social Affairs
IIED	International Institute for Environment and Development

CRED	Centre de Recherche en Economie du Développement
NGOs	Non Governmental Organizations
CDOs	Community Development Officers
CBOs	Community Based Organizations
DFO	District Forest Officer
ASPO	Agency for Personal Services Overseas
URDT	Uganda Rural Development Trust
DDSP	District Development Support Programme
ECA	Economic Commission for Africa

ABSTRACT

Men and women are highly dependent on land and forest resources for survival. These resources are considered as wealth creating and livelihood sustaining assets. The property rights to these resources are important in ensuring food security and poverty reduction. Despite the increasing awareness of the potential of women in development, women all over Africa still face the age-old problem of neglect, inequality and lack of access to productive resources. In Uganda, there is need for both men and women to have equal rights to productive assets such as land and tree resources to achieve Millennium Development Goal 3 by 2015. This study examined the transfer of property rights to land and trees resources between men and women; factors which influenced the gendered access and ownership of these resources between men and women across the multi-ethnic groups in Kibaale district; and the role of secure land and tree rights towards accumulation of other productive assets. The study was carried out in Kagadi Town council, Muhooro and Kyakabadiima sub-counties. Key informant interviews were conducted at community level, focus group discussions at village and semi-structured interviews at intra-household level, where both the husband and wife were interviewed. Data at community and village level was analyzed using mainly content analysis. Multinomial logistic regression was used to determine what factors influenced different modes of land acquisition. Binary logistic regression was used to determine factors that influence gendered access and ownership to land and tree resources. A chi-square test was used to test association between modes of land acquisition, right to land and tree resources verse gender, ethnicity, income sources and age of the respondent. The results revealed that land was mainly acquired through purchase because of the multi-ethnicity and high population pressure that favoured land markets. There was minimal joint land ownership, however, widowed, divorced and women under customary marriage had individual ownership to land. The factors that influenced access and ownership of land were sex and ethnicity of the respondent with natives more likely to own land compared to immigrants and women were less likely to own land compared to men. On the other hand, the factors that influenced ownership to tree resources were sex and marital status of the respondent. Men reported to have more rights to sell and bequeath land and tree resources compared to women. Most respondents reported to have more rights to subsistence use of land and trees resources. The study concludes that property rights to land and forest resources influence the amount of productive assets accumulated. There is need to empower women through education and increasing their sources of income in order to close the gender asset gap. This will probably lead to reduced poverty amongst the rural women and there is need for more research to be done in other parts of the country to come up with comprehensive issues to be addressed by policy.

1.1 Back ground of the study

Property rights to land and forest resources are paramount for the welfare of both rural women and men. Land and forest resources are interlinked resources which are essential for survival of both men and women. In many communities trees are planted to increase tenure security over land (Place *et al.*, 2001; Kisamba-Mugerwa, 1998). Property rights can be referred to as an individual's ability to call upon the collective stand behind his or her claim to a benefit stream (Schlager and Ostrom, 1992).

In most sub-Saharan countries, women and men are also highly dependent on natural resources such as land and forest resources for ensuring food security and welfare. For example, about 90% are dependant on forest resources. This is because the rural people view forests and forest resources as wealth creating and livelihood supporting assets (Adedayo *et al.*, 2010). On the other hand, land is considered the most valued form of property and productive asset, it is a wealth creating and livelihood sustaining asset in rural areas (Agwarl, 2002) but without property rights to these resources many peoples' lives are put at stake.

Property rights to land, forests, livestock and other agrarian resources are critical to the livelihoods of rural men, women and children (Carpano *et al.*, 2007). Insecure property rights perpetuate gender inequalities; livelihood insecurity and poverty (Carpano *et al.*, 2007). Property rights to these resources are important in ensuring food security and poverty reduction which are important in attainment of MDG 1 & 3. MDG 1 about eradicating extreme poverty and hunger while MDG 3 is about promoting gender equality and empower women by 2015. Property rights to different resources differ based on where there are located and management for the case of forests and tree resources. For example studies by Nabanoga, 2005, Gombya-Ssembajjwe *et al.*, 2001 have shown that in government forests women are allowed to access firewood and other non timber products for domestic purposes without any restriction while men can access poles for construction also for domestic use. Access to tree products on-farm will depend on the relationship with the tree owners. The

government of Uganda has undertaken policy reforms to ensure equal distribution of these important resources between men and women.

Uganda has undergone various land tenure law and forest policy reforms since the colonial times. The most recent land reform is the Land Act which was passed last year 2010. All these legislations i.e. the constitution 1994, Land Act, 1998 and Land Amendment Act, 2010, Forest plan (2002), Tree planting Act (2003) and Forest Policy (2001) are aimed at equal distribution of resources between men and women. Where the economy primarily depends on agriculture as in Uganda, studies about land ownership have shown that few women have ownership over productive resources and yet their contribution is high towards food production in terms of labour, for example, women contribute over 70% of the work force. DFID (2007) reported that 17% of registered land titles are in women's names in Uganda. While most authors including a report by SIDA (2009) and Nayenga (2008; FAO, 2004a) show that only 7% of women in Uganda own agricultural land. In most cases, women only have user rights to land, without the possibility to make decision, control, manage and own the land.

It is even worse for forestry; the percentage of women who own forest resources especially plantations is not known. Women can only get access to land through their spouses and male relatives (Meinzen-Dick, 2009); but when they are divorced or widowed they forsake it to their spouses. In regard to tree rights, women only have access to certain products from the tree such as fruits, firewood and fodder for livestock, and commercial products such as timber remain the responsibility of the men. Further, women can have access to certain species, tree products and certain spaces at a given time (Nabanoga, 2005; Rocheleau and Edmunds, 1997).

Despite the existence of various legislations in empowering women, there still exist gender inequalities in relation to ownership of land and other productive assets (Whitehead and Tsikata, 2003). Women are still disadvantaged in both statutory and customary land tenure systems (Agarwal, 1994; Kevane, 2004). They have weak property and contractual rights to land, water, and other natural resources as well as credit facilities. The women whom the legislation is intended to protect are either ignorant about the legislations or there are other factors which have made these legislations inadequate in terms of exercising their rights

towards ownership of land (Whitehead and Tsikata, 2003). This explains the reason as to why there is still a challenge of overcoming poverty in Uganda. Property rights to land and forest resources in many parts of Uganda still remain a challenge including Kibaale district.

The presence of absentee landlords in Kibaale district has caused the general insecurity over land (Assimwe and Norlan, 2001). The women's insecurity in tenure to land results into women's fruits of labour on the land often belonging to their husbands and not to them, living them in a disempowered position (Mukadasi and Nabalegwa, 2007; Kajoba, 2002). For example husbands may misappropriate the proceeds from sale of the crop, trees, livestock and women may not have the ability to influence the distribution of the produce and income from their husbands' fields. This usually has negative consequences on women's ability to maintain household living standards. This could be one of the reasons why there is persistent poverty in most rural areas of Uganda.

The land issues of Kibaale district date back to the colonial times; absentee landlords (Baganda) were allocated land and land titles by the colonial powers. Later, the land was returned to the natives (Banyoro) in 1964. However, the land titles remained in the hands of Baganda landlords. Further, land was allocated to immigrants from Kabale district by the government and over the years the populations of the immigrants has increased to over 50% of the district population who have managed to penetrate the political spheres (Espeland, 2006). In addition to government allocation, Bafuruki (immigrants) accessed more land through purchase from indigenous Banyoro (natives), and clearing bushes and forests (Espeland, 2007 & 2006). These two issues have created tension between the natives and the immigrants. Kibaale district in particular is highly multi-ethnic with about 32 ethnic groups (Espeland, 2007). The studies conducted elsewhere e.g. Irobi (2005) show that multi-ethnicity leads to discrimination and segregation amongst the different ethnic groups towards access to a given resource, with the minority groups suffering most.

1.2 Problem statement

Property rights to land and tree resources are very important for the survival of both men and women. They help to reduce gender inequalities, reduce poverty and improve livelihoods. Access and control over land and tree resources helps to improve investments, provide employment, shelter for the household and sustainable management of these resources. Forest

resources in particular provide enormous opportunities to rural women to earn a living for their families (Adedayo, *et al.*, 2010). However, women are limited by factors such as neglect, inequality and lack of access to productive resources despite the increasing awareness of their potential in development and this has led to high dependency on the male counterparts for support financially. Legislations have been put in place to ensure equal access to productive resources.

The presence of a number of legislations does not guarantee equal rights to these resources. There are other underlying factors that aggravate these inequalities. Studies have been undertaken at household level to understand access rights to land, trees and forests in Uganda. However, just like other parts in Africa; there is inadequate research and information about the gendered ownership of productive assets such as land and tree resources at individual level (Deere and Doss, 2006; Doss *et al.*, 2008 and 2009; Kelkar, 2009). Even the national studies conducted by the Uganda Bureau of Statistics at the household have failed to address the issue of individual asset ownership which is important in understanding the gender asset gap. Little information is also available about the actual patterns of land and forest ownership by gender, factors that influence gendered access and control to land and forest resources. The implications of secure land and tree rights over accumulation of other productive assets and influence of ethnicity towards access to land and forest resources is still inadequate by the fact that Kibaale composed of number of tribes.

The study, therefore examined the nature of rights to land and tree resources held by women and men, and how they are acquired by the user and transferred from one user to another. Further it analyzed the ways how these resources were retained and used to acquire other productive assets for improved welfare. It assessed the different inadequacies in the property rights, access to resources and came up with recommendations for enhancing women's access to and control over land and tree resources.

1.3 Justification of the study

Even where legislation may be in place to strengthen women's property rights, lack of legal knowledge and weak implementation may limit women's ability to exercise their rights (Quisumbing and Pandolfelli, 2009). Property rights are important in increasing economic productivity, raising social standing and dignity. Therefore the findings from this study will

help in addressing the existing gender inequalities toward access and ownership of land and forest resources and possible interventions to overcome them. They will also help in strengthening women's property rights, increase awareness and enhance the implementation of strong policies to address gender inequalities. The information will also guide policy makers in developing policies that address equitability towards access and ownership of resources by both men and women. It will contribute to policies as regards to women empowerment, poverty reduction, social protection and promotion of pro-poor economic growth that will lead to improved livelihoods of rural women. This research will also contribute to achievement of Millennium development goal three (MDG3) advocates for women empowerment. MDG3 states "*Promote gender equality and empower women*" by 2015.

1.4 Objectives of the study

1.4.1 Overall objective:

The overall objective of the study was to analyze the gender dynamics and implications of secure property rights to land and on-farm tree resources among multi-ethnic groups in Kibaale District, Western Uganda.

The specific objectives of the study were to:

1. Analyze practices of acquisition and transfer of property rights to land and tree resources between men and women of the different ethnic groups.
2. Assess the factors that influence gendered access and ownership to land and tree resources by the different ethnic groups; and
3. Analyse the role of secure land and tree rights in access and ownership of other productive assets for men and women.

1.5 Research questions

The study was studied by the following research questions:

- i. How are rights to land and trees acquired and transmitted between men and women?
- ii. What factors affect gendered access and ownership to land and tree resources?
- iii. In what ways do secure land and tree rights influence access and ownership of other productive assets between men and women?

2.1 Introduction

This chapter presents a review of literature about the importance of land and forest/tree resources to people's livelihoods; property rights and their importance to men and women's welfare. The different property right regimes as regards to land and forest resources in Uganda, how these rights are acquired and transferred, it describes the evolution of land and tree tenure in Uganda and its implication to access and ownership of these resources. It further, explains the causes of women's insecure tenure, interventions to overcome these insecurities and lastly how secure or insecure land and tree rights influence accumulation of other productive assets.

2.2 Importance of land, trees and forest resources

Land and forest resources are very important for the survival of rural men and women. There is an increasing understanding of the importance of forests and the forestry sector as a key element in poverty reduction strategies in Africa (Oksanen *et al.*, 2003). Over two-thirds of Africa's 600 million people obtain a major proportion of their subsistence and some cash income from a large and diverse set of forest products and forest-related activities (Arnold and Townson, 1998; Kaimowitz, 2003; CIFOR, 2005). Plants and animals from natural forests, woodlands and planted trees provide ecological services and are used by rural Africans for food, energy, medicine, animal feed, construction, furniture, agricultural implements and utensils. These uses of forest products allow livelihood diversification (Belem *et al.*, 2007; Mamo *et al.*, 2007; Shackleton *et al.*, 2007; Taïta, 2003; Kristensen and Balslev, 2003; Kristensen and Lykke, 2003).

On the other hand, land is recognized as a primary source of wealth, social status and power providing the basis for shelter, food and economic activities (FAO, 2002). Access to resources and services such as sanitation, extension, electricity as well as to make long term

investments in land and housing are often conditioned by access rights to land (Strickland, 2004).

2.3 Property rights, Access to land and trees by women and men

Access is generally defined as “the ability to benefit from things - including material objects, persons, institutions, and symbols” (Ribot and Peluso, 2003). It encompasses both entering into a defined physical property and obtaining products of a resource, in terms of access and withdrawal (Schlager and Ostrom, 1992). Women are often constrained in accessing and controlling land and forest resources, due to the construction of gender identities within households (Agarwal, 1997; Goebel, 1998). But access is not ownership. Women’s ownership or rights of use can be guaranteed only through land and property rights that relate to an enforceable claim, ensuring women’s freedom to rent, bequeath or sell the property (Strickland, 2004). Ownership of property such as land, housing and other property provide both direct and indirect benefits such as secure dwelling, means of livelihoods and measures wealth or capital which additional economic resources can be leveraged. However, in countries where women’s property rights are legally conveyed, differences in the application of the statutory and customary laws mean that women’s property rights still may not be guaranteed (Strickland, 2004).

Property rights to land can be transferred through various means; inheritance, purchase, lease, rent, gifts and mortgage. The critical mode of property transfers in sub-Saharan Africa is through inheritance (Cooper, 2011; Cooper, 2010a; Cooper, 2008; UN Habitat, 2006; Platteau and Balland, 2000). However, where there is increasing population pressure, a more mobile population, growing market integration, access to land through family lineage and community membership tends to give way to individualization of property rights and access to land is through land sales and land rental markets (de Janvry and Sadoulet, 2001). Inheritance is where property is passed on to the children by parents or any other person. It operates where land frontiers are still closed, limited land markets and where large-scale land redistributive programmes have not been implemented. However it may also operate where land markets are well established and where land reforms are extensive (de Janvry and Sadoulet, 2001).

The transfer of property such as land differs between men and women, even across natives and immigrants. Women may have access to property such as land and other assets through informal arrangements or traditional methods of household and communal decision making; such practices vary greatly from country to country and community to community. In Latin America, women become landowners mainly through inheritance while men do so through purchases in land markets (IRCW, 2005). In South Asia, however, women traditionally do not own property because land is inherited through the male family line. In the Middle East and North Africa, inheritance laws and practices are based on Sharia law, which defines the shares that go to each family member: a woman's share is half that of the man's in cases of both a male and female heir. And in most parts of sub-Saharan Africa, women historically have enjoyed access rights to land and related resources through a father, brother or husband, depending on a community's lineage system (IRCW, 2005).

2.4 Land and tree tenure

Land tenure refers to a set of actions aimed at controlling the use of land (Adeyoku, 1975), Osemeobo (1993) and Persons (1970) defined land tenure as the systematization of the rules which operates by specifying what different classes of person may or may not, must or must not, do with reference to occupancy, use, abuse or disposition of land. Thus land tenure affects (a) who owns the land (b) the way the land is used, managed and protected and (c) the size of individual land holdings. Land tenure security, refers to enforceable claims on land, with the level of enforcement ranging from national laws to local village rules, which again are supported by national regulatory frameworks (IFAD, 2008). It refers also to people's recognized ability to control and manage land— using it and disposing of its products as well as engaging in such transactions as the transferring or leasing of land (IFAD, 2008).

Land and tree rights to men and women differ greatly across Africa; women's rights to land are highly limited (Kiptot and Franzel, 2011). This is because most of the land tenure systems grant rights to own and dispose land to men (Place, 1994). Women's rights to land are tied to their relationships with male counterparts and these are lost when the relationship is severed through divorce, death of the husband or failure to have a son (Meinzen-Dick, 2009; Gray and Kevane, 2008). In patrilineal societies such as in Uganda; land is passed to sons and not daughters. Even after many land reforms, studies conducted in different parts of the country show that land can only be passed on to sons and less to daughters (Lastarria, 2003;

Kisamba- Mugerwa, 1989). Women basically have rights to use land and rights to bequeath and sell are typically limited with the exception of few cases.

Tree tenure is a right to use and own trees (Kiptot and Franzel, 2011). As noted by Kayode (1996) land and tree tenure are closely correlated. However, there are some differences between tree and land tenure. Even though trees are sometimes assumed to be 'fixtures' which like buildings are owned by whoever owns the land, trees are however objects of property rights which like minerals are separable from the land on which they are located (Kayode, 1996). As such tree tenure can be described as the right of individuals or group of individuals to use trees and tree products and/or inherit trees. It also includes the right of control over trees such as the exclusion of others from the use of trees and tree products as well as the rights to dispose off trees and their products (Bruce, 1989). Tree tenure is as complex as land tenure (Kayode, 1996). Rights in a tree may be distributed among several individuals. One person may be considered as the owner of a tree and have exclusive right to chop it down or collect the firewood, but many other people may have the right to collect fruits or leaves (FAO, 1994). Rights to trees among men and women differ based on the economic value derived from the tree however individuals retain private property rights over the trees as long as they have rights to the land (Kiptot and Franzel, 2011). Women and men will have different rights to given species and even on the different parts of the tree and they vary over time and among different communities.

According to Rocheleau and Edmunds (1997), wives among the Luo community of western Kenya have rights of collection and use of fruits, but are restricted from harvesting fuel wood of high value timber trees such as *Markhamia lutea* and *Albizia spp.* In Uganda, a study by Howard and Nabanoga (2005), reported that women had right to collect fire wood from *Ficus natalensis* while bark cloth was entirely for men. Nwonwu (1996) noted that among the Ibo of South eastern Nigeria, women own economic trees such as the palm oil as a reward from their husbands for their ability to bear children. For every child born, a palm tree is set aside in the communal farmland to mark the arrival of the child. However, when a child grows he takes over the palm tree.

2.5 Land and Tree Tenure in Uganda

Similar to most parts of Uganda and indeed other parts of sub-Saharan Africa, land is not just an economic asset. It has a very high 'existence value' that confers social status and cultural identity to those that inhabit and do farming on it. In Uganda, land is a contentious issue as a result of increasing population and commercialisation. Land access and ownership in Uganda has been governed by a set of laws that have evolved overtime.

2.5.1 Evolution of land tenure in Uganda

Land tenure systems have evolved during pre-colonial, colonial and post-colonial systems and these have guided access, management and transfer of land (Gombya-Ssembajjwe *et al.*, 2001). During the pre-colonial period, land was accessed and transferred under the guidance of social norms as per the prescribed community under the clan heads. Access to land depended essentially on the membership to the clan and control was vested in the clan head or the committee of elders. In this system land access by women was restricted to usufruct rights only. This system promoted marginalization of women as land would only be passed to the customary Heir who in most cases is a male (Gombya-Ssembajjwe *et al.*, 2001).

With the coming of the British in 1900, they introduced more three land tenure systems i.e. freehold, leasehold and mailo tenure systems. Despite the introduction of these systems customary land tenure system continued to exist and most of the land in Uganda is held under this tenure system. Land tenure systems in Uganda are discussed in detail as follows:

Customary tenure system is a system of land ownership governed and regulated by customary principles and usually sanctioned by customary authority (Mugabwa, 2002). The individuals' access to and use of the land is determined by the customary rules of the tribal or clan group to which an individual belongs. This system does not recognize individual ownership of land though this has changed even in areas where customary tenure was predominant there is private land ownership. This system recognizes the various rights of the individual to possess and use land subject to the supervision of the clan or community leadership. Individuals' have no right to sell the land.

Freehold tenure involves perpetual existence and full ownership of land where an individual has all powers of ownership over the land (Mugabwa, 2002). These include right to use,

develop, sell, dispose it by will, mortgage and create rights of interest for other people. It is a more formalized form of land ownership allowing both non-citizens and citizens to own land. Freehold tenure is limited to few parts of Uganda such as Ankole, Bugisu, Toro and Kigezi (Gombya-Ssembajjwe *et al.*, 2001).

Leasehold tenure is a form of tenure whereby one grants to another a right to exclusive possession of land for a specified period of time (Mugabwa, 2002). This may be in return for a periodic payment of money called rent. A lease can be granted to non-Ugandans for a maximum period of 99 years. The lessee is entitled to exercise all powers of the land owner as are appropriate to the type of lease as subject to terms of the lease.

Mailo tenure system was introduced in Uganda by the British in 1900 (Mugabwa, 2002). When the Kabaka (King of Baganda) made an agreement with the British, it is a modified form of freehold tenure. Under this agreement, about 19,600 square miles of land equivalent to 50,760 km² in then Buganda was divided among the Royals, Notables, Chiefs and individuals, missionary societies, Buganda administration, townships, central government forests and the queen of England known as the crown land. The word 'mailo' was derived from the square mile unit of measurement used in the allocation of land. This form tenure, it entails holding registered land in perpetuity. It is different from freehold tenure in that it is subject to customary and statutory rights of lawful or *bonafide* occupants of land.

After the *1900 agreement* there were a number of laws that were passed to enable the management of land in Buganda and other parts of the country. For example the *Buganda Land Law of 1908* which disallowed a mailo owner from transferring his land to a person not in the protectorate without consent of the governor and the Buganda legislature; the *Busullu and Envujju Law of 1928* that fixed the rent and tribute payable to the mailo owner by the tenant and unlimited freed of the mailo owner to evict tenants. These were abolished during the *1975 Land Reform Decree* under the Rule of President Idi Amin. Under this Decree all land was declared public land and the power to manage and allocate land was vested in the Uganda Land Commission (Gombya-Ssembajjwe *et al.*, 2001).

Other laws were passed under the customary tenure such as the *Crown Lands Ordinance, 1903* and the *public Lands Act 1962 and 1969* (Gombya-Ssembajjwe *et al.*, 2001).

Under British protectorate administration all land was crown land with the exception mailo land. Rights by indigenous people to occupy any alienated crown land outside Buganda and urban areas without permission from government with guidance of customary law and the Governor had power to sell or lease this land to any person (*Crown Lands Ordinance, 1903*). Under the 1962 *Public Lands Act*, the customary occupants on public land were very vulnerable to evictions. The 1969 *Public Lands Act* gave protection to lawful customary occupants on customary land.

2.5.2 The Constitution of Uganda, 1995; Land Act, 1998 and Land Amendment Act, 2010

The 1995 *Constitution of Uganda* all the land is vested in the citizens of Uganda and this land is to be owned under freehold, mailo, leasehold and customary tenure. Non-citizen may own land only under leasehold. It clearly spells out four tenure systems and recognizes the *Lawful* and *Bona-fide* occupants on mailo tenure. The land act amendment (2010) that protects the *Lawful* and *Bona-fide* occupants from eviction.

The bundle of land rights in any tenure regime consists of three types of rights: use rights, exclusion rights and transfer rights (Lastarrial, 2003). In central Uganda, there are basically three tenure regimes; State ownership, Mailo (freehold) and customary tenure regimes (Howard and Nabanoga, 2005). The state owned land is mainly under the forest reserves. Mailo tenure is a form of freehold which was created by British colonialists which allocated land in perpetuity to mainly Baganda Royals especially chiefs (Espeland, 2008; Howard and Nabanoga, 2005; Lastarrial, 2003; Gombya-Ssembajjwe *et al.*, 2001). The predominant tenure system in Kibaale district is Mailo tenure, stemming from colonial times. This was a result of British colonialists who allocated Baganda elite large tracts of titled land in Bunyoro Kingdom referred to as the 'lost counties' as a reward in assisting them to defeat Bunyoro Kingdom (Espeland, 2006). However, later on in 1964, the Baganda elites were forced to leave by the Banyoro and this land was returned to Banyoro but with out land titles. The mailo owners are predominantly absentee land lords and the land is cultivated and inhabited by tenants who occupy and use (under specified conditions) parcels of land locally/commonly known as *Kibanja* holders (Assimwe and Norlan, 2001). The issue of land in Kibaale is still controversial between the Banyoro and immigrants (Bafuruki) because of insecurity in the land tenure.

The 1998 *Land Act* introduced the land fund to ensure all tenants in Uganda to acquire registered interests on the land they had tenure rights and for Kibaale this was meant for the Banyoro to purchase land from the Baganda landlords. This has however not worked because. The government promised many times to purchase land from the absentee land lords but this is still pending. Since 1960s', when the formal land owners were evicted, they have never had control rights over land and have been declared absentee landlords.

According to Espeland, 2006; Kibanja rights are sold without any consultation from the government or absentee land lords. In 1970s' the government resettled the immigrants from Kigezi which by then was over populated. Ever since other people have voluntarily migrated and settled in Kibaale, the Mubende Banyoro Committee which spear headed the eviction of the Baganda land lords argues that formalisation of land holdings would help to control the Immigrant situation. The Immigrant settlements have been referred to as land grabbing, corruption and encroachment.

2.5.3 Forestry policy reforms and tree tenure in Uganda

Uganda has undergone various forest policy reforms which have controlled the ownership of forest and tree resources. The first forest policy was in 1929, 1948 and then after independence there was the forest act of 1964. This was followed by other forest policies in 1971, 1987 which was expanded in 1989. This led to the current forest policy of 2001. Before the coming of the British access and control of the forests were vested in the in the kings and chiefs. During the colonial period, control of forest was vested into the colonial government all forests were declared property of the crown and the natives had only access rights to collect forest produce for domestic use. The policies emphasized production and protection.

All the policies and acts after independence vested the powers of control of forest resources in the state even for trees referred to as reserved species on private land were controlled by the state. The indigenous people had little or no participation in tree and forest management. This led to the current Forest policy, 2001 that provides increased participation of communities in forest management irrespective of the forest owner. According to Forestry policy (MWLE, 2001), women are disadvantaged in security of tenure, in many communities they cannot easily inherit land compared to male counterparts and are rarely involved in decision-making over natural resource management or the management of household income.

2.5.4 Gendered access and ownership to land and tree resources

Women and men have different roles and responsibilities they play in the society and these determine what resources they have access and control to (Nabanoga, 2005). However, these roles and responsibilities change according to situations. A study conducted by Nabanoga (2005) in the Central Uganda revealed that cultural norms tend to presume that men provide cash for the provision of shelter, to buy goods for the household that are not produced by the family, to pay school fees, and for all cash outlays. While women are responsible for provision of subsistence needs to the family, they have however had assumed men's role due to male migration to cities to seek for employment.

Women in poor households where men cannot fully provide cash needs were involved in income generating activities. Division of labour and responsibilities was based on age and sex with women and children above ten years being involved in collection of firewood for domestic use. While certain activities were predominantly for women and others for men for example collection of crafts while charcoal making was predominantly for men (Nabanoga, 2005). Legally, local people are allowed to non-timber products in reasonable quantities for domestic use from forested landscapes.

Rights with regards to trees are numerous. Under private property, the land owner has the right to plant trees, pick fruits or gather leaves from the trees, cut down trees or gather firewood (Kisamba-Mugerwa, 1998). Whoever has these rights varies under different tenure systems. In some communities, for example, persons are permitted to pick fruits from trees on communal land or to gather firewood in communal woods. No one is allowed to cut down a tree without permission from the appropriate authority. On lands allocated by community to men, that person can plant trees and cut them down. However, the wife has only user rights to cultivate the land and may be allowed only to harvest fruit or cut boughs for livestock. Studies conducted in the central region show that gender equity with regard to land rights has not improved significantly. Women and men are expected to have equal land rights within the freehold system. However, ownership of land by women still remains low and husband prefer to pass the land to daughters rather than wives (Kisamba- Mugerwa *et al.*, 1989).

2.6 Factors influencing gendered access and ownership to land and tree resources

Land access and ownership is dependant on a number of factors and this may vary depending for example: marriage, age, income, and access to credit. Men can easily access land through inheritance whereas women mainly access land through marriage because women access land through this means it makes them highly dependant on their spouses in terms of access to land for livelihood activities (Afutu-Kotey and Adjei-Holmes, 2009). In some areas, even where there are lease arrangements some communities require a male representative to be present in order to acquire land, this complicates the land transaction processes. This means marriage is a key determinant for women's access to land.

Economic status; purchasing and leasing arrangements tend to marginalize women in their bid to access land. There are complicated processes which are making it hard for women with less bargaining power to access land. High land prices prohibit women from owning land; money of great concern for women to gain access to land (Afutu-Kotey and Adjei-Holmes, 2009)

Access to forest products is also influenced by a number of factors and these may include: age of the household head, ethnicity, occupation, and sources of income (Coulibaly-Lingani *et al.*, 2009). Age- forest access relationship depends on the type of forest products the respondents are gathering. Active age groups between 25-45 years have higher access to fuel wood collection compared to other age groups (Coulibaly-Lingani *et al.*, 2009). Fairly larger household sizes i.e. 10-20 members have higher access to Non Timber Forest products than smaller or larger household size. This is because of motivation dependency to forest products. Migrants had low access to forest products compared to indigenous people because migrants cultivate land acquired by gift or by informal renting agreements, the owner may reserve rights to access tree products, such as fruits of *P.biglobosa* and *V.paradoxa* (Boffa, 1999; Pare', 2001). However, some migrant groups have stayed in a village for a long time they have been accepted and integrated into the traditional system. Income sources will influence access to forest products. Higher incomes within relevant range of income increases dependency to forests. Individuals involved in farming or livestock husbandry have high access to forest for fuel wood collection and grazing.

2.7 Causes of women's insecurity of tenure

Women's rights are especially insecure due to traditional social norms, customary laws and practices and unequal gender power relations (Carpano *et al.*, 2008). Gender- biased laws remain one of the primary barriers to secure land rights in many countries (USAID, 2005). But even where women have legal entitlements to ownership, tradition and patriarchal norms prevent them from exercising their legal rights or having them enforced. Another major constraint is that women and men are often unaware of their rights or they lack access to legal system to enable them claim their legal rights (USAID, 2005). Furthermore, women lose the rights acquired on the land and natural resources used for their livelihoods as a consequence of their husbands' death, in case of separation or divorce, or forced displacements or migrations (Action Aid, 2010; USAID, 2005). In many patriarchal societies, as it is case of Uganda women have access to land through the male counter-parts. Married women always have full access rights to land when they are in still married status (URDT, 2008; Nayenga, 2008).

2.8 Relationship between secure land and tree rights to productive assets

Land issues affect the everyday choices and prospects of poor rural women and men. Secure tenure over land enables women to have a right to use the land and control the proceeds from the crop. Further it can be used as a mortgageable asset or collateral during the periods of crisis. It offers self-employment income, protection against domestic violence and increase in the share the household can spend on the children. Studies conducted in Africa show that insecure tenure increases the vulnerability of women to HIV/AIDS (Grown *et al.*, 2005), Chadha (1992) found that individuals who owned land generated much higher rural nonfarm earnings from self-employment than did those without land. Research in Kerala, India, found that 49 percent of women with no property reported physical violence, whereas 7% of women with property did, controlling for a wide range of other factors such as household economic status, education, employment, and other variables (Panda, 2002).

Having assets in the hands of women has other welfare impacts. Some studies have found that it increases the share that households spend on children's well-being. In Bangladesh and South Africa, for instance, a study by Quisumbing and Maluccio (2003) found that the assets that women bring into a marriage, though fewer than those that men bring, play a significant

role in household decision making (Quisumbing and Maluccio, 2003). Even in societies such as in Bangladesh where husbands control most household resources, expenditures on children's clothing and education were higher and the rate of illness among girls was lower in households where women owned assets (Quisumbing and *de la Briere*, 2000; Hallman, 2000).

Land access and tenure security influence decisions on the nature of crops grown – whether for subsistence or commercial purposes, what is to be consumed or sold (Adam, 2001). They influence the extent to which farmers are prepared to invest in improvements in production, sustainable management, and adoption of new technologies and promising innovations. Success of future endeavours to promote new agricultural technologies for climate change mitigation and/or adaptation will be predicated by the security of tenure. Land also acts as collateral and thereby influences people's access to financial services and their capacity to take advantage of markets (IFAD, 2008; FAO, 2000). There is a high propensity for the farmers to invest in tree planting, manuring, soil and water conservation and other 'permanent' improvements. Conversely, insecure tenure is associated with the rapid destruction of natural resources and land degradation (Adams, 2001).

Security of tenure is the key to having control over major decisions, such as what crops to grow, what techniques to use, what to consume and what to sell. Without this, women cannot access credit and membership of agricultural associations, particularly those responsible for processing and marketing (ECA, 2004). Their access to technological inputs is limited; they are frequently not reached by extension services and are rarely members of cooperatives, which often distribute government subsidized inputs and vital market information to small farmers. In addition, they lack the cash income needed to purchase inputs even when these are subsidized (ECA, 2004).

2.9 Interventions to overcome gendered inequalities towards ownership of land and forest resources

2.9.1 Raising awareness

Many non-governmental organizations have been involved in raising awareness amongst women over their land rights. Women are educated about their legal rights through various mechanisms such as workshops, publications and the media. Examples of such organizations include; International Land Coalition (ILC) through the WRAP (Women's Resources Access Programme) that has been operating in Nepal, Kenya, Indonesia and Uganda (Knox *et al.*, 2008). Other organizations include; Oxfam America, Rural Development Institution. These organizations help in improving their knowledge of statutory laws among communities such that people can have formal and informal authority to interpret and enforce laws and resolve conflicts.

2.9.2 Building capacity

In addition to raising awareness some organizations have trained women, for example, in writing wills and involving them in drama activities that address women's property and inheritance rights. These organizations include; Huairou Commission, an INGO (International nongovernmental organization), and Grassroots Organizations Operating Together in Sisterhood, Kenya (GROOTS), an NGO, brings women together in workshops or peer exchange forums to increase their capacity to advocate for their rights. Hlomelikusasa in South Africa provides public education to women on their legal rights regarding marriage and inheritance and trains women to draft wills through its "Skills for the Future" program. The Justice for Widows and Orphans Project (JWOP), a network of NGOs in Zambia, establishes community-level support and advice groups among women and trains them on property laws and writing wills. In Zimbabwe, Ntengwe for Community Development engages women and girls in drama activities that address property and inheritance rights.

2.9.3 Provision of Legal and Financial assistances

Women lack resources to go to courts to pursue their rights. Therefore, NGOs have come up with mechanisms to support women claim their rights. Organizations with access to legal

expertise provide free or low cost legal aid, strategic litigation and monitor compliance. Some organizations assist women in securing their legal rights including property and inheritance rights. For example Asian Peru Foundation an INGO provides direct legal services. It advocates for reduction in fee for women to pay when they register immovable assets.

Provision of legal support and services by training community members as paralegals and provide legal assistance. They further help in facilitating the process of acquiring necessary legal documents such as marriage certificates, ensuring issuance of death certificates, oral and holographic will and memory books. For example; memory books are used by Rwanda Women's Network (RWN) and GROOTS Kenya. Some mobilize female headed households to defend their housing rights and provide microcredit services to help recover forced evictions e.g. Social and Economic Rights Action Centre an NGO in Nigeria (ILC, 2006).

2.9.3.1 Advocating for women's rights in policy

Various organizations have advocated for inclusions of issues concerning women's rights during policy reforms. For example CLEAR (The Centre for Land, Economy and Rights of Women) chaired a group that advocated for women rights in the Kenyan parliament on the land policy formation process to ensure women's property rights were articulated in draft proposals. In countries undergoing land and agrarian reforms, organizations work in various capacities to ensure gender equitable policies in land redistribution (WLLA, 2008).

2.9.4 Addressing Cultural and Religious norms

There are few organizations addressing cultural and religious norms and these greatly affect the implementation of statutory law. Some organizations involved in educating the statutory law are now involved in educating on customary and religious laws. For example, EMACE in Sri Lanka educates women in Theswalam, Kandian and Islamic personal laws. Most organizations that address customary and religious laws focus attention on changing the norms and attitudes of local leaders and administrators so that laws are enforced and applied in women's favour (WLLA, 2008). Transkei Land Service Organization (TRALSO) in South Africa and LEMU (Land and Equity Movement of Uganda) exclusively focus on changing local customs and norms. LEMU attempts to revive earlier traditions of customary law that ensured women's rights to land and men's obligation to protect women's welfare. Adoko of LEMU explains, "They tackle the problems of women from a structural angle, recognizing

where power lies.”LEMU operates in the Northern and Eastern parts of the country (Adoko and Levine, 2005).

2.9.5 Efforts in Uganda to address gender inequalities toward land and forest resources

There are various efforts that have been undertaken by Uganda to ensure equality towards access and ownership of land and forest resources by both men and women. These efforts have been undertaken by both government and non governmental organizations (NGOs). For example NGOs such as Land Equity Movement of Uganda (LEMU), International Land Coalition and Uganda Land Alliance, LEMU operates in the Northern and Eastern part of Uganda; Uganda land Alliance has its activities in different parts of the country including Kibaale district and International Land Coalition (ILC) through the WRAP (Women’s Resources Access Program) and other organizations

2.10 Implementation of Policies and Failures

Uganda has a developed and implemented various policies and laws concerning land and forest resources. Uganda’s 1995 Constitution is claimed to be one of the most gender sensitive constitutions in Africa (Action Aid, 2005). Article 21 prohibits sex discrimination, ensures equality before law and equal protection under the law. Article 31(1), on marriage law, guarantees equal rights to both men and women at commencement, during and at marriage’s dissolution. Moreover, Article 31(2) directs parliament to make appropriate laws for protection of rights of widows and widowers to inherit property of their deceased spouses (Rugadya *et al.*, 2004).

Article 26(1) of the constitution allows women to own property individually and communally while carrying out real estate transactions. Article 33(6) states, “Laws, cultures, customs or traditions which are against the dignity, welfare or interest of women or which undermine their status are prohibited by this constitution” (GoU, 1995). According to the succession Act, women are entitles to 15% of their deceased husbands’ property if legally married, as are widow as are widowers. However, this is not the case in practice for example widowers normally take 100% of the wife’s property (FAO, 2004a).

2.10.1 Land Act, 1998

Article 237, in constitution, Consent clause only protects women with husbands and other categories of women are left out. This measure is not enforced by officials who govern land sales, the efforts of consent clause are not full understood by LCs in the case of customary tenure. The act did not give specific responsibility to any individual to ensure or verify that there is consent. These make women to generally have insecurity over land despite the existence of the law (Adoko and Levine, 2005). Ugandan women have a full legal capacity and may enter into contract for purchase of land with any individual under their own names (FAO, 2004a). Despite these gender sensitive legal frameworks ownership to property especially land and forest resources still remains a challenge women can not easily own land and forest resources.

3.1 Introduction

This chapter presents a description of the study area and methods. The first part presents the location and size of the study area, rainfall and temperature patterns, soils and vegetation, socio-economic and demographic characteristics. The last part presents the sampling design and selection of sample size, methods used in data collection and the data analysis.

3.2 Study Area

The study was carried out in Kibaale district located in western Uganda. Kibaale district was selected as the study area because it was part of the “big project” that funded the research, to enable comparison with other study areas of the project, verification purposes to the data that was collected and multi-ethnicity aspect. The district is comprised of 5 counties; Bugangaizi west, Bugangaizi east, Buyaga east, Buyaga west and Buyanja (*District planning unit, 2010*). The study was carried out specifically in Kagadi Town Council, Kyakabadiima and Muhooro sub-counties. These sub-counties were selected because they provided a clear representation of the different ethnic groups. *See map in figure 3.1.*

3.2.1 Location and size

Kibaale district is bordered by Hoima district to the north, Kyankwasi district to the north east, Mubende district to the east, Kyegegwa district to the south east, Kyenjojo and Kabarole district to the south west and Ntoroko district to the east (*Figure 3.1*). The district lies 215 Km west of Kampala, the capital city of Uganda. It is located between latitudes $0^{\circ} 37' - 1^{\circ} 13'N$ of the Equator and longitudes $30^{\circ} 33' - 31^{\circ} 33'E$. The district covers an area of $4,400\text{km}^2$. Kibaale lies on the central Plateau of Uganda with an altitudinal range of about 680 - 1500 metres above sea level (Sempagala-Mpagi, 2008).

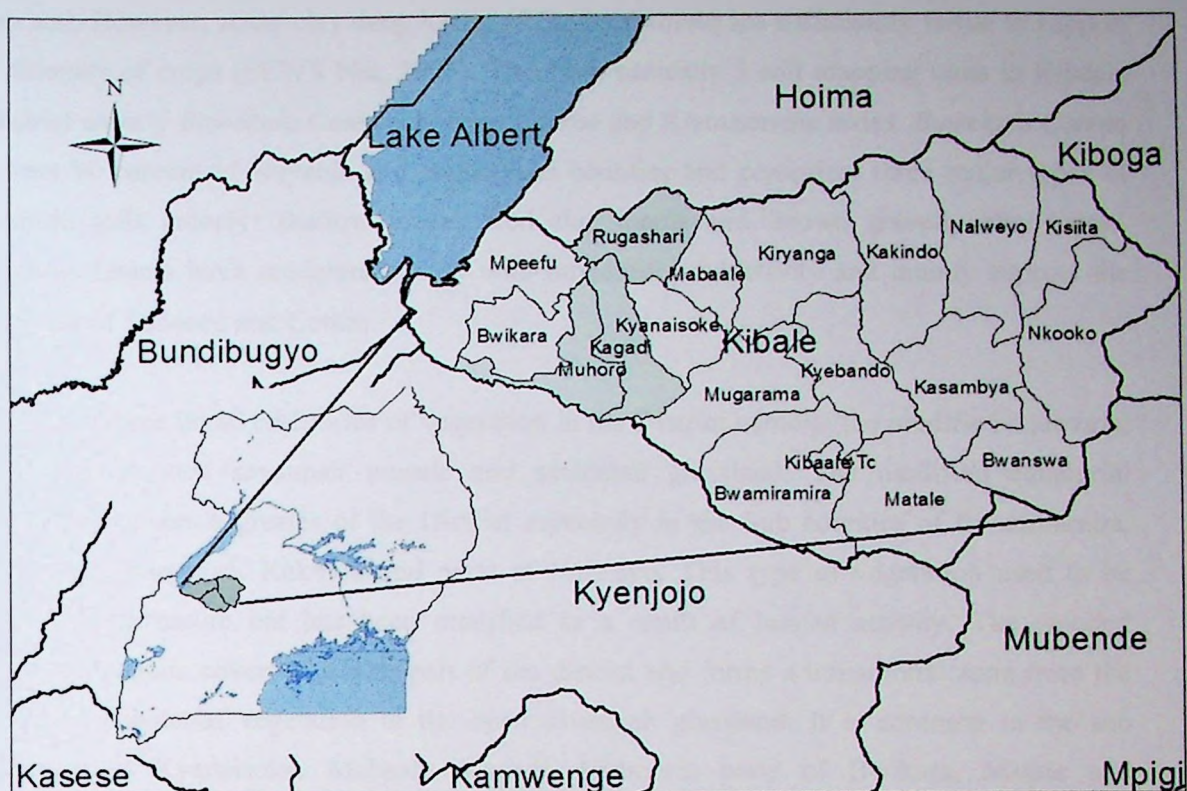


Figure 3. 1 Map of Kibaale District showing the study area

3.2.2 Rainfall and temperature patterns

Kibaale district has a favourable tropical climate. It has a bi-modal rainfall pattern which varies between 1000 mm - 1500 mm per annum i.e. moderate to high rainfall. Rainfall comes in two peaks, one from March to May and the second from September to December. However the western part of the district, bordering the rift valley is generally dry, with temperatures varying from 15°C to 30°C with highest temperatures recorded in the rift valley zone (FAO, 2000).

3.2.3 Soils and Vegetation

The process of erosion and accumulation that acted upon the land surfaces gave rise to several types of soils in Kibaale District. In exception of the lowlands which are covered by alluvial and lake deposits, the soils of the district are of ferrallistic type. Productivity of these soils largely depends on favourable rainfall, adequate depth and maintenance of the humic

top soil. However, some clay deep loams of *Buyaga catena* are sufficiently fertile to support a diversity of crops (FEWS Net, 2005). There are basically 3 soil mapping units in Kibaale District namely *Buweekula Catena*, *Buyaga Catena* and Kamusenene series. *Buweekula Catena* covers 90 percent of Buyanja and Bugangaizi counties and comprises three major types of granitic soils namely: shallow loams, Red clay loams and Brown gravelly clay loams. Shallow Loams have moderate acidity with moderate productivity and mainly support the growing of Tobacco and Cotton.

There are three broad categories of vegetation in the District namely: the modified equatorial type, the wooded savannah mosaic and savannah grassland. The modified equatorial vegetation covers a greater of the District especially in the Sub counties of Bwamiramira, Kyebando, Kiryanga, Kakindo and parts of Nalweyo. This type of vegetation used to be equatorial in nature but has been modified as a result of human activity. The wooded savannah mosaic covers a greater part of the district and forms a transitional zone from the modified equatorial vegetation to the open savannah grassland. It is common in the sub Counties of Kyanaisoke, Mabaale, Kagadi, Muhooro, parts of Bwikara, Matale and Bwanswa. The savannah grassland is typical in areas where human activity has modified the wooded savannah mosaic. It is mainly found in the sub- Counties of Rugashari, Mpeefu and Kisiita. The open grassland and thicket promote livestock farming although most of such range lands have not yet been properly developed.

3.2.4 Socio-demographic and economic characteristics

Kibaale district has a population of 492,200 people out of this, 250,500 are female and 241,000 are male (Sempagala-Mpagi, 2008). This high ratio between female and male is one of the reasons why this district was selected for this study. There are various tribes in Kibaale but major ones are the Banyoro, Bakiga and Batooro. The Banyoro are indigenous to Kibaale and the Bakiga were resettled by government from Kabale. These people mainly depend on agriculture; the food crops grown in this area include: rice, Irish potatoes, yams, cowpeas, pigeon peas, groundnuts and Sim sim. The cash crops: coffee, cotton, tea and tobacco. The fruit and vegetables: pineapples, tomatoes, onions and cabbages.

3.3 Methods

3.3.1 Sampling procedure

The study area was stratified based on ethnicity i.e. Bugangaizi east and west is occupied mainly by Bakiga, Buyanja by indigenous Banyoro and immigrants; and Buyaga east and west mainly occupied by indigenous Banyoro (Assimwe and Norlan, 2001). The sub-counties where the study was conducted were selected from these counties and this was done purposively. It was done to enable us to capture information across the different ethnic groups. The study was carried out in Kyakabadiima formerly Rugashiri this mainly occupied by immigrants, Kagadi Town Council occupied by mixture of immigrants and native Banyoro and Muhooro more of the native Banyoro. From the assumption that the ethnic groups are uniformly distributed across the sub-county, i.e. there are minimal variations across a given sub-county, and then one parish was selected randomly from each sub-county from the list of parishes using a random table number and then two villages were selected randomly from each parish from the list of villages to avoid biasness.

The term ethnicity was used to mean the different ethnic groups (tribes) residing in Kibaale based on these, there were categorized into immigrants and natives. Immigrants are the people who were are not the original inhabitants of Kibaale. These were either resettled by government or came voluntarily for various reasons. While natives are the people who are the original inhabitants of Kibaale these are the Banyoro according to history. History of settlement though this was not part of the study. History of settlement means different times at which people settle in a given place.

A systematic random sampling design was used to select the households to be interviewed. This was done to reduce on the costs. A total list of households in a given village was obtained from the LC1 chairperson for a given village; this was used to determine the total number of households in a given village and a random sample was obtained.

Selection of Sample size

- During the survey, individuals within male and female headed families were interviewed. The target respondents were only household members above 18 years of age because people below this age are considered children according to the Ugandan

constitution. For each household only two members were interviewed from the household preferably a husband and the wife. This would enable us obtain data about individual ownership of property within a household which is important in calculation of gender-asset gap. The interviews were administered to each individual separately and each answered questions on their behalf (Coulibaly-Lingani *et al.*, 2009). No consultations were allowed between the husband and the wife. In households where the spouse was not present an adult female or male who had knowledge about the household assets would be interviewed. For widowed household, the surviving spouse could be interviewed and then the second respondent could be one of the elder sons/daughters staying within the household. Thirty six households were selected per sub-county giving a total of 108 households for the district. Thirty Six households were selected because this number can enable statistical analysis. Since two individuals were interviewed per household this led to a total of 216 respondents. This was to ascertain individual ownership of property/assets within the household.

3.3.3 Data collection methods and tools

Primary data

Primary data for this study was collected at three levels at the sub-county (Community level) using key informant interviews, at village level using focus group discussions and at household level using intra-household survey.

3.3.3.1 Household survey

Household survey was conducted using semi-structured questionnaire (*Appendix. I*) to capture information on existing practices in acquisition and transference of property rights between men and women. The questionnaire also captured information on the socio-economic and demographic characteristics of respondents, existing land and tree tenure systems, land and tree rights, constraints towards access and ownership of productive assets specifically tree resources, any government and individual efforts to address gender inequalities and factors that influence gendered access to land and forest resources. Furthermore the questionnaire was used to explore how land and on –farm tree resources have been used to accumulate other productive assets such as agricultural implements, consumer durables, household basic

assets, livestock and transport. The numbers for each asset owned by each respondent within a household were captured. The interview lasted for one hour

3.3.3.2 Key informant interviews

Key informant interviews were held in the selected communities at the sub-county, respectively to complement and/or triangulate information collected through a household survey. Key informant interviews focused on land rights and ownership of forest resources some information was also captured about organizations involved with addressing issues about land. The key informants were from CBO's, NGO's, government official, local leaders and sub-county chiefs. The questions followed (*see appendix 3*)

3.3.3.3 Focus group discussion

Men and women were grouped separately during group discussions since this facilitated generation of gender disaggregated data which was used to help in understanding intricate matters about access and ownership of productive assets. The participants for the focus group discussions were selected purposively basing on the time they have spent in the area and by having a good knowledge about the issues of land and tree resources and these did not participate in the intra-household survey. Focus group discussions were guided by a checklist (*Appendix 2*).

These generated information concerning land and tree ownership at village level, information about the rights to these resources were also generated and lastly information about assets and accumulation of other productive assets as mentioned above was ascertained. The group consisted of at least 6 people for effective discussions. A larger group would make other respondents not to participate. Women and men focus group discussions were separated in order to obtain information from women because most cases women are shy to speak in the presence of their spouses and they would hide very important information that they wouldn't want their spouses to know. Such arrangements help the respondents to speak without reservations (Nabanoga, 2005). A total of two focus group discussions were held in each village of women, men and the youth. The participants were selected purposively and it is recommended that there of the same age range, sex, socio-economic background, profession or interest (Nyariki, 2009).

3.3.4.0 Secondary data source

Secondary data was obtained from the review of literature from journals, text books, working papers, occasional papers from different organizations. Most of this data was used in the background, problem, literature review section and discussions of the results. This data also provided information about the study area location, population, socio-economics and demography of the study that were very important in the designing of the study and later analysis of the data. The secondary data was generally very informative in undertaking this study since little or no work had been done in the area of intra-household gendered asset ownership in Uganda.

3.4 Data analysis

The variables analyzed in order to address the objectives of the study were; different tenure systems and agroforestry practices, reasons for migration, mode of land acquisition, different rights to both land and tree resources, tree species, tree products, productive assets accumulated individual within a household and socio-economic and demographic characteristics such sex, age, sources of income, ethnicity, marital status, position of responsibility. Data were analyzed both qualitatively and quantitatively. Data generated through key informant interviews and focus was analyzed qualitatively while data generated through questionnaires was analyzed quantitatively.

3.4.1 Household surveys

Data generated through household surveys was coded and then entered into Statistical Package for Social Scientists (SPSS 16.0). Mean frequencies of different variables were computed and percentage distribution tables generated. Descriptive statistics were used to determine the total land holdings owned by both men and women. A one-way Analysis of Variance (ANOVA) was run to test for differences between men and women land holdings. In the cases where there was more than one response provided, such responses were first grouped and then frequencies of the multiple responses derived. Further analysis was carried out using a 2-proportion test to determine whether there were any significant differences within the different rights between men and women. Cross tabulations were computed to tell the differences between the modes of land acquisitions and rights to land and tree resources between men and women across the different ethnic groups. The contingent tables developed were transferred to Minitab to for the Chi-square tests. The same procedure was used for

assets accumulated by men and women, means of asset accumulation by sex and ethnicity. To determine the percentage of asset owners, the incidence of asset ownership by sex method was used. Using the formulae below;

$$= \frac{\text{Number of women owners}}{\text{Number of total women}}$$

$$= \frac{\text{Number of men owners}}{\text{Number of total men}}$$

This method calculates the percentage of asset ownership based on the number of owners. The percentage of owners of a given asset is obtained by the number of women owners divided by the number of total women and number of men owners divided by the total number of men. Further constraints towards tree ownership by men and women were computed using cross tabulations and later contingent tables were generated. Bar graphs were generated to provide a visual representation of different rights between men and women, agroforestry practices, constraints to gendered access and ownership of tree resources.

Chi-square tests were used to test if there are any associations between ownership of land and trees and accumulation of specific productive assets by men and women, especially, relationship between the different modes of acquisition and sex, ethnicity, income and age of respondent. Chi-square tests were also used to test whether there were any associations between rights to land and tree resources with sex and ethnicity of the respondent.

Multinomial logistic regression models (MLRM) were used to determine what factors which influence the different modes of land acquisition. The modes of acquisition were the dependent variables and the socio-economic characteristics such as ethnicity, sex of the respondent, age, and income sources were used as the explanatory variables. Multinomial logistic regression is similar to binary logistic regression; however, it is used when the dependent variable is not restricted to two categories. It is based on the assumption that the odds ratios of any two categories are independent of all other response categories. The formula is as:

Let there be a dependent variable categories 1, 2, ..., j with one being the reference category. In MLRM, one value typically 1st or the last, or the value with the highest frequency of

dependent variable is designated as a reference category. The probability of membership in other categories is compared to the probability of membership in the reference category.

For a DV with J categories, this requires the calculation of J-1 equations, one for each category relative to the reference category, to describe the relationship between the dependent variables and independent variables.

Hence if the 1st category is the reference, then for $j = 2, \dots, j$

$$\ln \frac{P(y_i=j)}{P(y_i=1)} = \alpha_j + \sum_{k=2}^K \beta_{jk} \cdot X_{ik} = Z_{ji}$$

When there are more than two categories. One regression is run for each category of y_i (the dependent variable for any observation being in that category). Then the probability of y_i being in category 1 is given by the adding-up constraint that the sum of probabilities of y_i being in the various categories equals one.

The regressions are, for $k=1, 2, \dots, j$

$$P(y_i=k) = \frac{\exp(Z_{ji})}{\sum_{j=2}^J \exp(Z_{ji})}$$

For the reference category

$$P(y_i=1) = \frac{1}{\sum_{j=2}^J \exp(Z_{ji})}$$

Where y_i is the observed outcome for the i^{th} observation or the dependent variable, x_i is a vector of the i^{th} observations of all the explanatory variables, and β_j is a vector of all the regression coefficients in the j^{th} regression (Agresti, 2007).

Further, binary logistic regression using the forward elimination procedure. The logistic regression model is an appropriate statistical tool to determine the influence of explanatory variables on responses variables, the later have dichotomous outcomes and former are continuous, categorical or dummy variables (Agresti, 1996; Peng *et al.*, 2002). Logistic regression model has been used for prediction and determining the most influential

explanatory variables on the dependent variable (Cox and Snell, 1994). The explanatory variables were sex of the respondent, ethnicity, income source and marital status. The dependent variables were ownership to land and tree resources.

In essence, the logistic model predicts the logit of the response variable (Y) from the explanatory variables (X). The logit is the natural logarithm (ln) of odds of Y, and odds are ratios of probabilities (π) of Y happening to probabilities ($1-\pi$) of Y not happening. The logistic model is specified as:

$$\ln \left[\frac{\pi}{1-\pi} \right] = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_k x_{ki}$$

Where β_0 is the intercept and $\beta_1, \beta_2 \dots \beta_k$ are the coefficients of the independent variables $x_1, x_2 \dots x_k$. Before performing logistic regression, multivariate correlation analysis was applied to check for co-linearity between the explanatory variables (Adedayo *et- al.*, 2010).

3.4.2 Key informant interviews and Focus group discussion

Data generated through key informant interviews and Focus group discussions were subjected to content analysis and analytical comparisons suggested by Miles and Huber (1994). Recorded notes were reviewed and re-evaluated for their truthfulness and to identify recurrent ideas which emerged from the discussions or the interviews. Tape recorded sessions of discussions or interviews were played and listened to again. Outcomes of discussions and interviews were grouped according to topics. Key statements and ideas expressed for each topic explored in the discussions and or interviews were identified and different positions under each key topic were summarized. A systematic comparison was made on the emerging topics and positions to identify the common ideas. Verbatim phrases that are representative of positions were isolated out and presented in boxes.

4.1 Introduction

This chapter presents the results of the study; the first part is about the socio-economic and demographic characteristics of the respondents, sources of livelihoods for men and women, and the on-farm tree resources. The second part is about the transfer of property rights to land and tree resources presenting modes of acquisition, factors that influence each mode of land acquisition and the rights held by men and women to tree resources. The last part describes role of the land and tree rights in acquisition of other productive assets and means of how these assets are acquired by men and women.

4.2 Socio-economic and demographic characteristics of the respondents

4.2.1 General household characteristics

Table 4.1 presents the socio-economic and demographic characteristics of respondents. Fifty seven percent of the respondents were female while males comprised of 43%. Among these, 57% were natives (the Banyoro) and 42% were immigrants. The immigrants were mainly of the following ethnic groups: Bakiga, Bafumbira, Batoro, Baganda, Banyarwanda, Banyankole and Iteso; though Bakiga (24%) and Bafumbira (8%) were the dominant ethnic groups. These ethnic groups migrated into Kibaale district for several reasons which included; search for land (42%), Marriage (32%), resettlement by government (11%), business and search for employment (5%). The main reason for migration of men into Kibaale was search for land while women migrated mainly because of marriage (Table 4.2). Thirty one percent of the respondents settled in Kyakabadiima because of search for land while 5% of the respondents migrated to Kagadi in search for employment. Based on gender 3% of men had attained tertiary level compared to women (1%) and the highest percentage of women were illiterate (13%) compared to men (3%).

Table 4. 1 Socio-economic and demographic characteristics of respondents (N= 215)

Characteristics	% of respondents			
	Kagadi T.C	Kyakabadima	Muhooro	Total
<i>Sex of respondent</i>				
Male	18	12	13	43
Female	27	15	15	57
<i>Migrant status</i>				
Native	33	1	24	57
Immigrants	13	26	4	43
<i>Marital status</i>				
Customary	18	12	6	35
Statutory/civil	0	1	0	1
Consensual	8	3	3	14
Single	5	1	4	11
Widowed	6	2	1	9
Divorced	1	1	2	5
Church/religious	10	6	10	25
<i>Educational level</i>				
Illiterate	44	10	2	16
Primary	22	14	15	51
Secondary	18	2	9	29
Institution	3	1	1	5
<i>Age</i>				
18-30	16	7	9	32
31-40	13	7	10	30
41-50	10	7	5	22
51-60	2	2	2	6
61-Above	5	4	1	10
<i>Access to credit</i>				
Yes	17	10	19	46
No	28	17	9	54
<i>Position of responsibility</i>				
LCI	13	15	12	40
Church /religious	9	6	4	19
Cultural/elderly	3	3	2	7
Civil servants	9	2	2	12
Women group/SACCO	3	2	3	7
Politician	0	10	3	13

Generally, across the three sub-counties the number of female respondents was higher compared to the male, the natives were higher than the immigrants, most of the respondents had attained primary level education and customary marriage was the most practiced form of marriage.

About 46% of the respondents had access to credit among these men and women who had access to credit were 26% and 20%, respectively. Credit was accessed from banks, Savings and Credit Co-operatives Schemes (SACCO), women saving groups and this money was used to start up businesses, purchase land and buy other productive assets. Muhooro sub-

county had the highest number (69%) of respondents with access to credit while Kyakabadiima sub-county had the least (38%).

Table 4. 2 Reasons for settling in Kibaale district (N= 214)

Reason	% of respondents		
	Male	Female	Total
Search for land	52	35	42
Business	23	3	10
Marriage	6	48	32
Resettlement by government	9	13	11
Search for employment	9	3	5

Table 4.2 shows the different reasons why men and women migrated and settled in Kibaale district. The reasons for migration were different while men moved in search for land, women basically moved because of marriage. The sex of the respondent was significantly associated with the reasons for migration $P < 0.05$ ($X^2 = 16.83$, $df = 4$, $P = 0.002$).

4.2.2 Sources of household livelihoods in Kibaale district

The major source of household livelihoods was crop production (76%) and the main crops grown were coffee, bananas, Irish potatoes and sweet potatoes, maize, groundnuts, cassava, millet, beans, sugar cane and sorghum. In addition to crop production, farmers also had trees on their farm and tree products such as fruits, firewood, poles and timber were sold for cash. The respondents were also involved in some business such as retail shops, car driving and hire, Boda boda (Motorcycle) riding, sale of tree seedlings, bricklaying, restaurants, entertainment and tailoring. This supplemented the income that was obtained from crop production (Table 4.3).

Table 4. 3 Sources of household livelihoods in Kibaale district (N=214)

Main income source	(%) Respondents		
	Male	Female	Total
Crop cultivation	30	46	76
Livestock production	2	1	3
Business	7	8	15
Salary, wages, pension & allowances	3	2	5
Brewing alcohol	0	1	1

The main source of livelihood for both men and women was crop production as opposed to previous studies whereby alcohol brewing was the main source of income. However, there were other sources of livelihoods such as livestock production, business and wages, salaries, pension or allowances.

From the table 4.3, the main source of income for women was crop production. The percentage of female respondents involved in livestock production was generally small while none of the male respondents were involved in alcohol brewing. The main source of income for both immigrants and natives was crop production 32% and 42%, respectively. None of the natives was involved in alcohol brewing as a source of income and only 1% of immigrants were involved in this activity. Crop production was still the main source of income across all the sub-counties. However crop production was highest in Kagadi T.C (31%) followed by Kyakabadiima (25%) while business was highest in Kagadi (14%) followed by Muhooro sub-county (9%).

4.3 On-farm tree resources in Kibaale district

There were five agroforestry practices identified and reported by respondents (Figure 4.1). These are scattered trees on farm land, woodlots, boundary planting, plantation and other agroforestry practices which comprised of home gardens. The common agroforestry practices were scattered trees on farmland and woodlots (Figure 4.1). These were predominant under different sub-counties for example woodlots were predominant in Muhooro (14%) while scattered planting was predominant in Kyakabadiima (17%) and Kagadi T.C (32%).

Different tree species were dominant under the different practices. The dominant tree species on farmland were *Eucalyptus spp.* (36%), *Persia americana* (27%), *Artocarpus heterophyllus* (12%) and *Mangifera indica* (12%). The tree species were used for poles, firewood, timber, fruits, shade, ornamentals, fodder and medicines. *Persia americana* (26%), *Mangifera indica* (11%), and *Artocarpus heterophyllus* (11%) were dominant under scattered tree planting while eucalyptus was dominant under woodlots (23%) compared to the other species. *Eucalyptus* was reported under various agroforestry practices such as boundary, scattered planting and as well as under plantations. There were other tree species such as *Senna*

spectabilis, *Ficus species*, *Pine species* these were planted as woodlots, scattered in the crop land and plantations, respectively. However, these constituted a small percentage of less than two percent. Pine and *Eucalyptus* were the main species under plantation though very few respondents had plantations. There were no significant differences between agroforestry practices and tree species ($P>0.05$).

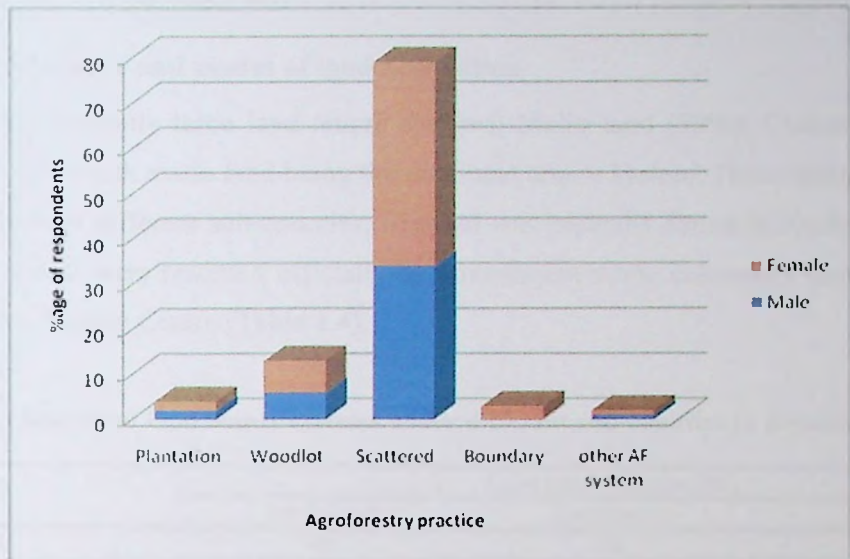


Figure 4. 1 The main agroforestry practices in Kibaale district

Figure 4.1 presents the main agroforestry practices and their variation according to sex of the respondent. The main agroforestry practices were trees scattered in cropland and woodlots. Across sub-counties, the respondents reported scattered planting as the dominant practice i.e. Kagadi T.C (38%), Kyakabadiima (20%) and Muhooro (21%) respectively.

Both male and female respondents reported having most (79%) of their trees were scattered under crop land followed by woodlots (13%) though they also had trees under other agroforestry practices. There were small variations amongst which species were used by men and women under the different agroforestry practices. For example, under scattered planting 15% of female respondents used *Persia americana* while men it was 12%; 7% of female respondents and 5% of male respondents used *Mangifera indica*. The case of woodlots; 20% of the female respondents and 16% of male respondents respectively used *Eucalyptus*.

It was very evident that indigenous species were not mostly used by respondents. The tree arrangement was significantly associated to land ownership ($\chi^2 = 19.425$, $df = 8$, $P = 0.031$), meaning that the owner of the land will determine how the tree species should be planted on a given land parcel.

4.4 Transfer of property rights to land and on-farm tree resources in Kibaale

4.4.1 Land tenure and modes of land acquisition

There were basically three land tenure systems; Mailo land (79%), Customary (15%) and Freehold (6%) with mailo land being the dominant tenure system. These tenure systems were predominant in different sub-counties; freehold was basically found in Kyakabadiima where the immigrants were resettled officially by government while customary tenure in Muhooro and Kagadi trading Centre (Table 4.4).

Table 4. 4 Dominant land tenure systems under different sub-counties in Kibaale District

Sub-county	Land tenure systems (%)		
	Mailo land	Customary	Freehold
Kagadi T.C	49	28	6
Kyakadiima	28	13	81
Muhooro	24	60	13

Women preferred customary land and freehold land tenure system while men preferred mailo land. The reasons being in both cases women and men had more rights under these tenure systems. There were land transactions under the different land tenure systems and modes of acquisitions varied under the various tenure systems.

Five modes of Land acquisition were reported by respondents i.e. purchase, government allocations, gifts, inheritance, and rent (Figure 4.2). Most of the respondents had acquired their land through purchase (63%) and inheritance (30%). The other means of acquiring land were reported to be: free from government (5%) (Especially in Kyakabadiima where there was a resettlement scheme), gifts and rent (Figure 4.2).

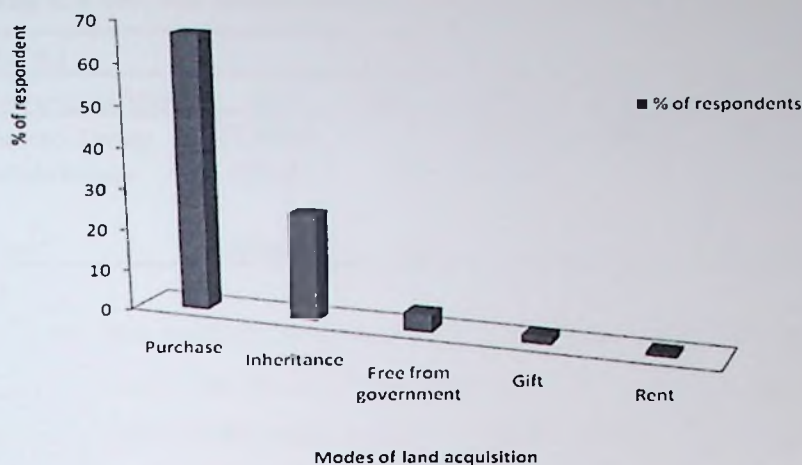


Figure 4. 2 Modes of land acquisition in Kibaale District

Purchase of land was practiced across all the tenure systems but was highest under mailo land (53%) where as land was inherited across all the tenure systems it was also highest under mailo land (19%) and least under freehold (2%). Gifts, rent land transfers were practiced only under mailo land tenure system. Land acquired through gift was the piece of land acquired freely from individuals as opposed to government allocation. Rent is were an individual acquired a certain piece of land for cultivation for a specified period for example 6 months to twelve months at a fee.

The maximum numbers of land parcels per respondent were four (1%), with few individuals having two land parcels (28%), three land parcels (3%), land parcels and others had none. However, most of the respondents had one land parcel (68%). The sizes of land parcels varied from 0.1ha up to 24.4ha. The average size of land parcel was 0.81ha. The sizes of land parcels owned by men and women were different. Men's land parcel were larger compared to women. The minimum size of total amount of land holdings owned by women and men were 0.1ha and 0.16 ha, respectively, while the maximum size of land holdings owned by women and men were 6.1ha and 24.4ha, respectively (*See appendix.5 for summary statistics*).

The land sizes owned by female and male respondents were significantly different $P=0.010$ (Table 4.5).

Table 4. 5 One way ANOVA to show difference between land parcels owned by men and women

<i>ANOVA</i>						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F</i>
Between Groups	78.49135	1	78.49135	6.696823	0.010405	3.890867
Within Groups	2226.93	190	11.72068			
Total	2305.421	191				

The total land holdings presented are for respondent who reported ownership to land. The women who only had access to land through spouses were not presented in the graph. What-ever is presented in the graph is what is reported ownership and most respondents in this area are tenants with no title deeds as already explained. Ownership in this case refers to an individual who had a purchase agreement, a will or other means to proof that they are land owners.

Comparisons of modes of acquisition between men and women based on land parcels showed that the dominant mode of acquisition for both men and women was purchase. The other modes of land acquisition were inheritance, government allocation while others obtained land through gifts either from friends or relatives (Figure 4.3). Further land was also acquired through rent; for those who could not acquire land through the main means of acquisition that is purchase and inheritance. There were high variations in the percentages for the different modes of acquisition between men and women (Figure 4.3)

Fewer women had acquired land compared to men and most women acquired land through purchase compared to the other modes of land acquisition. The greatest percentage of women owning land were either widowed, divorced or under customary marriage. Women had not acquired land through government allocation because land was only allocated to men. The only mode through which land was acquired jointly that is a household was by purchase. The land acquired together meant that the agreement had the names of both husband and wife.

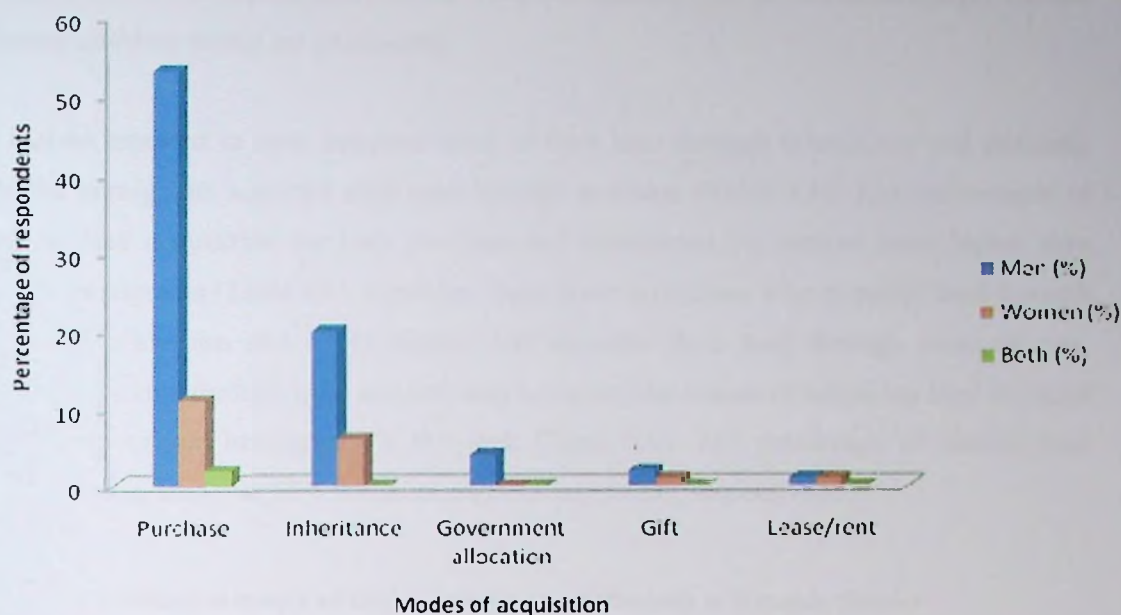


Figure 4. 3 Modes of land acquisition and gender

The modes of land acquisition were not significantly associated with the sex of the respondent with $P > 0.05$ ($\chi^2 = 4.62$, $df = 8$, $P = 0.767$). This meant that the respondent's sex does not influence the means of how land is acquired by an individual within a household.

The land transactions were made informally with use of agreements and wills. About 81% of respondents reported that they held purchase agreements. The rest held wills (1%) and none (18%) respectively and none had a land title. Among these, sixty four percent of male respondents reported having agreements while fourteen percent of female respondents reported having agreements. None of the female respondents reported having a will. Forty one percent of the documents were in the men's name, sixteen percent in both the husband and wife while twelve percent was in the women's name.

The respondents felt their rights to land were secure and the highest percentage said freehold with a land title as compared to other land tenure systems. The reasons for this were because they can easily access a loan from financial institutions and it would avoid disturbances from other people. From focus group discussions, respondents reported that they could defend their ownership through various means as the *reasons below; period spent on the land, having*

developments such as houses and planted trees, the elders would defend them and for women by having children would act as security.

The natives reported to have acquired most of their land through inheritance and purchase while the immigrants acquired their land through purchase (Table 4.6). The percentages of modes of land acquisition for both purchase and inheritance for natives were higher than those for immigrants (Table 4.6). However, there were no natives who acquired land through government allocation and no immigrant had acquired their land through lease or rent. Acquisition of land through gifts and rent was not a popular means of acquiring land amongst both the natives and immigrants in this area (Table 4.6). The percentage of natives who reported owning land was 58% while immigrants were 42%, respectively.

Table 4. 6 Variations in modes of land acquisition and ethnicity in Kibaale district

Mode of acquisition	Native (%)	Immigrant (%)	Total
Purchase	37	29	66
Inheritance	17	9	26
Free from government	0	4	4
Gift	2	1	2
Rent	1	0	1

Table 4.6 shows how natives and immigrants acquire land in Kibaale district and the highest mode of acquisition was purchase for both natives and immigrant. Other modes of land acquisition are inheritance, free from government, gift, and lease/rent. Gift as a mode of land acquisition is where land is given freely by individuals either in appreciation or to a relative. A chi-square test indicated that there was a relationship between the modes of land acquisition and the respondent’s ethnicity since $p=0.032$ is less than $p=0.05$ ($\chi^2= 10.565$, $df= 4$, $P = 0.032$).

Figure 4.4 presents respondent’s age and different modes of land acquisition in the study area. Respondents with the age ranges between 18-40 years acquired most of their land through purchase, gifts and inheritance. In addition, they were able to acquire land through all the modes of land acquisition compared to respondents with forty one years and above. Government allocation was only high within the age range of 61 and above. From the age

range between 41 years and above no respondents reported to have acquired land through gifts.

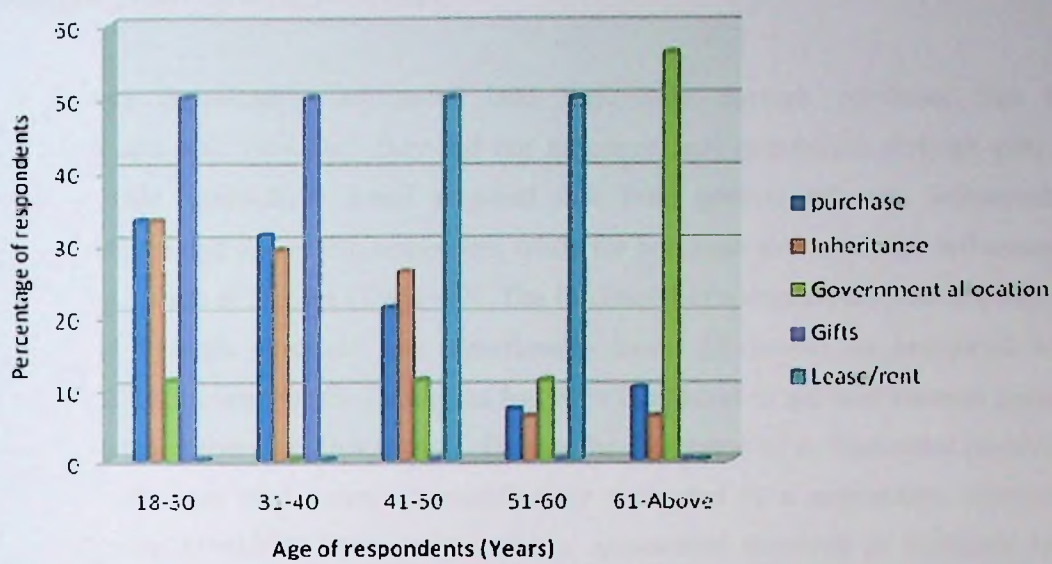


Figure 4. 4 Modes of land acquisition and age of respondent in Kibaale District

Across all the sub-counties most respondents (32%) within the age range between 31-40 obtained their land through purchase while respondents within the age range of 18-30 obtained most (31%) of their land through inheritance. About 60% of the respondents above sixty year were free allocated land from the government.

Comparisons were made based on gender and results showed that male respondents within the age range of 31-40 years acquired most of their land through purchase (23%) and only 10% of the respondents within the age range of 41-50 years acquired the land through inheritance. Female respondents within the age of 18-30 years reported having acquired most of their land through purchase. This was because most the young women could get married at an early age. However, this reduced with increasing age from 23% to 6%. Male respondents in the age category of 60 years and above were the only ones who had acquired their land through government allocation.

The results indicated that about 49% of the respondents who were crop cultivators acquired their land through purchase and this was followed by those involved in business (11%). A chi-square test showed that modes of land acquisition were highly dependent on the income source ($\chi^2=29.981$, $df=16$, $P=0.018$).

Three factors significantly influenced land acquisition through purchase, free from government and rent. However, they did not influence land acquisition through gifts and inheritance (*see appendix.4*). Land acquired free from government was influenced by ethnicity; income and age of the respondent while for purchase and rent were influenced by ethnicity and source of income (Table 4.7). The likelihood of a respondent who is a native to acquire land through purchase was significantly lower ($P=0.049$) as compared to an immigrant. This implies that the immigrant had 85% likelihood to get land through purchase compared to the native (*see appendix.4*). Further the likelihood of a respondent involved in business to purchase land increased significantly compared to a respondent involved in alcohol brewing ($P=0.036$). This meant that a respondent involved in business had a likelihood of 98% to purchase land compared to a respondent involved in brewing alcohol.

The likelihood of a respondent within the age range between 18-30 years old to get free land from government was significantly lower compared to the respondent with the age range between 60-above years old ($P=0.031$). This implies that the respondent within the age range between 60 year and above had a likelihood of 99.3% to get free land from government as compared to other age ranges. The likelihood of natives of obtaining free land from government was significantly lower compared to the immigrants ($P=0.001$). Implying the likelihood of an immigrant to obtain free land from government was 98% compared to the natives.

The likelihood of a respondent who is a native to obtain land through lease/ rent was significantly higher compared to the immigrant ($P=0.049$). This implies that the natives' chance to obtain land through rent was 6.626 times more compared to the immigrants. Further, the respondents likelihood to obtain land through rent was significantly higher for the respondent involved in business compared to those involved in alcohol brewing ($P=0.036$). This means that the respondents' likelihood involved in business to obtain land through rent was 99% compared to the respondent involved in alcohol brewing (Table 4.7).

Table 4. 7 Summaries of Multinomial regression models for predicting socio-economic factors that determine modes of land acquisition in Kibaale district

<i>Mode of land acquisition</i>	<i>Explanatory variable</i>	<i>P-value</i>	<i>Exp (B)</i>
Purchase	<i>Ethnicity</i>		
	Natives	0.049	0.151
	<i>Income source</i>		
	Business	0.036	99.761
Government allocation	<i>Age of respondent</i>		
	18-30	0.031	0.007
	31-40	0.002	0.003
	41-50	0.003	0.005
	<i>Ethnicity</i>		
	Natives	0.001	0.020
	<i>Income source</i>		
	Crop production	0.000	1.181 x 10 ⁻⁷
	Livestock production	0.000	3.187x10 ⁻⁹
	Business	0.000	9.305x10 ⁻¹⁰
Rent	<i>Ethnicity</i>		
	Natives	0.049	6.626
	<i>Income source</i>		
	Business	0.036	0.010

Different modes of land acquisition are influenced by different factors e.g. the likelihood of an individual to purchase is influenced by ethnicity and income while government allocation is ethnicity and age and rent by ethnicity and income source.

The results indicated that the rights to land were associated to the mode of acquisition of land i.e. land acquired through purchase; the respondent had all the rights to that land as opposed to land acquired through inheritance, gift, government allocation and rent. It was observed that respondents who acquired their land through inheritance and government allocation had all the rights to land with the exception of right to mortgage where as land acquired as gift the respondents reported that they had only right to subsistence and commercial use and lastly those who had acquired their land through had only a right to subsistence use.

4.4.2 Relationship between rights to land, gender and ethnicity of households

Men and women both had rights to land (Figure 4.5). The right to subsistence use of land was highest (49%), followed by right to commercial use (29%). Generally, few respondents had a right to mortgage land (1%). Men had more rights to land compared to women with the exception of right to subsistence use (Figure 4.5). Subsistence use involved women growing crops for both home consumption and sale of the surplus. The rights to commercial use, sell, mortgage and bequeath land for women were lower than for men. The right to mortgage had

the lowest percentage of respondents for women and men. When comparisons were made between marital status and rights to land, it was showed that individuals under customary (36%) and religious marriages (25%) had more rights to land compared to other forms of marriage such as consensual, statutory, widowed, divorced and single.

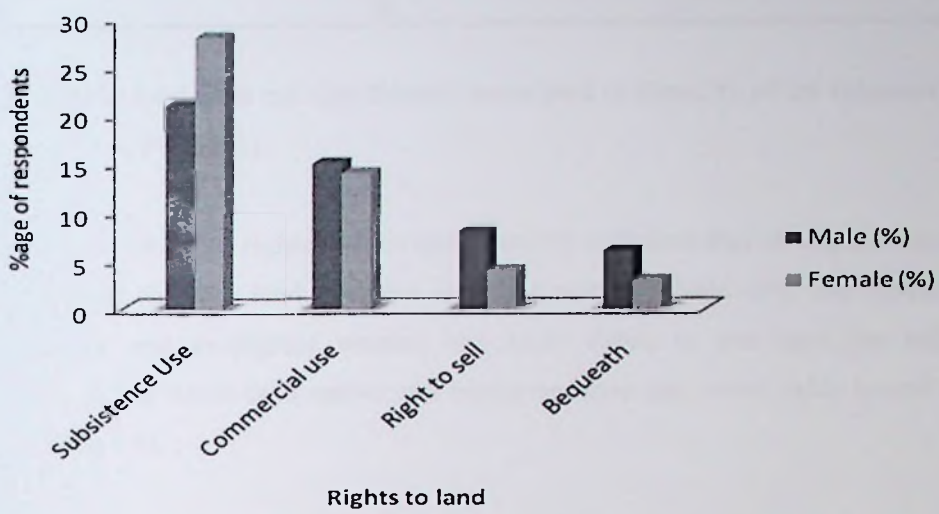


Figure 4. 5 Relationship between rights to land and gender in Kibaale District

The figure 4.5 shows the different rights that men and women had to land and there were basically five rights i.e. right to subsistence use, commercial use, sell, mortgage and bequeath. All rights to land were significantly associated to the sex of the respondent ($\chi^2= 11.685$, $df = 4$, $P= 0.020$). However, there were significant differences within the different rights for women and men. For example; right to commercial use, right to sell and bequeath were significantly different between men and women while right to subsistence was not significantly different ($P= 0.004$, $P=0.002$, $P=0.001$ and $P=0.771$) respectively.

Both the natives and immigrants reported to have more rights to subsistence and commercial use of land. However, natives had more rights compared to immigrants and only natives had a right to mortgage (Table 4.8). Generally, immigrants had less rights to land compared to the natives. However they also had rights to subsistence, commercial use, sell and bequeath land.

Table 4. 8 Comparison between the rights to land and ethnicity

Rights to land	Natives (%)	Immigrants (%)	Total
Subsistence use	29	20	46
Commercial use	15	14	29
Sell	6	5	11
Mortgage	1	0	1
Bequeath	5	5	10
Total	56	44	100

The rights to land were not significantly associated to ethnicity of the respondent $p > 0.05$ ($\chi^2 = 2.38$, $df = 4$, $P = 0.666$).

Comparisons between rights to land and ethnicity indicated that immigrant men and women had the same rights to land as native men and women (Table 4.9). The results showed that both native and immigrant women had more rights to use land for subsistence and commercial use while both native and immigrant men had more rights to sell and bequeath land (Table 4.9).

Table 4. 9 Rights to land; differences between immigrants and native men and women

Rights to land	Natives		Immigrants	
	Male (%)	Female (%)	Male (%)	Female (%)
Subsistence use	22	30	18	27
Commercial use	15	12	14	18
Sell	6	5	9	3
Bequeath	5	4	8	2
Mortgage	1	0	1	0

4.4.3 Rights to on-farm tree resources in relation to sex, ethnicity & marital status

Analysis of gendered rights to use of on-farm trees resources indicated that respondents had different rights to on-farm tree resources and these varied according to sex, marital status and ethnicity (Table 4.10). In general, about 54% of the respondents had rights to subsistence use of tree resources and the right to bequeath tree resources was the least among most of the respondents (Table 4.10). The right to subsistence use involved harvesting tree products for home consumption/ domestic use and if there could be surplus these could be sold for income. The products harvested ranged from fire wood, fruits, poles, medicines and timber. The respondents had other rights such as right to commercial use of tree resources and right to sell (Table 4.10).

Most of the trees were either planted by the owners of the land or found growing naturally on the land and retained during cultivation. Considering variations based on gender, women's rights to subsistence use and commercial were higher compared to their male counterparts while male respondents had more rights to sell tree products (Table 4.10). Comparisons were further made based on land ownership and these showed that across all the rights within the household, husbands had more rights compared to wives.

The rights also varied according to different agroforestry practices; under scattered planting both men and women could easily use the tree resources for subsistence and commercial purposes as compared to other agroforestry practices. Respondents attached these rights to different tree species with certain trees species having more rights than others for example: *Eucalyptus* and Avocado species were most valued for both subsistence use and commercial 36% and 27% for subsistence while 21% and 14% for commercial use, respectively. *Eucalyptus* was still the most highly valued for sell (9%) and bequeathing (5%) compared to other species such as Jack fruit and Mangoes. *Ficus species*, *Senna spectabilis*, *Markhamia lutea* and other species were less valued. Fruits were the main tree products harvested for both commercial and subsistence use. Other products such as poles (5%) and fire wood (10%) were also sold for income. The other products harvested were medicines, charcoal and timber for both subsistence and commercial purpose however on small scale. Products harvested for subsistence did not require consultation from the tree owner.

The trees especially for fruits could be harvested by all the household members with the exception of the wife for fruits that required climbing. Fruits such as avocado, jack fruit had high commercial value and would be harvested mainly by men (35.2%). Surplus of fruits during the peak season would also be given to neighbours and relatives.

Table 4. 10 Gender differentiated rights to on-farm tree resources

Rights to trees	Men (%)	Women (%)	Total
Harvest for subsistence	23	31	54
Harvest for commercial	12	16	28
Sell	6	5	11
Bequeath	4	3	7

A chi-square test revealed no significant association between the sex of the respondent and a given right to a tree resource ($\chi^2 = 2.599$, $df = 3$, $P = 0.458$). Both women and men were involved in all tree planting activities. However, the degree of involvement varied, male respondents were highly involved in initial clearing of the land (62%), ploughing, planting through harvesting (69%) compared to women. Further, an individual's involvement in a given activity was not significantly associated to the right to a given tree resources ($\chi^2 = 1.894$, $df = 12$, $P = 1.000$).

Ethnicity of the respondent did not significantly influence an individual's right to a given tree resource. The natives had more rights to subsistence use (56%), commercial (42%), sell (13%) and bequeath (9%) compared to immigrants. Immigrant's rights to subsistence, commercial, sell and bequeath were 42%, 22%, 8% and 5% respectively. Both the natives and immigrants harvested trees for subsistence use provided the trees were found on their farms. Subsistence use of tree resources involved harvesting firewood, poles, timber, medicines, and fruits for home consumption while commercial use involved harvesting of products in large quantities for marketing purposes as the case of fruits and poles. Firewood was collected from the neighbouring bushes even without seeking permission from the owner. High value products were obtained with permission from the owners. There were generally small variations in the percentages of rights to tree resources for both immigrants and natives. There was no significant association between a given right to a tree resource and ethnicity of the respondent $P > 0.05$ ($\chi^2 = 1.66$, $df = 4$, $P = 0.798$). Most respondents (33%) under customary marriage had a right to subsistence use, followed by respondents under religious marriage (26%).

4.3.4 Access to on-farm tree resources based on gender

The majority of respondents accessed fruits (62%), followed by fire wood (22%), poles (8%), and timber (3%). The highly accessed products for both men and women accessed were fruits

and firewood. Thirty three percent of female respondents were able to access fruit while 22% accessed firewood. On the other hand 29% of the men accessed fruits and 9% fire wood. These were for both domestic and commercial use. Timber and poles were less accessed by both men and women about 2%.

Most of the activities such as initial clearing, ploughing, lining out, pitting, planting, pruning, thinning and harvesting as pertaining tree planting and management were carried out by men compared to women. Women's involvement was less compared to men. About 64% of men were involved while 37% of women were involved in these activities. Harvesting of fruits was done by children compared to parents. Collection of firewood was an activity carried by women unless if it involved cutting down the tree.

4.5 Factors that influence gendered access and ownership to land and tree resources

4.5.1 Factors that influence gendered ownership to land in Kibaale district

A number of logistic regression models were developed to explore the key factors that influence gendered access and ownership to land and tree resources (Table 4.11). The first model was to determine factors that influence ownership to land. The overall assessment of the logistic model for factors that influence gendered ownership to land and Hosmer-Lemeshow goodness-of-fit statistics, revealed that it provided adequate fit to data ($\chi^2=2.581$, $df=8$, $P>0.05$) with 77% prediction. The likelihood for an individual to own land in Kibaale depended on three factors; ethnicity, marital status and sex of the respondent in the community (Table 4.11). Natives had 41 times higher likelihood to own land than immigrants (Table 4.11).

Table 4. 11 Logistic regression for factors that influence gendered ownership to land in Kibaale district

Characteristic	β	S.E.	Wald χ^2 -test	df	Sig	Odds ratio e^{β}	95% C.I. for odds ratio	
							Lower	Upper
Sex of respondent								
Female	-2.322	0.459	25.593	1	0.000	0.098	0.040	0.241
Migrant status								
Immigrant	-0.721	0.371	3.774	1	0.052	0.486	0.235	1.006
Marital status			10.131	7	0.181			
Customary	-0.73	1.713	0.182	1	0.670	0.482	0.017	13.844
Statutory	-0.042	0.533	0.006	1	0.938	0.959	0.338	2.725
Consensual	0.392	0.685	0.328	1	0.567	1.480	0.387	5.665
Single	1.769	0.724	5.969	1	0.015	5.865	1.419	24.24
Widowed	1.918	1.111	2.979	1	0.084	6.807	0.771	60.093
Divorced	0.54	0.472	1.313	1	0.252	1.717	0.681	4.327
Church/religious	-1.05	1.879	0.312	1	0.576	0.350	0.009	13.927
Access to credit								
No	0.082	0.37	0.049	1	0.825	1.085	0.525	2.242
Constant	2.571	0.528	23.757	1	0.000	13.084		

Hosmer-Lemeshow Test: Chi-square=2.581, df=8. P=0.958; -2 Log likelihood=190.75; Cox & Snell r^2 =0.198; Nagelkerke r^2 =0.289; Overall percentage of right prediction = 77%

Respondent's ethnicity, marital status and sex were the most important factors that influenced land ownership at individual level (Table 4.11).

The likelihood of a female respondent to own land was significantly lower compared to male respondent ($P=0.00$) (Table 4.11). A male respondent had a likelihood of 10 times to own land compared to a female respondent, while the likelihood of an immigrant to own land was significantly lower compared to a native ($P=0.052$). Respondents who were single had a likelihood of 5.685 times higher to own land compared to married respondents.

4.5.2 Factors that influence gendered ownership to on-farm tree resources

The overall assessment of the logistic model for factors that influence gendered ownership to on-farm tree resources and Hosmer-Lemeshow goodness-of-fit statistics, provided adequate fit to data ($\chi^2 = 6.596$, $df = 8$, $P > 0.05$) with 76.6% prediction. The likelihood for an individual to own trees resources on-farm in Kibaale depended on two factors; sex and marital status of the respondent (Table 4.12). Male respondents had 2.5 times higher likelihood of owning on-farm tree resources than females. The respondents under statutory marriage had 13.2%

likelihood of owing on-farm tree resources compared to those under other forms of marriage (Table 4.12).

Table 4. 12 Factors that influence gendered ownership to on-farm tree resources in Kibaale district

Characteristic	95% C.I. for odds ratio							
	β	s.e.	Wald χ^2 -test	df	Sig.	Odds ratio e^{β}	Lower	Upper
Sex								
Male	0.9000	0.461	3.808	1	0.051	2.461	0.996	6.078
Marital status			12.2	6	0.058			
Customary	19.838	2.84x10 ⁴	0.000	1	0.999	4.13x10 ⁸	0.000	.
Statutory	-2.027	0.683	8.803	1	0.003	0.132	0.035	0.503
Consensual union	-0.264	0.922	0.082	1	0.775	0.768	0.126	4.682
Single	1.480	1.124	1.734	1	0.188	4.394	0.485	39.76
Widowed	-0.427	0.948	0.202	1	0.653	0.653	0.102	4.188
Divorced	-0.119	0.529	0.051	1	0.822	0.888	0.315	2.503
Position of Responsibility			0.848	4	0.932			
LCI	0.595	0.948	0.393	1	0.531	1.812	0.283	11.63
Church leader	0.313	0.861	0.132	1	0.716	1.367	0.253	7.391
Cultural leaders	-0.046	1.247	0.001	1	0.971	0.955	0.083	11
Civil servant	0.813	1.390	0.342	1	0.558	2.255	0.148	34.39
Ethnicity								
Immigrant	0.411	0.477	0.742	1	0.389	1.508	0.592	3.839
Ownership of land								
Yes	0.944	1.086	0.755	1	0.385	2.57	0.306	21.61
Access to credit								
Yes	-0.568	0.467	1.48	1	0.224	0.567	0.227	1.415
Constant	0.484	0.946	0.261	1	0.609	1.622		

Hosmer-Lemeshow Test: Chi-square=6.596, df=8. P=0.581; -2 Log likelihood=137.314; Cox & Snell r^2 = 0.175; Nagelkerke r^2 =0.251; Over all percentage of prediction=76.6%

Respondents’ sex and marital status were important factors that determined an individual’s likelihood to own on-farm tree resources at individual level within a household (Table 4.12)

4.5.3 Constraints to ownership of on-farm tree resources

The main constraints that hindered men and women from owning on-farm tree resources are presented in Figure 4.6. These include: inadequate land, lack of money, inadequate knowledge and skills, poor attitude, inadequate planting materials and others. Inadequate land (73%) was main constraint for both men and women. Inadequate land was a major limiting factor for women (42%) to own trees compared to men (31%). Lack of money to purchase planting materials was another constraint that limited them from owing trees on their farms.

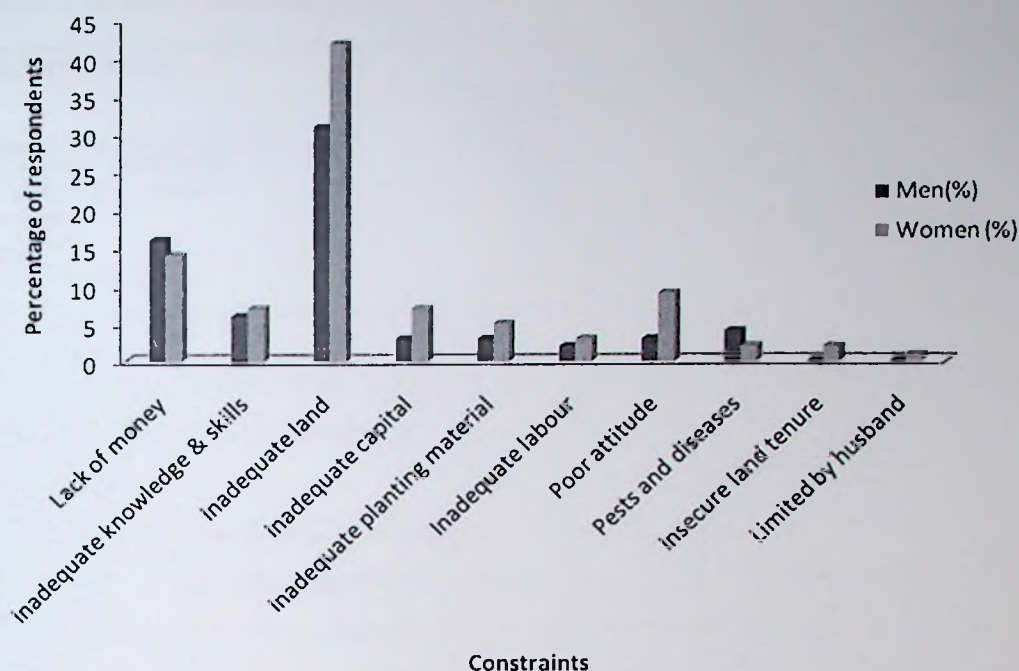


Figure 4. 6 Constraints to gendered ownership of on-farm tree resources in Kibaale district

4.6 Role of land and tree rights to access and ownership of other productive assets

4.6.1 Assets that belong to men and women

Women had accumulated fewer assets compared to men with the exception of livestock (Table 4.13). Considering each category, men had accumulated 24% of agricultural implements compared to women (23%). Agricultural implements included items such as hoes, pangas, and wheelbarrows, rakes and spray pumps. For household basic assets, men (37%) had higher percentage compared to women (31%). Household basic assets included items such as beds, chairs, mosquito nets, stove and lantern. Amongst all the respondents no woman owned a car, however, only a few women (21%) owned bicycles. Men owned 9% of communication assets and 7% of the women respectively. Communication items included radios and phones. About 36% of women owned livestock while of 27% of men had livestock. Livestock included: goats, pigs, cattle and poultry. Luxury included items such as Televisions and Refrigerators though few respondents reported owning these assets (Table 4.13).

Table 4. 13 Assets owned by men and women

Productive asset (s)	% ownership of assets	
	Men	Women
Agricultural implements	24	23
Household basic assets	37	31
Livestock	27	36
Transport	3	2
Communication	9	7
Luxury	1	1

The assets accumulated by an individual were significantly associated with the respondent's sex ($\chi^2 = 63.06$ $df=6$, $p=0.000$).

Asset ownership based on incidence of asset ownership by sex

About 87% of the male respondents reported ownership of radios while for women it was 80% (Figure 4.7). These radios varied according to sizes women owned one or two dry cell radios while men had radio cassettes and bigger music systems. The percentage of men and women who owned poultry was the same and ownership of other assets by men and women are as presented (Figure 4.7).

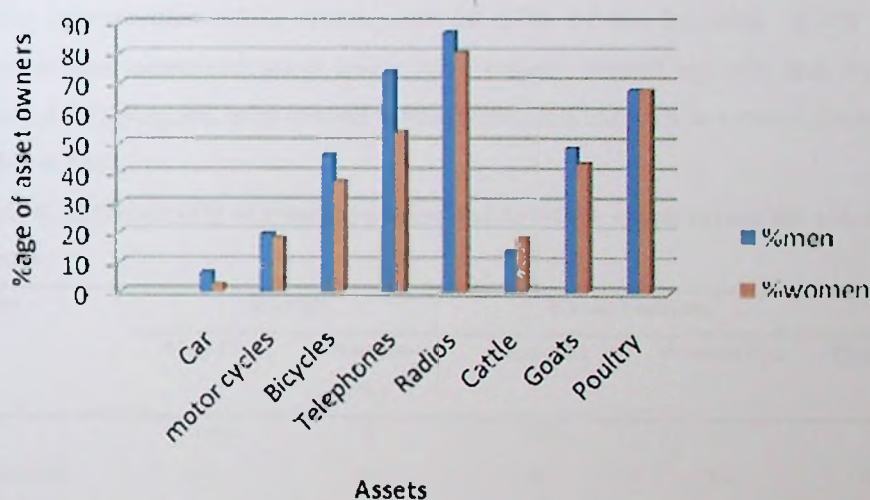


Figure 4. 7 Transport, Communication and livestock assets owned by men and women in Kibaale district

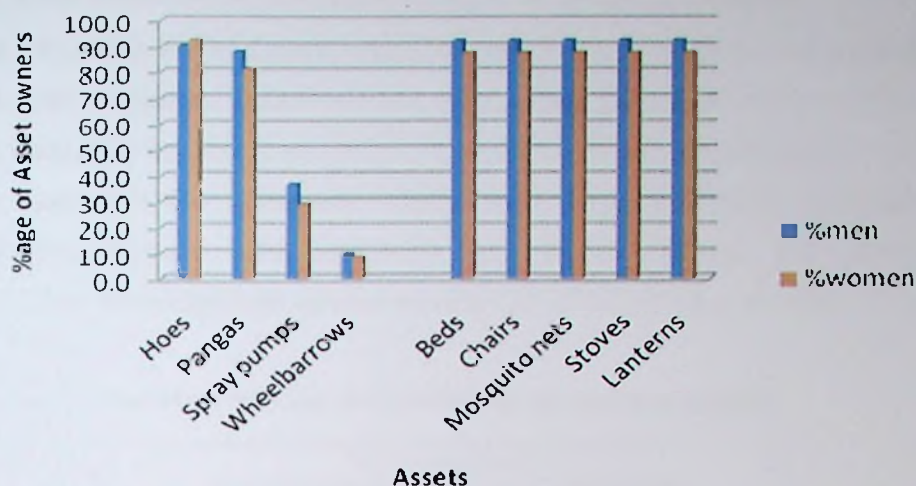


Figure 4. 8 Agricultural equipments and household basic assets owned by men and women in Kibaale district

Generally the men owned more household basic and agricultural implements compared to women (Figure 4.8). In Muhooro, most assets were owned by men with the exception of poultry where the percentage of women was equivalent to that of men (50%). Men owned 67% of the motorcycles while women owned 33% of the bicycles. While in Kyakabadiima transport and communication assets were mainly owned by men and livestock by women (Table 4.14). Kagadi, men owned motorcycles and cars while women owned the other assets (Table 4.14)

Table 4. 14 Ownership of communication and livestock assets across the sub-counties in Kibaale district

Assets	Kagadi		Kyakabadiima		Muhooro	
	Men (%)	Women (%)	Men (%)	Women (%)	Men (%)	Women (%)
Car	100	0	100	0	0	0
Motorcycle	43	27	60	60	67	33
Bicycles	52	48	50	50	47	53
Cell phones	44	61	55	45	67	33
Radios	39	62	53	47	52	48
Cattle	38	62	46	54	57	43
Goats	39	62	48	52	53	47
Poultry	36	64	48	52	50	50

4.6.2 Asset ownership across ethnic groups and within households

Asset ownership within a given household varied based on gender and husbands (70%) had more assets compared to their spouses (28%). Only 2% owned assets jointly. The trend of asset ownership amongst natives and immigrants showed that the natives had accumulated more asset than the immigrants (Table 4.15). However, further investigation into the relationship between asset ownership and ethnicity showed that ethnicity was not significantly associated with asset ownership ($\chi^2 = 2.462$, $df=3$, $p=0.482$).

Table 4. 15 Comparison between asset ownership across ethnic groups

Asset owner	% of respondents	
	Natives	Immigrants
Husband	42	28
Wife	16	12
Both	1	1
Family	1	0

4.6.3 Means of asset accumulation

Assets were accumulated by households using different means; land being a key means of accumulating assets through growing annual (45%) and perennial crops (13%). Crops were grown and sold directly to purchase a given asset or after the sale of the crops, households invested in another enterprise such as livestock then that were sold to acquire the required asset. In some cases, the crops grown such as bananas and sugarcane were distilled into alcohol and the alcohol sold to purchase the asset. The other means through which respondents obtained assets are presented as in Figure 4.9.

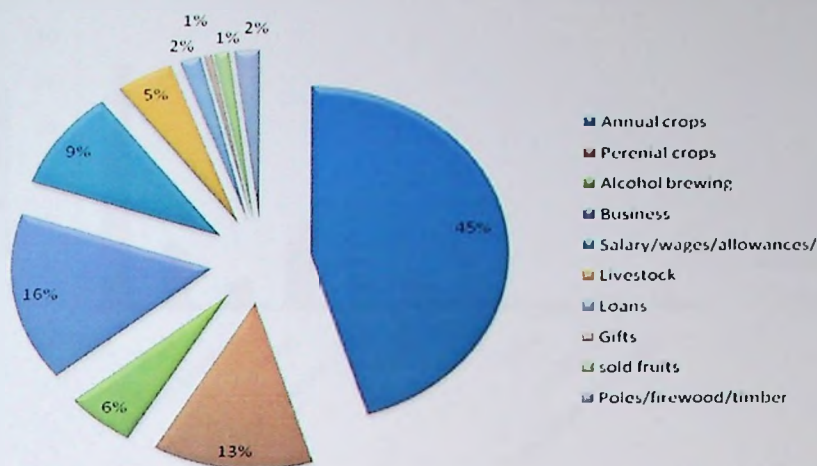


Figure 4. 9 Means of asset accumulation in Kibaale district

Commercial tree growing was not widespread amongst the interviewed households. Most respondents (76%) had trees planted scattered on cropland. Most products such as firewood, poles and were used for home consumption, purchase of consumables such as salt, soap, sugar and school fees payment. Therefore small percentage of fruits (1%) and other tree products (2%) were sold to purchase assets. Assets were also acquired through other means such as business, salary, wages and allowances, loans and some assets were just given free (Figure 4.9).

Female respondents accumulated most of their assets through crop production and business (Figure 4.10). While male respondents' accumulated their assets through crop production sale of annual crops, perennials crops and salaries/wages/pensions and allowances. Both sexes accumulated few assets through gifts and loans. Alcohol brewing was among the least means of asset accumulations though previous studies had reported alcohol as a main means of livelihoods in Kibaale district.

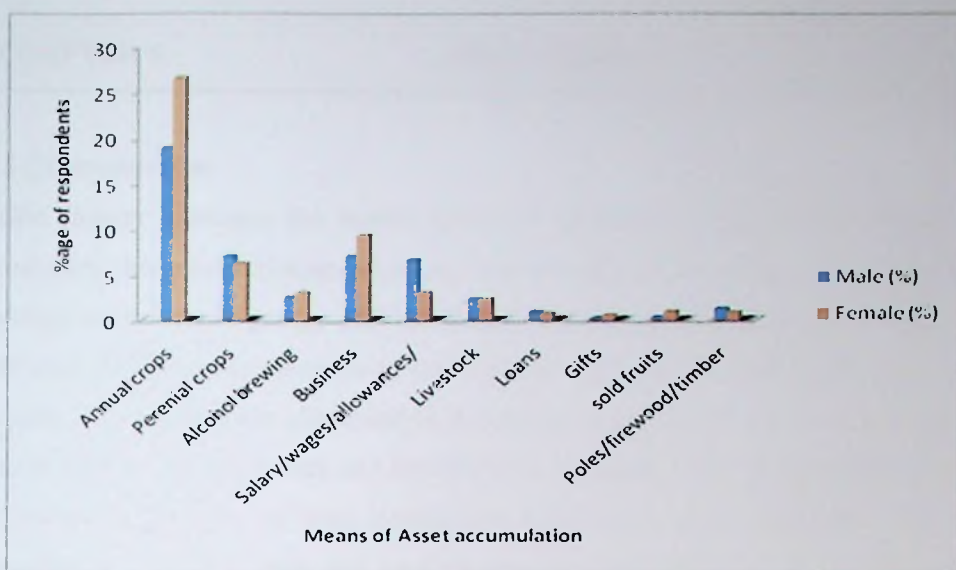


Figure 4. 10 Means of asset accumulation by sex in Kibaale district

Across sub-counties the main means of asset accumulation were through cultivation of annual crops and business. In Kagadi, most respondents accumulated their assets through annual crop cultivation (20%) and business (11%), Muhooro crop cultivation mainly (15%) and Kyakabadiima crop cultivation (10%)

5.1 Introduction

This chapter discusses the results that were presented in chapter 4. The study was about analysing the gendered acquisition and transfer of property rights to land and trees resources across multi- ethnic groups and the factors that influence ownership to these resources and the role played by secure rights to land and tree resources in accumulation of other productive assets. These have been discussed in relations to other studies. The first section discusses the main sources of livelihoods and agroforestry practices. This is then followed by land tenure systems, the modes of land acquisition and factors that influence each mode of land acquisition; rights to land and on-farm tree resources held by men and women across the different ethnic groups; factors that influence gendered access and ownership to tree resources. Lastly the assets accumulated by women and men as a result of rights to land and tree resources.

The main source of livelihood of the people in the study area was crop production and these crops were mainly grown for subsistence and commercial use. Coffee, annual crops such as ground nuts, maize, beans and Irish potatoes were grown for cash. High dependency on crop production is common among populations with low levels of education due to limited access to alternative sources of income (Gatambia *et al.*, 2010). From the results, only 5% of the respondents had attained tertiary education, meaning that very few were able to access skilled employment. The other factor that could have attributed to the high dependency on crop production is the poorly developed road network in Kibaale district. Being mainly a rural area, most of the roads are murrum, which presents a limitation to serious business and industrialization. It could also have had serious set backs due to ethnic land wrangles and this has created less interest in potential investors. The limited land size could also have favoured subsistence agriculture. The ethnic groups occupying the area of study were traditionally crop cultivators thus less dependent on livestock production. In addition to crop production, tree production supplemented other needs.

Most of the trees were scattered in crop land. This practice is commonly carried out in ecological regions where there is subsistence farming and also common in areas integrated

with animals (Nair, 1993). Scattered tree planting is also practiced in areas with limited land size. This was clearly shown by the number of land parcels owned by the respondents. Most respondents had one land parcel of less than two acres (about 0.81 ha). Leakey (2010), reported that there was increasing tree numbers in areas with high population densities and very small farm size. *Eucalyptus* species was most preferred and used species under the different agroforestry practices. It was also a highly valued species for both commercial and subsistence use. This is probably because of its fast growth, multiple purpose nature, commercial value attached to it and availability of seedlings in the area. Other species such as pines were less planted probably because of inadequate knowledge and skills about the species, long term nature of the benefits, inadequate land since they require land to be set aside specifically for growing pines. Female respondents preferred scattered tree planting probably because it allows growing of crops together with trees. Therefore they are able to obtain different benefits from the same piece of land. This agroforestry practice could have been influenced by the existing land tenure system. The existing land tenure system will influence land access and ownership in a given area (Bob, 2011). Land ownership also influences the tree planting activities in a given area. It has been observed that security of land tenure enhances tree planting.

5.2 Transfer of property rights to land and on-farm tree resources in Kibaale district

5.2.1 Land tenure systems and modes of land acquisition

Three land tenure systems are common in the area namely mailo land, freehold and customary. Most of the land was under mailo land tenure system; this finding is similar to that of Asimwe and Norlan (2001) who reported that land in Kibaale came under this tenure system during the colonial times when the Baganda helped the colonialist to fight and defeat the Omukama of Bunyoro. The British in turn rewarded the Baganda Royals by giving them the Banyoro land (Tumusiime, 1998; Espeland, 2006; Rugadya, 2009). Up to day the land titles are still held under the names of the Baganda land lords and this has created a lot of land insecurity. This also explains why 81% of the respondents were tenants who held agreements and not land titles.

Despite the fact that land is under absentee landlords, this has not stopped land transactions in the area. People can easily sell, buy, bequeath, rent and lease land because the absentee landlords though they still hold the land titles have never claimed the land. Some people have stayed on such land for over sixty years without any disturbances. However, some people have utilized this opportunity to grab land by obtaining land titles without the knowledge and consent of the current tenants. One such case was noted in Kagadi North where the Seventh Adventist Church surveyed a piece of land and obtained a land title beyond its boundaries. Land transactions are informally done through agreements. Most of the land owners /tenants do not hold titles whether under customary or mailo land.

There were five different modes through which land could be acquired in Kibaale i.e. purchase, inheritance, government allocation, gifts and rent. The highest percentage of respondents reported having acquired land mainly through purchase probably because of increasing land scarcity as a result of increasing population density. These findings concur with other studies done in the Central, Western and Eastern Uganda (Trout, 1994; Baland *et al.*, 1999; Baland *et al.*, 2000; Lastarrial, 2003). They noted that there were high levels of land transactions in both customary and mailo land areas as a result of increase in population and commercialization of Agriculture.

Population increase or decrease determines the land markets. In areas where population is low, there is abundance of land therefore less competition for land. However, as population density increases, competition also increases and thus an increase in the land markets (Baland *et al.*, 2000). The increase in the population in Kibaale district is basically as a result of influx of people from the neighbouring districts in search for land for cultivation, employment, marriage, business and resettlement by government in resettlement schemes. People, who had been resettled in government resettlement schemes such as in Kyakabadiima, realized that it was very far from services such as hospitals, good schools and therefore preferred to purchase land where these amenities can be easily accessed.

The people who had been resettled also invited their relatives to buy land that was abundant. This is termed as voluntary migration (Nsamba-Gayiiya, 2003). The findings of this study concur with de Janvry and Sadoulet, 2001, who reported that where there is increasing population pressure, a more mobile population, growing market integration, access to land

through family lineage and community membership tends to give way to individualization of property rights and access to land is through land sales and land rental markets. However, this result differs from Platteau and Balland, (2001) and Willy (2006) who noted that inheritance is the highest mode of land acquisition in Sub-Saharan Africa. The reasons for the differences could as result of increasing populations and multi-ethnicity.

There were high variations in the percentages for the different modes of land acquisition between men and women. Fewer women had acquired land compared to men. This is probably because land is considered as a property for men (Miles, 2007) as it is in many parts of Uganda and generally in the sub-Saharan Africa. Women who own land were either widowed, divorced or under customary marriage. This could be explained by the fact that widowed women easily inherit land from their late husbands in custody for their young sons, or could be given land freely by their parents after loss of their husbands. This could also apply to divorced women. The modes of land acquisition were independent of the sex of the respondent, however; the modes of land acquisition were significantly associated with the ethnicity of the respondent. This implies that methods of how land is acquired will not dependent on the sex of an individual but they were influenced by ethnicity of the respondent.

Productive assets such as land are acquired by both men and women differently (Kelkar, 2009). For example, men mainly acquire land through purchases where there are land markets and in most patriarchal societies such as Uganda, land is bequeathed to sons and not to daughters. This explains the percentage of men who had acquired land through inheritance being higher than the percentage of women. Women can only gain access to land through relationships with the male counterparts such as husbands, fathers or relatives and therefore vulnerable when these relationships are severed (Gray and Kevane, 2008; Meinzen-Dick, 2009). Further more, acquiring land through purchase will depend on someone's financial capability (wealth) and other factors such as education level and increased awareness about land rights.

Based on information from focus group discussions, women were able to raise money to purchase land through women saving groups, loans, business and cultivation of crop. Respondent's source of income was significantly associated with the modes of land acquisition. Respondents involved in business had a high likelihood of acquiring land through

purchase than those involved in other sources of income. These results concur with Lastarria-Cornhiel (2003), who reported that wealthier households were in a strong position to acquire land through the market; almost 85% of the households earning regular non-agricultural incomes had actually purchased land. The increased awareness by women on their land rights is attributed to a number of programmes over the local Radio Kagadi aired by Uganda Rural Development Trust (URDT) to increase women's awareness about land rights.

The modes of land acquisition were dependant on the individual's ethnicity probably because of their origin. Immigrants obtained land through purchases because they originated from other parts of the country and they could not inherit land from the native Banyoro under customary tenure. This is consistent with findings by Zhang and Oweridu (2007) who reported that immigrants in Ghana can only acquire land through purchase, gift, tenancy, lease, care taking or through labour arrangements because they do not have a right to acquire land from communal land. However, there were a few people who had spent a long time in Kibaale therefore their children could inherit land that was acquired by parents either through purchase or free from government. Ethnicity plays an important role in acquisition of land; in most of the ethnic groups the elders allocate land to the young generations. Therefore older generations and family heads have power over the young generations by having control over the rights to land. In areas where land is allocated through inheritance, ethnicity plays a key role in that the elders are the ones to allocate land to the members of the community (Bates, 2000). There are cultural/emotional bonds to land and in many areas indigenous people have denied immigrants rights to land as the case of Tanzania and Niger (Green, 2005).

In some parts such as Songhai in Niger land is seen as a common inheritance, which could not be bought or sold without severing the relationship between the present cultivators and their ancestors. It is very evident that in many African societies there is deep attachment to land, often identifying with it through ancestral ownership. In some communities such as in Kenya this is associated with rituals and ceremonies therefore acquiring land from the community it is not just about paper work but about joining with that community (Ndungu, 2011).

5.2.2 Rights to land and on-farm tree resources

The right to subsistence use of land had the highest percentage of respondents and very few respondents had a right to mortgage land. Subsistence use involved utilization of land to produce products that were used for home consumption and the surplus could be sold. Subsistence use was high probably because subsistence use of land does not require the individual to own land as compared to the other rights to land such as mortgage, bequeath and sell. Respondents were able to access land for subsistence use from parents, friends and relatives. Whether you're a land owner or not you can access land to cultivate crops so long as you have a good relationship with the land owner.

There was a low percentage of respondents who had a right to mortgage land were less compared than those with rights to sell, bequeath, commercial use and subsistence use. This is because most of the tenants do not have land titles, land transactions are done informally with the use of agreements. These agreements cannot be used as mortgage in the bank. Even in areas where land titling and registration has been done it was found that the percentage of respondents with a right to mortgage land were fewer compared to other rights to land. A study conducted by Lastarrial (2003) done in Western Uganda, revealed that the right to mortgage land was also ranked low amongst respondents because of low commercial transactions through financial institutions, fear of losing their land or getting into debt.

Sex of the respondent was found to be significantly associated to rights to land. Other studies for example Bob(2011) have shown that land rights are influenced by factors such as class, gender, religion and ethnicity. Due to social constructions in most of the patriarchal societies, traditional social norms, gender power relations, legal constructions, and customary law, men have been observed to have more rights to land compared to women. These factors in most cases have favoured men putting them in a more superior position compared to women. In cases where women acquire land while they are married, men still have rights over the land despite the fact that the women are the ones who purchased the land. If they don't allow the man to have rights over the land they are declared rebellious.

The results revealed that more women had a right to subsistence compared to right to mortgage. This is due to few women owning land in this area because of the factors. The women had more rights to subsistence use because of women's reproductive role of caring

for the family and because most of the women were married. Other studies (URDT, 2008 and Nayenga, 2008) reported that married women always have full access rights when there are still married. The need for them to provide food as defined by societal norms made them to have a right to subsistence use of land.

The study findings are in agreement with Cloud and Knowles (1988), who pointed out that in most of Africa women's bundle of rights to land especially right to rent, lease, sell or bequeath are less than those of men. That is their breadth of security of tenure is narrower than men's. In many parts of Africa security of duration of tenure is a matter of particular concern for women. For while security of tenure is often treated as a household characteristic and is so treated in all but one of the seven African case studies in Bruce and Migot-Adholla (1994), even in households with secure tenure, women's property rights are often insecure and, in particular, the duration of their rights is subject to extreme uncertainty (Golan, 1994; Akwabi-Ameryew, 1996; Davison, 1988, and Wengi, 1996). The effect of insecure duration of tenure is demonstrated by the finding of Gavian and Fafchamps (1996) that farmers who cultivated both borrowed and owned fields invest in fertility improvement only in the latter where they place all manure. The inability of the state to enforce its own tenure regime can adversely affect women.

Just like land, the right to harvest for subsistence use of tree products was highest amongst all the respondents. Right to subsistence use of on-farm tree resources involved harvesting tree products such as fruits, poles, firewood, and medicine for domestic use. The most important products for subsistence use were fruits and firewood. Tree products are very essential for the survival of a given household. Especially fruits, they serve as a basic source of food, especially in dry seasons (Okia *et al.*, 2010; Agea *et al.*, 2010; Agea *et al.*, 2007; Ndawula *et al.*, 2005). The fruits mainly consumed were; Avocadoes, Mangoes and Jack fruit. Fire wood is a major source of fuel to rural households and over 90% of Ugandans are dependant on fuel wood as the main source of energy for cooking (Knöpfle, 2004).

Subsistence use of on-farm tree products was high probably because there were limited markets for the products in the area. Generally, the relative price of timber and related products was low compared to other districts (KDLG, 2003). Rights to trees differ depending on its use, for example, trees with commercial value are restricted and vested in the land

owner. Harvesting for subsistence purposes is less restricted irrespective of the species and spaces because plant rights regimes tend to ensure access to subsistence resources for all community members (Howard and Nabanoga, 2005).

Women had rights to plant especially fruits on men's land and men would plant trees for poles and timber. However, there were exceptions where women had taken the initiative of planting tree species for cash such as Pines and *Eucalyptus* for poles. This could be explained by the fact that they were able to own land and therefore being able to make decisions over what is to be planted there. Harvesting rights over certain trees were retained by men especially eucalypts because of their high economic value. Studies have shown that women's rights to tree products are limited to those considered to be with little or no commercial value as the men retain high value products (Kiptot and Franzel, 2011). A few women could harvest the trees without consulting their husbands and in such cases the products were mainly for domestic purposes. This also depended on the mutual understanding between the husband and the wife. Male respondents had more rights to sell and bequeath tree products. This is attributed to the fact that most of the trees were owned by men; few women had ownership to trees on farm land. Only land owners or people who have perpetual use of the land on which these trees occur can harvest the fruits. The right to naturally occurring non-timber trees that are only of subsistence value is very much relaxed. This can be collected anywhere without permission from the land owner (Acheampong and Marfo, 2011). However, women had rights to weed, prune and thin men's trees. The unequal rights to tree resources is a result of the construction of gender identities within a household that often constrain the access and control of land and tree resources by women (Agarwal, 1997; Goebel, 1998). Generally the rights to trees depend on the three factors; the nature of the tree, the nature of use and the nature of the person/group. It is land owners and tree planters who tend to be favoured in terms of their rights to trees. Women and other group who have temporal claims to land are in most cases disadvantaged (Fortmann, 1998).

5.2.3 Access to on-farm tree resources based on gender

Men had more access to fruits and poles because of their high economic value of these products in this area. Studies have shown that women's rights to tree products are limited to those considered to be with little or no commercial value as the men retain high value

products (Kiptot and Franzel, 2011). Fruits such as mangoes, jack fruits and avocados would be sold to supplement income obtained from sale of crops. The income from tree products was used to pay school fees, buy school uniform and purchase of small things such as salt, soap and sugar. Sale of timber was not very predominant because most of the pine plantations were still young and very few respondents had plantations. Plantation establishment is influenced by secured land rights and market forces. These factors influence positively on farmers' forest plantation activities and investment; households with full ownership rights are likely to establish plantations compared to those without (Zhang and Owiredo, 2007). Women had more access to fire wood and medicines, which are essential for the whole family because of their responsibility to care for the family. This is similar to findings by Rocheleau and Edmunds, (1997), Quisumbing, (2003), Howard and Nabanoga, (2005) and Yikii, (2010). The function of the tree is tied to prevailing norms of gender division of labour and authority, this substantially influences the interpretation and enforcement of gendered property rights to trees.

Access to land and tenure is governed by a complex system of delegation of rights, involving ethnicity, inheritance and various sorts of compensations for exchange of land (Pare, 2001). Therefore, ethnicity is a key determinant to access to forest/tree resources. Coulibaly-Lingani *et al.* (2009) studied access to forest resources by different ethnic groups in Southern Burkina Faso and found that there were variations in access between indigenous people and the immigrants.

5.3 Factors that influence gendered access and ownership to land and tree resources

5.3.1 Socio-economic and demographic factors that influence gendered ownership to land

There were three main factors that influenced an individual's ownership to land i.e. ethnicity, sex and marital status. In most patriarchal societies, Uganda inclusive, land is bequeathed to male counterparts. Therefore, the likelihood of males owning land is higher than that of women/daughters. In such societies, women can access land through relationships with the male relatives, fathers or husbands. Land access and ownership through men changes with marital status. Whether the land was obtained by both the man and woman on divorce, the

property remains as a man's property. Widows may not be accorded ownership over land under communal ownership upon death of their husbands. A study conducted in Tanzania by a team led by Silaa in 2002 in Morogoro revealed that according to local customs and traditions, upon divorce women were only given kitchen utensils, clothes and some crop harvest for that season. This therefore means that many married women can have only full access rights while they are still married. However, they may lose these rights in case a husband dies or they are divorced (Meinzen-Dick, 2009; Gray and Kevane, 2008).

Ethnicity was significantly associated to land ownership because these factors have an aspect of power. Natives had a high likelihood to own land than the immigrants. This could be attributed to the fact that natives had the power to exclude the immigrants from owning land by avoiding to sale it to them even driving them away. A number of social dimensions i.e. class, gender, religion and ethnicity affect an individual's access to and ownership of land (Bob, 2011; Kagwanji, 2009). There are a range of factors that influence who has access to and control over land resources at different levels (community, household and individual). These relate to one's bargaining position which influences the level of success or failure in acquiring land. The external factors are broader economic and political forces, quantity and quality of land available, and the local economy and culture. These largely influence market prices and the amount and quality of land available. The internal factors are demographic aspects (such as gender, age, household status and lineage), economic status and social networks. These factors together with local culture can deny rights to certain groups, such as women, immigrants and generally define who will benefit and be prioritised in terms of accessing land (Bob, 2011).

5.3.2 Socio-economic factors that influence gendered ownership to on-farm tree resources

There were mainly two factors that influenced gendered ownership to on-farm tree resources; sex and marital status of an individual. The reasons as to why men would easily own tree resources could be because most men had ownership over land and they also had exclusive rights such right to sell and bequeath land and which comes from customary rights (Coulibaly-Lingani *et al.*, 2009). Land is a prerequisite for an individual to plant trees. Based

on the study, it was very evident that men had more land parcels compared to women. This means that men could easily acquire land and therefore plant trees compared to women.

Respondents under statutory marriage had a higher likelihood to own trees than those under other forms of marriage. The explanation for this could when people are married under this form of marriage there is some form of security created between the husband and wife. The wife can lawfully claim her rights over property such as trees compared to an individual under customary or consensual union. This also creates stability within a household hence combined labour towards tree planting. Therefore, the property such as trees can be owned as a joint property.

A study by Hansen *et al.*, 2005 conducted in Malawi revealed that where there is matrilineal inheritance revealed that marriage promoted tree planting among men and discouraged it among women. The reason was because men are more influential in decision making and women are more free to plant tree while still single than when they are married (Hansen *et al.*, 2005). From this study it is important to note that marital status has a significant effect over ownership of tree resources. Men are favoured towards ownership of tree resources whether married or not under matrilineal or patrilineal inheritance. Women's ownership over tree ownership is still hindered by the traditions and norms in the society.

5.4 Role of land and tree rights to access & ownership of other productive assets

5.4.1 Asset accumulation by men and women

Asset accumulation by men was higher compared to that of women with the exception of livestock. The differences in the rights to land and on-farm tree resources held by men and women within a household could have attributed to differences in the percentage of assets owned by each individual. Men having more rights to these resources put them at a better advantage compared to women in that they could use the different rights to acquire property.

Men could easily sell land and products from land to acquire assets compared to women. For example, a man would sell the land and buy cattle, bicycle, motorcycle and other household assets that was not the case for women. Some men after purchasing land they would construct

the residential home and these would help to save money that could be used for rent. Men sold poles and timber that were high economic value compared to fruits and firewood that were sold by women.

Men owned cattle and goats whereas women had more of small livestock such as pigs and poultry, which once sold could not yield much income hence less assets. These results are consistent with the results from a study conducted in Nigeria by Dillion and Quinones, 2010. The more asset accumulation by men was because men owned big animals that could be sold at a high price compared to women who owned poultry and also was favoured by (Dillon and Quinones, 2010).

In addition to the rights, men had other alternative sources of income such as business and employment by government these provided additional income. Women were also involved in business such as small retail shops; tailoring and brewing alcohol to some, extent, however there were limited by time as they had also to look after the family this meant less income. Men on the other hand because they earned higher income this meant they could easily afford to buy farm inputs such as fertilizers, seed, and pesticides hence improve their crop production which transforms into high yield and better income. The findings of this study are similar to Meinzen-Dick and Di Gregorio (2004); Zhang and Owiredu (2007) who concluded that property rights / secured rights to land provide incentives or even the authority to make investments in the land where they live or farm that leads to high returns, and full ownership of land is necessary for investment in creating productive assets. However, the cultural and social norms in the community will influence the asset- building behaviour of women and men (Kelkar, 2009). However, this study did not investigate this aspect about asset accumulation.

Asset accumulation was independent of ethnicity of an individual. This means that ethnicity did not influence the amount of assets accumulated by an individual other factors could be used to explain asset accumulation within a household in addition to the ones discussed before. Sunpuwan and Podhisita (2008) pointed out that there are basically two major factors that determine asset accumulation within a household; characteristics of household heads and household composition. Under characteristics of household heads, education and occupation

are very important, these together comprise human capital and individuals with high human capital can do any activity compared to the ones with lower human capital.

Studies carried out in different parts of world show that the larger the household size the less the number of assets accumulated. For this study therefore, in addition to rights held by men and women, these other two factors could have attributed to high asset accumulation amongst the male respondents though this study focused mainly on rights to land and trees. From the results, men were observed to have attained higher education levels compared to women this meant high human capital.

5.4.2. Means of asset accumulation and relationship between means of asset accumulation and land ownership

Most of the assets were accumulated through land and means of asset accumulation were dependent on land ownership. Land is basic for everything in that without land most of the investments cannot be done. Most of the assets were accumulated through the sale of crop and crops are grown on land. Land is of one of the four factors of production and other factors such labour, capital and entrepreneurship are highly dependent on land. Land can be used as capital to start-up another income-generating activity. It is a critical asset, especially for the rural people because it provides a means of livelihood through the production and sale of crops and other products (Meinzen-Dick, 2009).

5.5 Summary of key findings of the study

This study has contributed to the body of knowledge in the following ways:

- The design of the study was different in that the previous studies were considering a household as a single unit on assumption that productive resources such as to land and tree resources are equally distributed i.e. women and men within a given household may have equal share to the productive assets such as land and tree resources. Further this study analyzes the different rights to specifically on-farm tree resources i.e. right to harvest for subsistence use, commercial use, sell and bequeath on-farm trees and how these rights vary within a household based on gender and ethnicity. Contrary to the previous studies that focused on access rights by gender

- The study clearly shows how the modes of land acquisition are different across gender and ethnicity and the factors that determine which mode of land acquisition at individual level are different.

At individual level within a household there are basically three factors that influence land ownership which are sex, ethnicity and marital status. Tree ownership is influenced by two factors namely sex and marital status of the individual

- The study clearly shows how rights to land and trees clearly transform into the assets accumulated by individuals within a household. That is the individuals with more rights to commercial use, sell and bequeath are in a better position of accumulating more assets than those with less rights to commercial use, sell and bequeath.

6.1 CONCLUSIONS

Property rights to productive resources such as land and forest resources have been of increasing importance because of the benefits that accrue from them. This study examined how property rights to these resources are acquired and transferred and factors influence that ownership to such resources across men and women of different ethnic groups and what are the implications of having rights to such resources in accumulating other productive assets that are important in poverty reduction.

The following conclusions can be drawn from this study:

1. Generally, the colonial periods have greatly affected how property rights over land are transferred in Kibaale district. The predominant mode of land acquisition for both men and women is purchase though the number of women owning land is smaller than that of men. The other modes of land acquisition in Kibaale are inheritance, lease/rent, gifts, and government allocation. The modes of land acquisition through purchase, lease/rent and government allocation are influenced by ethnicity, source of income and age of an individual within a household. Modes of land acquisition are highly dependent on ethnicity of an individual with natives having more opportunities to acquire land as compared to immigrants. Generally, men have more rights to land and on-farm tree resources compared to women. Most of respondents had a right to subsistence use of both land and tree resources. Women become land owners mainly through purchase.
2. The main factors that influence gendered ownership to land at individual level are; sex, ethnicity and marital status. While gendered ownership to tree resources is influenced by sex and marital status of an individual. The key constraints to gendered ownership to tree resources are inadequate land and lack of money.
3. The rights to land clearly transform into the assets owned by an individual. The more the rights the individual has to sell, bequeath, commercial use and mortgage the more the accumulation of assets by an individual. Women own fewer assets compared to men due to differences in these rights and other factors such as low levels in education. Women's assets are accumulated mainly through crop production while men have

diverse means of asset accumulation in addition to crop production. Land is an important asset in accumulation of other productive assets as compared to tree resources in areas where very few people are involved in tree planting as a business. Asset accumulation within a household is not influenced by ethnicity of the individual; it is dependent on other factors. There is a clear gender asset gap; with men having more assets compared to women. This gap is influenced by many factors among these include: social construction, access, control and use of land and other natural resources such as trees, education level and access to credit

6.2 RECOMMENDATIONS

1. Girls need be encouraged by government to pursue higher education because women who are educated are in better position to earn income and acquire assets such as land.
2. Saving and Credit facilities such as SACCO's need be increased in the area such that women will be able to save and borrow money to start –up better businesses that can generate more income such that there are in position to purchase land which is the main means of asset accumulation in the area. Increased income sources will also help in the purchase of planting materials such as seedlings.
3. There is need for sensitizing society on women's rights by the government and civil society. Sensitization should aim at changing people's attitudes towards issues concerning land and tree resources and ways of thinking about women. Land should not be perceived as a man's property rather an asset that should be owned by both men and women. There should be greater awareness about women's rights among women themselves but also within land allocation and dispute settlement committees, and among extension service workers, traditional leaders and primary court magistrates. And issue of land titles in Kibaale should be handled with immediate effect by government as this has created a lot of insecurity and has retarded the development of the area.
4. Government should ensure that the land titles with the absentee landlord should be returned to Banyoro natives. There should be clear land policies to guide the ownership of land by the natives and immigrants. The implementation of such policies should be followed up with effective monitoring at the grassroots.
5. Reducing poverty and empowering women purposively, women need secure land rights as well as equal access to credit and other resources such as technical

information (MDG 3). There is great need for government and NGO's to increase their efforts of availing credit to women, education, and advocacy for property rights to land. This will ensure women's ownership to land and other productive assets that will contribute towards reducing poverty levels amongst women (MDG 1).

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APPENDICES

APPENDIX 1: Sample of the Questionnaire for intra-household survey

Makerere University, School of Forestry, Environment and Geographical Sciences
*Assessing Gendered Property rights to Land and Forest resources: A Case of Multi-Ethnic
groups in Kibaale District Western Uganda.*

Questionnaire for Individual Interviews for Tenants

Section A. General Information

a) Date of the interview.....
b) Sub-county..... b) Parish.....
Village.....
Name of the respondent.....

Section B. Socio-economic data

Sex of respondent 1= Male 2=Female
What is your relationship to the respondent? 1=Respondent 2=Spouse 3=Son/daughter
4=Father/sister 6= grand child 7=Parent
What is your marital status? 1= Customary marriage 2= Statutory Marriage 3=Consensual
4= Single never married 5= Widowed 6= Divorced 7= Religious marriage
How many years did you spend in school?.....
Do you hold any position of responsibility in this community? 1= Yes 2= No. if yes
specify.....
Ethnicity of the respondent 1= Muganda 2= Mukiga 3= Munyoro 4= Mutoro
5= others specify.....
a) Are you born here? 1). Yes 2). No
If no, what is your place of origin?.....
How then did you end up settling here?.....
Around which year was this?.....
What is your main source of income? 1). Crop cultivator 2). Livestock production 3).
Business 4). Others (specify).....
Do you have access to credit? 1). Yes 2). No.

3.1 Rights over land

3.1.1 a). Do you own any land? 1). Yes 2). No

3.1.1b). Please fill in the table below concerning rights you have over the different land parcels

Land Parcel	Owner	Size	Tenure	Mode of acquisition*	Type of ownership document	Name(s) on the document
1						
2						
3						

*If inheritance record source

Codes: Owner 1=Husband. 2=Wife, 3=others; Tenure 1= Mailo, 2=Customary 3=Freehold 4=Other; Mode of acquisition 1=Purchase 2= free from government 3=Encroachment from wetland & forest reserves 4= Lease 5= others (specify)

3.1.2. Do you have the following rights? If yes, whom would you consult?

Land Parcel	Use for subsistence	Use for commercial	Sell	Mortgage	Bequeath
1					
2					
3					

3.1.3 a). Under what tenure system do you think you rights over land are more secure?

1). Customary 2). Mailo land 3). Others

b). Explain why you think the system selected above is the best.....

c) Are there any constraints faced in using the mentioned tenure system? If yes mention them.

What mechanisms have/would you use (d) to overcome the constraints above?

Under what circumstances can you successfully claim their rights to

Access to trees

Do you have trees on your land? 1). No 2). Yes. In what arrangement are these
Plantation, Woodlot, AF system etc)

Please fill in the table below

Tree arrangement	Species	Owner	Access- by who?	For what?	When?

Please tick where appropriate concerning management of the plantations. Which of the tasks are you involved?

	Women	Men	Remarks (about the tasks)
Clearing			
Pitting & planting			
Management (pruning, etc)			

What products are allocated by the owner to each gender and why?

Do you have the following rights? If yes, whom would you consult? *Please fill in the*

	Tree arrangement	Harvest for subsistence	Harvest for commercial	Sell	Mortgage	Bequeath

What factors hinder gendered ownership to forest resources and how can these be addressed?

Are there any organizations involved in promoting gendered ownership to forest resources?

D0: Ways through which secure rights over land and forest resources influence gendered ownership of other productive assets

For those who own/have land/forest resources what other assets (Financial, natural & cultural) have you accumulated? *Please fill in the table below*

Category	Quantity	Unit cost	Owner	Obtained as result of use of land	Obtained as a result of use of tree resources
Hand tools					
Motorcycle					
Tractor					
Wheel barrow					
Hand pump					
Basic assets					
Other					
Others					

Mosquito net					
Stove					
Lantern					
Bed					
Cattle					
Goats					
Chicken					
Ant					
Bicycle					
Motor cycle					
Car					
Education					
Radio					
Cell phone					
T.V					
Radio					
Fridge					

Thank you for your time God Bless You!

DIX 2: Checklist for Focus group discussions

How do you define ownership of land in this area?

What is the predominant land tenure system in this area?

- a. In this community land belongs to who?
- b. Do you own land titles or what other means verify that you are the land owners?
- c. How is this land acquired individually?

Are women allowed to hold land titles in their names?

What rights do you have over the land?

What factors determine an individual's access and ownership to land?

What do you consider as productive assets in this community with the exception of land?

- a. What are the gender differences in ownership of productive assets named above?
- b. For those who own land how have you used the land to accumulate productive assets?

What are the constraints that hinder ownership of land by women and men/

- a. How can these constraints be addressed?
- b. Are there organizations addressing these constraints?
- c. What could be constraints faced by these organizations
- d. How can these be solved to ensure women's secure rights to land
- e. What opportunities can be harnessed to overcome the gendered inequalities towards ownership to land?

Under what circumstances can women successfully claim their rights to land?

Resources

Do you have trees on your land?

What arrangement are these trees? (Plantation, woodlot, AF system etc)

Who accesses what species, for what, when and the reasons why?

- a. What factors determine one's access for a given tree product?

b. Do you think there are factors that hinder women and men from accessing a given tree product?

Concerning management of trees what activities are done by women and men and why?

What are the constraints that hinder ownership of tree resources by women and men in this community?

a. How can these constraints be addressed?

b. Are there any organizations addressing these constraints?

c. How can they be solved to ensure women's secure rights to land?

d. What opportunities can be harnessed to overcome the gender inequalities?

For those who own tree resources, how have you used these resources to accumulate other productive assets?

Annex 3: Check list for key informant interviews

1. Name of the key informant.....
2. Name of the organization.....
3. Date of the interview.....
4. Location: a) District..... b) Parish..... c) Village.....

A. Land

Interviewees: Chiefs, CDO's, Project staff, Local CBO's, Elders & landless)

- 1. What is the land tenure system in this area?
- 2. How is land acquired by natives and immigrants?
- 3. What rights do men and women have over land?
- 4. What is the percentage of women and men with land titles?
- 5. What factors determine access to land by men and women? Do men and women have equal ownership to land if not why?
- 6. What factors determine an individual's ownership to land?
- 7. What are the coping mechanisms that have been employed to ensure ownership of land by both men and women?
- 8. What mechanisms have been put in place to ensure that both men and women have equal ownership to land?
- 9. What constraints are faced by women and men in trying to gain ownership to land among immigrant and natives?
- 10. What opportunities could be harnessed to ensure access to land by men and women?
- 11. Under what circumstances are women able to successfully claim assets to which they are entitled to both customarily and under law?
- 12. Are there any organizations promoting women ownership to land? If yes mention them

B: Tree resources (DFO, Elders, Local chiefs)

- 1. What do you understand by access to tree resources?
- 2. What factors determine an individuals' access to trees resources?
- 3. How are the rights to tree resources acquired and transferred?
- 4. What percentage of women own tree resources?
- 5. What factors limit men and women from owning tree resources?

that opportunities can be harnessed to improve gendered ownership to tree
resources?

4: SPSS outputs for Multinomial logistic regression models

Multinomial logistic regression models to determine factors that influence the different modes of land acquisition in Kibaale (*reference category: lease/rent*)

	Parameter Estimates						95% Exp(B)	
	B	Std. Error	Wald	df	Sig.	Exp(B)	Lower	Upper
Intercept	4.259	12.762	0.111	1	0.739			
Male	1.005	1.104	0.830	1	0.362	2.733	0.314	23.777
Female	0 ^b			0				
Customary	-0.031	12.550	0.000	1	0.998	0.969	2.013x10 ⁻¹¹	4.665x10 ⁻¹⁰
Statutory	-0.737	14.796	0.002	1	0.960	0.478	1.217x10 ⁻¹¹	1.881x10 ⁻¹²
Consensual	-3.838	12.463	0.095	1	0.758	0.022	5.306x10 ⁻¹³	8.747x10 ⁻⁸
Single	-0.341	12.715	0.001	1	0.979	0.711	1.069x10 ⁻¹¹	4.728x10 ⁻¹⁰
Married	-6.200	12.574	0.243	1	0.622	0.002	4.020x10 ⁻¹⁴	1.025x10 ¹
Divorced	0.092	13.002	0.000	1	0.994	1.096	9.394x10 ⁻¹²	1.280x10 ¹¹
Religious/church	-0.054	12.577	0.000	1	0.997	0.947	1.868x10 ⁻¹¹	4.804x10 ⁻¹⁰
Marital=8]	0 ^b			0				
18-30	-0.912	2.007	.207	1	0.650	0.402	0.008	20.535
31-40	-2.172	1.659	1.714	1	0.191	0.114	0.004	2.945
41-50	-2.376	1.518	2.452	1	0.117	0.093	0.005	1.819
51-60	1.286	2.335	.304	1	0.582	3.620	0.037	351.588
61-Above	0 ^b			0				
Ugives	-1.891	.959	3.889	1	0.049	.151	0.023	0.989
Immigrants	0 ^b			0				
Crop production	2.786	1.832	2.313	1	0.128	16.215	0.447	587.621
Livestock production	2.922	4.965	.346	1	0.556	18.571	0.001	312668.471
Business	4.603	2.191	4.415	1	0.036	99.761	1.363	7304.343
Salary/wages/others	4.030	.000		1		56.285	56.285	56.285
Alcohol brewing	0 ^b			0				
Intercept	1.389	13.014	.011	1	.915			
Male	1.286	1.132	1.291	1	.256	3.617	0.394	33.232
Female	0 ^b			0				
Customary	1.537	12.780	0.014	1	0.904	4.651	6.152x10 ⁻¹¹	3.515x10 ¹¹
Statutory	0.401	15.147	0.001	1	0.979	1.493	1.909x10 ⁻¹¹	1.168x10 ¹¹
Consensual union	-1.841	12.695	0.021	1	0.885	0.159	2.481x10 ⁻¹²	1.015x10 ¹⁰
Single	1.703	12.941	0.017	1	0.895	5.491	5.304x10 ⁻¹¹	5.686x10 ¹¹
Married	-3.297	12.807	0.066	1	0.797	0.037	4.641x10 ⁻¹³	2.947x10 ⁹
Divorced	2.295	13.228	0.030	1	0.862	9.924	5.453x10 ⁻¹¹	1.806x10 ¹²
Church/religious	1.849	12.807	0.021	1	0.885	6.356	7.979x10 ⁻¹¹	5.064x10 ¹¹
Marital=8]	0 ^b			0				
18-30	-0.033	2.074	0.000	1	0.987	0.967	0.017	56.376
31-40	-1.629	1.729	0.887	1	0.346	0.196	0.007	5.811
41-50	-1.702	1.587	1.150	1	0.283	0.182	0.008	4.089
51-60	1.548	2.415	0.411	1	0.522	4.700	0.041	534.072
61-Above	0 ^b			0				
Ugives	-1.650	.981	2.830	1	.093	.192	.028	1.313
Immigrants	0 ^b			0				
Crop production	2.065	1.938	1.135	1	.287	7.886	0.177	352.223
Livestock pdn	1.249	5.073	.061	1	0.806	3.486	0.000	72582.647
Business	3.445	2.295	2.254	1	0.133	31.355	0.349	2815.574
Salary/wages/others	2.962	0.000		1		19.335	19.335	19.335

alcohol brewing	0 ^b			0				
concept	25.057	13.721	3.335	1	0.068			
life	.113	1.296	0.008	1	0.931	1.119	0.088	14.196
male	0 ^b			0				
memory	.902	13.308	0.005	1	0.946	2.465	1.159x10 ⁻¹¹	5.240x10 ⁻¹¹
statory	-3.791	16.720	0.051	1	0.821	0.023	1.322x10 ⁻¹⁵	3.850x10 ⁻¹²
sensual union	-4.199	13.264	0.100	1	0.752	0.015	7.696x10 ⁻¹⁴	2.928x10 ⁻⁹
single	2.147	13.456	0.025	1	0.873	8.555	3.009x10 ⁻¹¹	2.432x10 ⁻¹²
idowed	-8.449	13.391	0.398	1	0.528	0.000	8.560x10 ⁻¹⁶	5.353x10 ⁻⁷
married	-.976	13.851	0.005	1	0.944	0.377	6.111x10 ⁻¹³	2.325x10 ⁻¹¹
church/religious	1.204	13.337	0.008	1	0.928	3.333	1.481x10 ⁻¹¹	7.502x10 ⁻¹¹
initial=8]	0 ^b			0				
30	-4.988	2.309	4.666	1	0.031	0.007	7.384x10 ⁻⁵	0.630
40	-5.981	1.937	9.530	1	0.002	0.003	5.667x10 ⁻⁵	0.113
50	-5.220	1.757	8.826	1	0.003	0.005	0.000	0.169
60	1.598	2.474	.417	1	0.518	4.944	0.039	631.198
Above	0 ^b			0				
wives	-3.923	1.223	10.284	1	0.001	0.020	0.002	0.218
migrants	0 ^b			0				
pp production	-16.778	2.860	34.427	1	0.000	5.168x10 ⁻⁸	1.902x10 ⁻¹⁰	1.404x10 ⁻⁵
stock pdn	-17.874	5.832	9.393	1	0.002	1.728x10 ⁻⁸	1.877x10 ⁻¹³	0.002
ness	-15.952	3.246	24.151	1	0.000	1.181x10 ⁻⁷	2.038x10 ⁻¹⁰	6.843x10 ⁻⁵
ary/wages	-16.424	0.000		1		7.366x10 ⁻⁸	7.366x10 ⁻⁸	7.366x10 ⁻⁸
alcohol brewing	0 ^b			0				
concept	-3.094	15.177	.042	1	0.838			
life	2.044	1.354	2.277	1	0.131	7.718	0.543	109.744
male	0 ^b			0				
memory	4.695	14.422	0.106	1	0.745	109.451	5.798x10 ⁻¹¹	2.066x10 ⁻¹⁴
statory	4.414	18.178	0.059	1	0.808	82.568	2.779x10 ⁻¹⁴	2.453x10 ⁻¹⁷
sensual	-1.651	14.422	0.013	1	0.909	0.192	1.016x10 ⁻¹³	3.624x10 ⁻¹¹
single	.565	14.703	0.001	1	0.969	1.760	5.374x10 ⁻¹³	5.765x10 ⁻¹²
idowed	-2.580	14.577	0.031	1	0.859	0.076	2.959x10 ⁻¹⁴	1.939x10 ⁻¹¹
married	1.728	15.009	0.013	1	0.908	5.630	9.446x10 ⁻¹³	3.356x10 ⁻¹¹
church/religious	3.787	14.474	0.068	1	0.794	44.119	2.110x10 ⁻¹¹	9.226x10 ⁻¹³
initial=8]	0 ^b			0				
30	1.843	3.547	0.270	1	0.603	6.317	0.006	6605.849
40	-1.596	3.358	0.226	1	0.635	0.203	0.000	146.269
50	-2.713	3.443	0.621	1	0.431	0.066	7.781E-5	56.596
60	5.528	3.772	2.147	1	0.143	251.641	0.155	409134.362
Above	0 ^b			0				
wives	-.732	1.231	0.353	1	0.552	0.481	0.043	5.372
migrants	0 ^b			0				
pp production	1.288	3.233	0.159	1	0.690	3.625	0.006	2045.539
stock pdn	-1.872	6.214	0.091	1	0.763	0.154	7.903x10 ⁻⁷	29929.828
ness	1.246	3.620	0.119	1	0.731	3.478	0.003	4196.337
ary/wages/others	.955	.000		1		2.598	2.598	2.598
alcohol brewing	0 ^b			0				

Please/rent.

because it is redundant.

16. Reference category: purchase

	Parameter Estimates					95% C.I Exp(B)	
	B	Std. Error	Wald	df	Sig.	Exp(B)	
							Lower Upper
	-2.870	3.024	0.901	1	0.343		
	.280	0.407	0.475	1	0.491	1.324	0.597 2.937
	0 ^b			0			
	1.568	2.691	0.340	1	0.560	4.799	0.025 937.407
	1.138	3.737	0.093	1	0.761	3.121	0.002 4734.299
	1.997	2.717	0.540	1	0.462	7.364	0.036 1511.751
	2.044	2.690	0.578	1	0.447	7.724	0.040 1504.535
	2.902	2.870	1.022	1	0.312	18.215	0.066 5055.041
	2.203	2.778	0.629	1	0.428	9.052	0.039 2097.413
	1.904	2.706	0.495	1	0.482	6.710	0.033 1349.050
	0 ^b			0			
	0.879	0.979	0.807	1	0.369	2.408	0.354 16.395
	0.543	0.921	0.348	1	0.555	1.722	0.283 10.470
	0.674	0.930	0.526	1	0.468	1.963	0.317 12.146
	0.261	1.154	0.051	1	0.821	1.298	0.135 12.475
	0 ^b			0			
	0.241	0.404	0.355	1	0.552	1.272	0.576 2.809
	0 ^b			0			
reduction	-0.721	0.916	0.619	1	0.431	0.486	0.081 2.930
via pdn	-1.673	1.371	1.490	1	0.222	0.188	0.013 2.755
s	-1.157	1.022	1.283	1	0.257	0.314	0.042 2.330
wages	-1.069	0.000		1		0.344	0.344 0.344
brewing	0 ^b			0			
nt	20.798	5.156	16.272	1	0.000		
	-0.893	0.712	1.573	1	0.210	0.410	0.102 1.653
	0 ^b			0			
ary	0.934	4.519	0.043	1	0.836	2.543	0.000 17862.136
	-3.054	7.896	0.150	1	0.699	0.047	8.965x10 ⁻² 248130.673
	-0.361	4.633	0.006	1	0.938	0.697	7.9291x10 ⁻⁵ 6123.692
	2.488	4.506	0.305	1	0.581	12.033	0.002 82444.847
	-2.250	4.722	.227	1	0.634	0.105	1.008x10 ⁻⁵ 1102.309
	-1.068	4.880	.048	1	0.827	0.344	2.414x10 ⁻⁵ 4895.466
omligious	1.258	4.534	.077	1	0.781	3.519	0.000 25453.929
	0 ^b			0			
	-4.075	1.238	10.845	1	0.001	0.017	0.002 0.192
	-3.809	1.094	12.123	1	0.000	0.022	0.003 0.189
	-2.844	.989	8.267	1	0.004	0.058	0.008 0.404
	0.312	1.093	0.081	1	0.775	1.366	0.160 11.626
	0 ^b			0			
	-2.032	0.793	6.568	1	0.010	0.131	0.028 0.620
	0 ^b			0			
roduction	-19.564	2.226	77.233	1	0.000	3.187x10 ⁻⁹	4.060x10 ⁻¹¹ 2.502x10 ⁻⁷
ack pdn	-20.795	3.105	44.854	1	0.000	9.305x10 ⁻¹⁰	2.117x10 ⁻¹² 4.090x10 ⁻⁷
	-20.554	2.435	71.272	1	0.000	1.184x10 ⁻⁹	1.002x10 ⁻¹¹ 1.399x10 ⁻⁷
wages/others	-20.454	0.000		1		1.309x10 ⁻⁹	1.309x10 ⁻⁹ 1.309x10 ⁻⁷
brewing	0 ^b			0			
	-7.353	8.340	0.777	1	0.378		
	1.038	.817	1.616	1	0.204	2.824	0.570 13.999
	0 ^b			0			
	4.727	7.216	0.429	1	0.512	112.945	8.147x10 ⁻⁵ 1.566x10 ⁴
	5.151	10.731	0.230	1	0.631	172.596	1.266x10 ⁻⁷ 2.352x10 ¹¹

	2.187	7.379	0.088	1	0.767	8.906	4.666×10^{-4}	1.796×10^7
	0.907	7.495	0.015	1	0.904	2.476	1.033×10^{-4}	5933478.42
	3.619	7.512	0.232	1	0.630	37.306	1.504×10^{-5}	9.253×10^7
	1.636	7.615	0.046	1	0.830	5.135	1.692×10^{-4}	1.558×10^7
gious	3.841	7.278	0.279	1	0.598	46.576	2.572×10^{-4}	7.506×10^7
	0 ^b			0				
	2.755	2.979	0.855	1	0.355	15.723	0.046	5405.298
	0.576	2.965	0.038	1	0.846	1.779	0.003	594.683
	-3.36	3.135	0.012	1	0.915	0.714	0.002	333.017
	4.242	3.060	1.922	1	.166	69.517	0.073	27968.957
	0 ^b			0				
	1.159	.815	2.024	1	0.155	3.183	0.646	15.741
	0 ^b			0				
duction	-1.498	2.687	0.311	1	0.577	0.224	0.001	43.267
duction	-4.794	3.788	1.601	1	0.206	0.008	4.535×10^{-4}	13.894
	-3.356	2.911	1.329	1	0.249	0.035	0.000	10.435
ages/others	-3.076	0.000		1		0.046	0.046	0.046
brewing	0 ^b			0				
	-4.259	12.762	0.111	1	0.739			
	-1.005	1.104	0.830	1	0.362	0.366	0.042	3.184
	0 ^b			0				
	0.031	12.550	0.000	1	0.998	1.032	2.143×10^{-11}	4.968×10^{10}
	0.737	14.796	0.002	1	0.960	2.090	5.316×10^{-13}	8.220×10^{12}
	3.838	12.463	0.095	1	0.758	46.418	1.143×10^{-9}	1.885×10^{12}
	0.341	12.715	0.001	1	0.979	1.407	2.115×10^{-11}	9.354×10^{13}
	6.200	12.574	0.243	1	0.622	492.539	9.753×10^{-9}	2.488×10^{13}
	-0.092	13.002	0.000	1	0.994	0.912	7.814×10^{-12}	1.064×10^{11}
religious	0.054	12.577	0.000	1	0.997	1.056	2.081×10^{-11}	5.354×10^{10}
	0 ^b			0				
	0.912	2.007	0.207	1	0.650	2.490	0.049	127.304
	2.172	1.659	1.714	1	0.191	8.776	0.340	226.804
	2.376	1.518	2.452	1	0.117	10.767	0.550	210.842
	-1.286	2.335	0.304	1	0.582	0.276	0.003	26.832
	0 ^b			0				
	1.891	.959	3.889	1	0.049	6.626	1.012	43.399
	0 ^b			0				
duction	-2.786	1.832	2.313	1	0.128	0.062	0.002	2.235
duction	-2.922	4.965	.346	1	0.556	0.054	3.198×10^{-6}	906.566
	-4.603	2.191	4.415	1	0.036	0.010	0.000	0.734
ages/others	-4.030	0.000		1		0.018	0.018	0.018
brewing	0 ^b			0				

Purchase.
 - because it is redundant.

ANNEX 5: Summary statistics for sizes of land parcels held by men and women

Statistics	Female	Male
Error	0.81	2.45
	0.16	0.30
	0.51	1.21
	0.40	0.81
Deviation	0.98	3.75
variance	0.95	14.08
	24.56	21.61
	4.59	4.31
	5.97	24.22
	0.10	0.16
	6.07	24.38
	29.95	383.97
	37	157