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AGRICULTURAL LAND TENURE POLICIES AS CATALYST FOR ENHANCED WOMEN ECONOMIC EMPOWERMENT IN ARUA DISTRICT, UGANDA

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ABSTRACT: *Land as a factor of production in agricultural based economy plays a pivotal role in enhancing women equal rights in participation in development. Therefore, land tenure systems should be gender inclusive in order to facilitate rapid economic empowerment of women who contribute the largest share of labour rural parts of Uganda. Nonetheless, it is important to note that literature on the relationship between agricultural land tenure policies and women economic empowerment in Uganda is scanty. The purpose of the study therefore was to investigate the effects of agricultural land tenure policies on women economic empowerment in Arua District. The study adopted human development perspective theory and correlation research designs because the designs permitted hypothesis testing. The study targeted district agricultural officers, community development officers, district environmental officers, farmers, opinion leaders from the community, members of the civil society organizations and extension officers with a total sample size of 120 participants. Reliability analysis was achieved by use of tests retest technique and the results were subjected to factor analysis with all the items registering above 0.80. Expert assessment was used to realise content validity with the minimum principle component analysis factor loading value of all the items in the research tools were above 0.80 indicating that the tools were valid. Data collected were cleaned by weeding out inconsistent and irrelevant responses. The study found land tenure policies positive (β=.904) and significant (p=0.000) to women economic empowerment. The study recommends that the government of Uganda, specifically the ministries of agriculture and lands, to spearhead an awareness campaign on the women land rights; initiate policy review targeting agricultural land tenure system and women economic empowerment. The study also recommends further research on this subject matter using other research paradigms such as case study.*

KEYWORDS: Land Tenure, Policies, Women Economic Empowerment.

INTRODUCTION

Background of the study

Scholars around the globe do contend that there is nothing better than securing agricultural land rights to empower women based in remote areas in the developing world, (Hanstad, 2014 and Deininger et al, 2016). This is because the economies of these areas are dictated by the dominant agricultural activities which are the main source of livelihoods and economic mainstay. In addition to this, secure agricultural land rights for women increase land related investment and spur economic participation, (Ali et al, 2014). However, it is important to note that in most African nations women have limited rights to agricultural land due to retrogressive cultural practices and customary land tenure systems. Subsequently, this has negatively impacted on their ability to break poverty cycle and meaningfully contribute to sustainable economic development, (UNECA, 2011). Decisions on agricultural land are male dominated while labour and production is female centred. This implies that women toil in the

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farm to produce while males control all the resources and outputs from the farm, (Teshale & Gebre, 2015). It is estimated that women in Uganda only own 1% of the agricultural land and this harshly retards their participation in large scale farming, (World Bank, 2010). According to UNFPA (2012) even when women own these parcels of land the need for male protection make them vulnerable and some of them may opt to allocate the land to their male relatives. This in turn has made it difficult to achieve meaningful women economic empowerment especially in Northern Uganda.

Land tenure system and women economic empowerment cannot be divorced since these two important concepts are intimately related in rural development, (Cotula, 2014). This is because Women play a pivotal role in development in rural areas, (OECD, 2007)). Secondly, women are the majority of workforce and they spend most of their time in small scale household farms eking a living. Comparatively, women who own land have enhanced status and greater bargaining power in the community and have greater influence over farm inputs and outputs, (World Bank, 2011). When women have control over agricultural land their food purchasing decision is most likely to benefit children's nutritional status and food security. Women who own land are able to access credit facilities to boost their business thus better economic empowerment, (Odeny, 2013). However it is important to note that most rural communities in Northern Uganda still rely on traditional land tenure system that discriminates against women and this has been the epicentre of serious debate, (Abdulai & Anturi 2005). World Bank, (2013) posits that when women have equal rights and freedom to agricultural land, incidences of domestic violence is minimized, however, the voices of women to own agricultural land has been silenced by different economic, political and social factors. These economic and social barriers to agricultural land tenure rights can be traced to pre-colonial periods in Uganda and lack of political goodwill in implementing available current legal frameworks. Unless the trend is reversed with regards to agricultural land tenure system vices like gender based violence which has roots in retrogressive culture may be impossible to wipe out. It is a fact that gender based violence retard women economic empowerment and there is a need to eliminate at all cost, (USAID, 2016c).

Women land rights and struggle for economic empowerment in Uganda dates back to pre and post-colonial eras. This study, however, did not dwell so much on colonial periods. In 1975 Idi Amin introduced the concept of land nationalization, (Nkonya et al, 2008). This resulted into abolition of freehold and mailo land ownership, (Hunt, 2004). A lot of gender inequity with regards to land access by women was furthered by this policy. Many women did not have absolute rights on agricultural land and could not control it as a factor of production. Despite all these limitations on access to land by women in Arua district women continued to contribute immensely to labor force in agriculture. This policy was applied during the period when the concept of gender and development emerged in 1980. It is important to note that gender and development approach was holistic and sought to address women strategic interests by minimizing institutionalized forms of discrimination of women more so on access to agricultural land. Gender and development approach took cognizance of gender roles by emphasizing that both men and women have equal rights to land and that women and girls should enjoy their rights without any form of coercion.

In 1995 the Ugandan constitution streamlined land tenure systems in Uganda and in 1998 land act was passed, (Kabeer, 2005). This act increased tenure security for women. The 1998 Land Act gave automatic co-ownership of spousal land including agricultural land, (Uganda National Land Policy Portal, 2015). This implies that before any transaction is done on the

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piece of land all parties including children and wife must give consent, (Ministry of Lands, Housing and Urban Development, 2013, Ugandan National Land Policy Portal, 2015 &Rugadya et al 2004). This corresponds to the era when women rights were at the centre of development. The rights based approach argues that inclusion of women to economic development is a right not a privilege. Those who ascribe to this school of thought contend that there is no development project which can be sustained without the component of gender equity. Right based approach reasons out that women have a right to live free from violence and any form discrimination, (UNECA, 2011, Whitehead and Tsikata 2003 &Thapa 2008). Therefore all government and state agencies should had put in place mechanisms that promote gender equality and mainstreaming at all level. This implies that women were to have equal rights to enjoy agricultural land ownership and to be economic independent without any hindrance from any quarters.

Despite all these legislations and legal policy frameworks, in some parts of Uganda such as Arua District, women still face a lot of challenges with regards to access, ownership and control over the productive agricultural land; this impacts negatively on their ability to be economically empowered. It is clear based on this brief history of Ugandan agricultural land tenure policies that women economic empowerment results from accrued benefits generated from land that has faced numerous challenges. Therefore it is against this backdrop that this study sought to investigate the effects of land tenure system on women economic empowerment in Arua District in Northern Uganda. It is worth noting that the content of this thesis once disseminated contributes greatly to the creation of new knowledge in this area and provide a fertile ground for review of women economic empowerment and agricultural land tenure policies so as to achieve gender equity for sustainable development as contained in united nations sustainable development goals 2030, national medium term development plan and the republic of Uganda national vision blue prints.

Problem Statement

The government of Uganda has made enormous steps towards the development of various policy documents aimed at scaling up agricultural production in the country, (Klaus, Fang & Sara, 2015, Ugandan National Land Policy Platform, 2015, Knight 2010 & Namubira-Mwaura, 2014). Despite the development of these agricultural land tenure policy documents the female small scale farmers still experiences a lot of challenges with regards to production, control of output and farm inputs, access to land and decisions regarding distribution of money from sale of crops grown on customary piece of land, (World Bank, 2012). This has in turn affected the women economic empowerment and the realisation of long term and medium term plans as contained in the country's vision document. The findings of this study will therefore be crucial during policy review so that women small scale farmers in Arua District and the entire farmers can enjoy and contribute positively towards sustainable agricultural development.

Literature on the relationship between Agricultural land tenure policies and women economic empowerment especially in Uganda is scanty while the available studies do not present conclusive findings, (USAID, 2011). For example, an online database search using search engines such as google and Mozilla Firefox on the effects of land tenure policies on women economic empowerment in Arua District of Northern Uganda yields no concise results. The search results are mainly institutional reports and documentaries by international donor funded bodies. Most of these reports, even though they provide a firm background and gap analysis for further research, are very subjective and are based on untested hypothesis. In

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addition to this, it is important to note that majority of the studies that have attempted to conduct studies on the effect of agricultural land tenure policies on women empowerment have mainly utilised desk research with the bulk of data being gathered by United Nations agencies and international corporations. Very few studies have been carried out by individual researchers, especially from higher learning institutions with subjects drawn from Arua District are available online. It was this gap that this study wished to fulfil by conducting an empirical study and disseminating the research findings in both print and electronic media through publication with a view to generate new knowledge aimed at policy realignment for gender parity.

Purpose

The purpose of the study was to investigate the effects of agricultural land tenure policies on women economic empowerment in Arua District.

Objectives of the Study

The research study pursued the following pertinent specific objectives:-

1) To determine the extent to which agricultural land ownership policy affects women economic empowerment in Arua District.

2) To investigate the extent to which land use policy affects women economic empowerment in Arua District.

Null Hypotheses

The study endeavoured to test the following null hypotheses:-

H_10 There is no statistical significant difference between agricultural land ownership policy and women economic empowerment in Arua District.

H_20 There is no statistical significant difference between agricultural land use policy and women economic empowerment in Arua District.

EMPIRICAL REVIEW

The Link between Agricultural Land Ownership Policy and Women Economic Empowerment

Research study done by Teshale and Gebre (2015) on rural women land use rights in Tigray regional state in Ethiopia applied questionnaires, focus group discussions, and key informant interviewees to collect primary data while Secondary data were gathered from different documents. The study established that there is a correlation between rural women land ownership and socio economic development. This is true because when women own land they are able to use the title deed as a security to acquire farm inputs. Decisions around what to be planted on the land also rest with the woman. This aspect of ownership encourages the rural women folk to work extra hard so as to achieve set goals and objectives, hence superior economic empowerment. The verdicts of this study resonates the findings of the study done by Klaus et al (2006) who investigated the legal knowledge and economic development: a

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case of land rights in Uganda. Even though this study had mixed findings on impact of land titles on economic development, the researchers concluded that when women have secure land ownership, they achieve economic development faster compared to when land is solely owned by men as espoused in most customary land slaws across Africa.

Research done by Pepijin et al (2007) on simulating soil fertility and poverty dynamics in Uganda with data collected from two villages in Lake Victoria crescent of Uganda using simulation techniques. The study established that there is a relationship between poverty, land ownership and soil fertility. The researcher argue that when land is owned by women they are able to determine the amount of fertilizer to use, crops to plant and they are able to monitor soil fertility with a view to improve the crop yields. This study even though did not directly investigate the relationship between women economic empowerment and land tenure policies; it presents accurate research findings on how land ownership correlates with poverty in Uganda. It is also imperative to note that simulations as a research techniques have several debilities in terms of scope and generalization of research findings as compared to the descriptive research design that this study adopted. Above all the issue of land ownership as presented by Pepijin et al (2007) affects soil fertility in the sense that when there is clear ownership of land decisions around which fertilizers to use, farming techniques to adopt in order to improve soil fertility among other sustainable agricultural practices is controlled. Empirical evidence also support the fact that when women own land they tend to consider best practices that ensure that soil fertility is improved since they prefer organic farming especially on kitchen garden, (FAO, 2014). However it is important to note that some societies which are male dominated, women tend to be excluded from decisions regarding land ownership and use and this affects productivity and sustainability of agricultural practices, (UNDP, 2010). This in turn directly affects the net income generated from the farm and slows down women economic progress.

Jagger, Pender, Ephraim and Sserunkuuma (2001) conducted a study on development pathways and land management in Uganda: Causes and Implications. The study specifically investigated patterns and detriments of change in livelihood strategies, agricultural productivity, land management practices, human welfare. The survey established that the current agricultural land tenure systems in Uganda do not provide policy makers with the much needed intervention strategies for better land utilization and women economic empowerment. This therefore implies that more empirical evidence based on accurate research findings are needed in order to provide recommendations that will ensure that land as a factor of production is properly utilised and owned by men and women equally for sustainable economic growth.

Study done Amber et al (2011) on understanding the complexities surrounding gender differences on agricultural productivity in Uganda and Nigeria, presents divergent findings. The study found out that lower productivity is persistent from female owned plots in female headed households in Uganda and Nigeria. However it is important to note that the researchers in their concussion strongly recommended further study in this area. It is against this backdrop that this study tested some of the hypotheses with a view to empirically confirm these previous research findings.

According to research study by Geshaw (2015) on women's land right policy and household food security in Ethiopia. The study found out that women's right to land influence their ability to produce and behave as producers. This further indicates that when women control

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resources including land there is a feeling of satisfaction that drives them to work extra hard hence greater economic empowerment.

Relationship between Agricultural land Use Policy and Women Economic Empowerment

There is a growing literature that explores the relationship between women economic empowerment, population growth, agricultural land use, food crop production and forest cover (Karim 2012). This is because as population expands land as a factor becomes constrained hence affecting its agricultural utilization. This fragmentation of land due to population spurt makes it difficult for women in the rural folk to meaningfully make a living from the farm (Otu et al, 2011). Effective land use depends on the size of the land under being utilised since small fragmented land due to high population density tend to give low productivity and in most cases often leads to over cultivation that may affect yields. The relationship between rapid population growth and the capacity of our earth has been a matter of controversies for a long time and would continue so in the future, (FAO, 2010).

Research studies have also found out that extensive methods of farming also have environmental impacts such as shifting farming, over-grazing, land fragmentation, deforestation and bush burning. Analogous findings have been reported in some bordering countries such as Rwanda, Tanzania and Kenya, (FAO, 2011). As a result of this, women economic empowerment or livelihood is affected. In addition to this a study done by Jayne, (2012) who investigated the impact of emerging land constraints and rising population density on smallholder agricultural productivity and commercialization clearly revealed that increased land use ensures that farm households are able to generate agricultural surpluses and consequently participate in agricultural output markets. This implies that proper utilization of land propels economic development. Therefore effective policies and strategies should be designed and implemented to ensure that women in rural areas are not blanked out if meaningful economic empowerment is to be realised since land use is key to agricultural output.

Limited land use by women in rural parts of Africa due to retrogressive cultural norms has been argued by some scholars as a contributing factor in the under development in most areas, (Nitya, 2011). This is true because access to land and fragmentation has been male dominated and decisions to sub divide land has been controlled partly the customary laws in these regions, (Odeny, 2013). This in turn has affected women economic empowerment since they have limited access to control land and make decisions on transfer or sale of land. They are normally locked out from the process despite numerous legislations that have been set by the government of Uganda to cushion them against such acts, (UNDP, 20011). However, there is evidence that demographic pressure may result in the transformation of agricultural land for rural and urban settlement/habitation. Karim (2013) found that there was more than 18% decrease in agricultural land in two Bangladeshi villages because of demographic pressure. The author concluded that population increase puts heavy pressure on cropland compelled the diversion of farming land for purpose of settlement and habitation.

Research study findings done the government of Uganda Bureau of Statistics (2012) revealed that from 2008 up to 2010 the total crop production in Uganda did not register major positive index but increased by only 1.5% per year compared to the 3.2% per annum of population growth during the same study period. This means that economic growth was slowed down during this period. In spite of this, food production has trailed behind population growth over

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the years due to low public and private venture in agriculture, inadequate support from agricultural financial institutions, disasters caused by nature causes such a crop pest and drought, lack of empirical studies or inadequate research especially in rural areas such as Arua and dormant or ineffective extension services (MAAIF, 2011). According to Bishai (2006), a combination of capacious agriculture and swift population growth results to augmented degradation of natural resources which subsequently leads to agricultural stagnation and this directly retards women economic empowerment. This research finding is in tandem with the Boserupian hypothesis that the increase in labour force increases area under food crop and subsequently the overall agricultural production. However, it is important to note when productivity is low, women who are the greatest beneficiaries of this agricultural activity are affected in large numbers. This in turn affects the pace of their economic gain in the community.

Women Economic Empowerment

In order for the government of Uganda to achieve sustainable development goals as envisaged by the global sustainable development goals 2030, women must be at the centre of the planning and implementation process including monitoring and evaluation. This calls for an inclusive society where gender is mainstreamed with the right based as the elements that make up the fabrics that weave the system. Moreover, this will facilitate economic empowerment for both gender and reduction of incidences of gender based violence. Article 3 of the international convention on economic, social and cultural rights demands that, all countries have to put in place mechanisms to ensure that women live freely without any form of discrimination in pursuit of economic development, (UN Women, 2015).

According to Kabeer (2011) empowerment is derived from the word power meaning ability to make choices whereas Sen (1985) defines power as dominant factor of decision making. In this study empowerment was defined operationally as the process by which those who have denied power make strategic life choices acquire the ability to make those decisions. Economic empowerment in this research will be defined contextually to mean ability people to make strategic life choices or decisions with regards to their income and how to spend money for better living conditions or standards.

Research study done by Mahabub, Manik, & Alia (2004) on the nature and impact of women participation in economic activities in rural Bangladesh using household survey research design found out that credible documentation of women participation in economic activities specifically for women belonging to farm households is under represented. The research found that this may have been attributed to the invisibility nature of women labour input farm which in most cases is not computed as a factor of production especially in rural areas in the developing world. This is a fact because in Arua district where farming is the mainstream of the economy women labour force accounts for more than 60%. However, this labour contribution is normally ignored when profit is being calculated and in most not paid back particularly in male dominated household heads.

Lakwo (2006) conducted a study on micro finance, rural livelihoods and women's economic empowerment in Uganda. The study found out that some current gender insensitive policies do not support women economic empowerment programs wholesomely. This has made it very difficult for women to access micro finance and credit facilities that would transform their lives.

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A study done by Sanzidur (2010) on women's labour contribution to productivity and efficiency in agriculture examined the contribution of women's labour input to productivity and efficiency in crop farming using a large survey dataset of 1890 households from 16 villages in Bangladesh. The study found out that female labour accounts for 28% total labour from the family and contributes significantly to productivity. The researcher also asserts that women from rural households also strike a balance between their economic labour time contribution and family duties.

Nabecwa (2001) studied policies and practices towards women empowerment via exploratory research design. The study specifically laboured to identify factors that affect effective policy advocacy work aimed at empowering women at the grassroots level and make recommendations on the most suitable empowerment strategies. The study findings revealed that while Uganda presents a viable opportunity for women economic empowerment, the accrued benefits of empowerment advocacy have not been realised at the community or grassroots level.

Klesen and Lawson (2007) investigated the impact of population growth on economic growth and poverty reduction in Uganda. The study relied on macro and micro econometric approach. The study found out that the current high population growth rate in Uganda slows down poverty eradication initiatives. High significance level was also noted between high poverty index and women economic participation.

Research study done by Dralega (2015) on rural women information, communication and technology use in Uganda found out that while women's collective activism as a reaction to socio economic and cultural domination has contributed slightly to economic empowerment of women. This therefore means that as a result of more awareness through the use of modern communication and technology facilities, women are able to share knowledge for economic gains. This has significantly contributed to empowerment. It is a fact that many women get to know a lot of information through social media utilities hence are able to demand for their rights including right to access, use and own agricultural land. According to a study by Alexandria (2013) on empowerment in Uganda using participatory action research culture and religious structures play a significant role in women empowerment.

Human Development Perspective Theory

Human Development Perspective Theory advocates for inclusivity in management and allocation resources in the society for the purpose of development, (Inglehart&Welzel 2005). This theory was adopted based on its emphasis on women economic empowerment such as autonomy and rights to live freely including owning agricultural land anywhere without any form of discrimination. It clearly explains the key variables that were under investigation. This is a more recent theory that emphasizes the conversion of economic development into a cultural process of human development that gives rise to an emancipative worldview, reflected in self-expression values that emphasize human choice and autonomy, including the choices and autonomy of women (Welzel, Inglehart&Klingemann 2003). This theory attempts to link social modernization to emancipative values through changes in existential constraints. The theory places interest on changes in modern societies particularly those changes which are viewed to be conducive to land tenure systems that enhance women's empowerment and therefore establishes a link between cultural modernity that value greater equality between genders, (Inglehart&Welzel 2005).

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The proponents of this theory reasons out that emancipative orientations develops corpus expectations aimed at making community members and their influential leaders to be more responsive and inclusive. It stresses that the leaders need to work with all members of the communities and all barriers that may exclude others including women in participating in economic activities to be eliminated. Subsequently, over increasing emancipative values lead to increases in women's empowerment throughout society and in parliament (Inglehart, Norris &Welzel 2002).

This theory also looks at the relationships between these land tenure and women participation in economic empowerment, given that the human development approach stresses the role of increasing human resources in expanding the scope of social inclusion and personal choice/ rights of all human beings. The proponents argue that the society expects that economic modernity will be more inclusive at the initial stage while appreciating contributions made by women towards economic development and trying to find a common ground between culture and women economic empowerment. They contend that cultural modernity will become more central to explanations of the higher stages.

Ultimately, Welzel (2003) on one hand, ties the modern human resources crucial to the human development sequence to economic development. But in this view the effect of economic development is more indirect. On the hand, Inglehart& Norris (2003) posits that cultural modernity holds tangible, positive consequences for women. These scholars add that when controlling for alternative hypotheses, the measure of attitudes toward gender equality is the sole predictor of the proportion of women in agricultural based economy.

It is important to note that Human Development Perspective theory as advanced by Inglehart &Welzel (2005) is not so purely anchored on gender-egalitarian attitudes in particular but rather the broad emancipative implications of self-expression values in general that positively predict gender empowerment more so women economic empowerment in rural areas. In addition to this Welzel (2003) also argues that modernization comes in many forms, while acknowledging the fact that all the measures/ key tenets as espoused in the theory is conceptualized in terms of women's empowerment, the strongest and most consistent research findings show that gains in gender equality are more discernible in countries with high levels of development and strong emancipative values. This implies that those countries where retrogressive cultural practices and gender inequality still exist, the situation may slightly be different. Therefore, parameters or measures of economic development should strongly relate to take cognizance of gender parity and women economic empowerment, (Inglehart& Norris 2003).

Conceptual Framework

Based on the in-depth empirical studies reviewed and theoretical framework as explained afore, the study adopted the conceptual framework in figure 1:-

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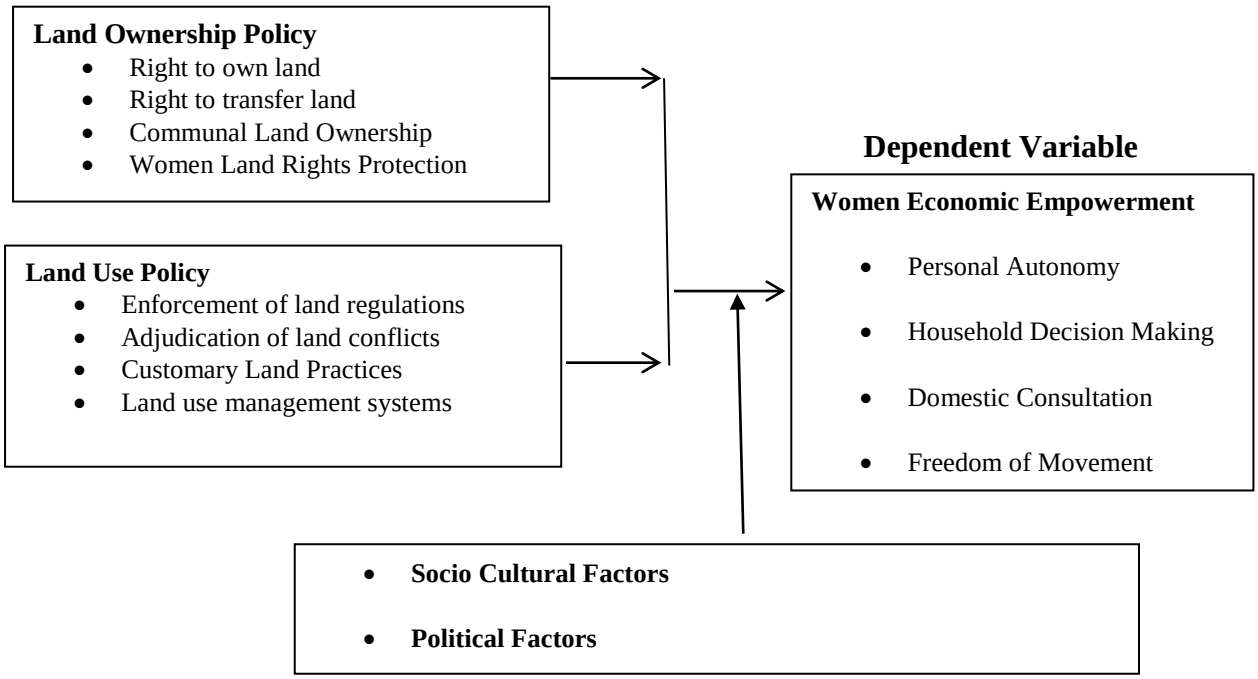
Figure 1: Conceptual Framework



Source: Author, (2016)

Explanation of the conceptual framework

In figure 1, there are two key variables. The independent variable in this study was agricultural land tenure policies had two key measures which define land tenure policies. These sub variables included land ownership and land use policies Similar past studies such as Teshale and Gebre (2015) and Mostofa, Taraquel, Haque& Islam (2008) applied the same sub variables to test whether a relationship exists between rural women land use rights and economic development.

Economic empowerment which is the dependent in this study was investigated using a variety of indexes such as personal autonomy, household decision making, domestic consultation and freedom of movement. Similar past studies such as Geshaw (2015) employed the same sub variables to measure women economic empowerment. It is important to note that this study was cognisant of other intervening variables since economic empowerment and land tenure systems in Africa are deeply rooted within the social norms of the society. The researcher felt that politics also plays a key role with regards to land adjudication and women empowerment. It was against these informed opinions that social, cultural and political intervening variables were included in the study.

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RESEARCH METHODOLOGY

Research Design

This study used descriptive cross sectional survey and correlation research designs. Correlation research design is used calculatedly because it allows for systematic collection and analysis of data in order to test hypothesis (Osso&Onen, 2009). Precisely, cross sectional design was used because of time and costs constraints that could not allow for longitudinal designs, (Kothari (2009). Survey was used because it allows for generalization and sampling of target population, (Cooper &Schindler, 2009). In addition to this, descriptive surveys are normally intended to describe the characteristics of particular individuals or a group and report things as they are and provide numerical data of the population, (Orodho, 2008).

The Study Area

The study was located in Arua District. Arua district is located in Northern region of Uganda. The Arua district is located between latitude 2^0 30'N and 3^0 50'N and longitude 30^0 30'E and 31^0 30'E with a total land area of 5,476.2 sq km. Arua district borders Maracha district to the North West, Yumbe District to the northeast and Adjumani and Amuru districts to the East. The Democratic Republic of the Congo lies to the west of the district as shown in annex 3 attached. According to the Ugandan Bureau of Statistics, (2013) report, in Arua District, forest and woodland occupies 1,338.7 sq km, about 25% of the district land area. The district is also highly densely populated due to rich economic background based on agriculture. Demographic data by the Ugandan Bureau of statistics (2014) estimates population of Arua District to be 776,700 people, with a population growth rate of 3.5% per year by mid-2012. The northern Uganda, particularly Arua usually has bimodal rainfall pattern; first rains from March-May and second rains from September - December. The average total rainfall is 1,250mm per year with the dry season in December -March temperatures being high throughout this period.

Agriculture is the backbone of the economy of Arua district and northern Uganda in general, (FAO, 2010). The district grows a number of crops for both cash and food purposes which include, beans, cassava, groundnuts, maize, mangoes, millet, and tobacco(Arua District Information Portal, 2009). Tobacco is the major cash crop and is the main source of livelihood for the majority of the population in the district. In addition to crops, farmers are furthermore participating in rearing goats, chicken and beekeeping at home for both consumption and for sale (Arua District Information Portal, 2009). Administratively, Arua District is made up of 5 counties; Arua Municipality, Ayivu, Okollo, Terego and Vurra with 25 sub-counties and two divisions (Arua District Information Portal, 2009). Specifically this study was located in Arua Municipality due to time and financial constraints that would have allowed a district wide research. In addition to this Arua Municipality is the headquarters of Arua District. This therefore means that data from the remaining four counties were not collected in this study.

Target Population

The study population for this study comprised of the key stakeholders in the agriculture and land sectors who are affected the policies. The study therefore targeted the district agricultural officer, lands officers, Community Development officer, District Environmental Officer, farmers, opinion leaders from the community, members of the civil society organizations and extension officers.

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The district agricultural and Extension officers were crucial in this study because they are key government officers who directly participate in agricultural policy formulation and implementation. In this regard they act the focal points since they provide feedback on a regular basis to the government on the effectiveness and defects of the policies within their domains. The district development officers were included in this study because agriculture and development are intertwined. It is important to note that economy of the Uganda especially in Arua District is agricultural based and the district development officer were included in the study since the researcher strongly believed they would provide the much needed data on the relationship between land tenure policies and women economic empowerment. District land officers were included since they participate directly in land tenure policy formulation and implementation at the community level hence were to provide useful insights on how these policies affect women economic empowerment in Arua District.

District Environmental Officer are important government officers who ensures that policies developed do not jeopardise the environment and they continuously conduct environmental impact assessment especially when large farming is being launched. In this study they were included specifically to provide the much needed information on best agricultural practice needed to enhance environmental sustainability. It is also important to highlight the fact that the District Environmental Officer (DEO), the Community Development Officer (CDO) and the District Agriculture Officer (DAO) were selected because they are believed to be knowledgeable and have a clear understanding of the current trends as pertains to demographics, agriculture and forestry issues in the district. Farmers were included in this study because they are the consumers of the developed policies. These policies directly affect their daily operations hence they hold critical information needed by the researcher.

Sample Selection and Size

The study employed Yamane (1967) formula as discussed by Glenn (2016) to calculate the sample size of farmers within Arua Municipality in Arua District in Northern Uganda. The equation for the formula was:-

$$n = \frac{N}{1+N(e)^2}$$

Where:-

n is the Sample Size

N is the total Population

e is the precision level

According to the Arua Municipality Data (2014) there are 655 small scale farmers located within the Municipality.

Therefore the sample size for farmers based on Yamane (1967) Formula with a confidence level of 95% with precision level of 15% (Margin of Error = 0.15) yielded a sample size of:-

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$n = N / 1 + N (e^2)$

$=655 / 1 + 655 \times (0.15)^2$

$=655 / 1 + 655 \times (0.0225)$

$=655 / 1 + 14.7375$

$= 655/15.7375=42$ respondents.

Purposive sampling was used to select 10 District Agricultural Officers, 10 District Lands Officers, 20 Extension Officers, 4 District Development officers and 4 District Environmental Officers. Stratified Sampling technique was used to collect data from 30 opinion leaders. The strata consisted of 6 community/ elected leaders, 6 religious leaders, 6 teachers, 6 village elders, 6 members of the provincial administration. The total study therefore comprised of a sample size 120 participants.

Non Probability Purposive sampling technique was used to select participants in this study because the researcher intended to purposively collect data from specific government officials within the district regarding the variables under study, (Orodho, 2009). Simple random sampling was used to ensure equal chances for all participants hence reducing biasness which may compromise validity and the reliability of the study findings, (Mugenda and Mugenda, 2009). Stratified sampling was used because of the heterogeneous nature of the opinion leaders, (Coopers Schilndler, 2009). In order to ensure equal distribution of the respondents under opinion leaders category four strata were developed for equity purposes.

Based on the aforementioned discussion, the study sample was distributed as shown table1.

Table 1: Study Sample Size

SAMPLE CATEGORY	TARGET POPULATION	SAMPLE SELECTED	PERCENTAGE
Farmers	655	42	6%
District Agricultural officers	15	10	67%
District Land Officers	15	10	67%
District Extension officers	30	20	67%
District Environmental officers	10	4	40%
District Development officers	10	4	40%
Opinion Leaders	200	30	15%
TOTAL	**920**	**120**	**13%**

Source, Author, (2016)

According to Cooper and Schilndler (2009) any sample of above 10% drawn from a large population's yield valid and reliable data in descriptive survey and correlation research designs. Therefore a total population size of 120 (13%) was deemed fit to generate accurate data needed for hypothesis testing as opined by Mugenda and Mugenda, (2009).

Data Collection Tools

Questionnaires were used to collect data from the District Agricultural Officers, District Land Officer, District Extension Officers, District Development Officers, District Environmental

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Officers and opinion leaders because data collected can usually be quickly and easily quantified through the use of a software package such as SPSS which the researcher used, (Burns, 2010). The questionnaire was structured into five sections each addressing a specific objective. Section one collected demographic data while section 2, 3, 4 and 5s respectively used a five point Likert Scale to collect data on the specific research objectives. A five point Likert Scale which was used to collect the quantitative data requested respondents to indicate their level of agreement/disagreement based on the statements on the relationship between various agricultural land tenure policies and their effects on Women economic empowerment.

Focus Group Discussions were used to collect data from farmers. The groups consisted of ten members at the sub county level with the researcher as the moderator. Focus group discussion was be used because it generates rich data, (Bosco &Herman, 2012, & Bagnoli & Clark, 2010). It is also a very powerful tool in qualitative research especially when data is collected from a group of people who may not be literate hence cannot respond to written questions in the questionnaire.

Validity and Reliability of the Instruments

The researcher conducted validity and reliability tests to ensure the relevance of the content in the tools as well as ascertain the degree to which a research instrument or data collection tools or procedures gives equivalent results over the number of repeated trials.

Validity

In this study, validity was achieved through expert assessment procedure. The researcher first conducted a thorough literature review from print and electronic media with an aim of developing a complete ambit of the measures for the variables based on the previous empirical studies. After the thorough literature review, the researcher designed the research tools and presented all the data collection tools to one of the lecturers who is an expert at the department of Development Studies at St Paul's University who criticised the tools in relation to the content and all the comments were incorporated. The researcher then presented the corrected data collection tools to the second lecturer at the department of development studies at St. Pauls Universities to critique the same tools. This procedure was repeated with the researcher computing the results of the expert's assessment procedure until there is total agreement between the experts and the results of factor analysis of above 0.4 being accepted. The decision to use expert judgment as a method of determining validity was guided by Kothari, (2009).

Construct validity was achieved by the researcher developing a complete domain of land tenure policies and women economic empowerment indicators after a thorough literature review from online and print media sources. The agreement on the meaning of the constructs of the items was borrowed heavily from the previous international land tenure policies and women economic empowerment data collection tools which have been developed and used by other experienced scholars in order to improve the validity index.

It is important to note that the content of questionnaire results can be predicted through the questions asked. Therefore the questionnaire was thoroughly revised to adhere to the standards expected in this study. A pre-test or pilot study was carried out in one of the villages in Arua Municipality area. In addition to this, the researcher ensured validity of the collected data by conducting the focus group discussion person and thoroughly training the

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research assistants who distributed and collected the questionnaire from the participant's hence high return rate.

Principle Component Analysis Factor analysis was carried out with factor loading value more than 0.4 being accepted and any value less than 0.4 were considered invalid hence were removed. The results were as shown in table 2:-

Table 2: Factor loading for all variables

Variables	Factor 1	Extraction
Land Ownership Policy	0.871	0.862
Land Use Policy	0.803	0.794
Women Economic Empowerment	0.845	0.831

Source: Author, (2016)

In table 2, land access policy had the highest loading factor while land use policy had the lowest. All the variables combined had principle component analysis factor loading value more than 0.4 hence all the items in the research tools passed the validity test.

Reliability

Reliability was achieved by test-retest technique, (Orodho, 2008). This was done by administering the same data collection tools to a randomly selected sample prior to piloting. All the corrections or comments from the results of the test were noted. The research instruments were then re-tested within a span of two weeks to the same sample drawn from the target group. It is cardinal to note that participants in the test re-test sample were excluded in the final sample during the actual data collection. The researcher then incorporated all the corrections noted during the re-test with a view to improve on the tools. Factor analysis was then used to compute the coefficient with sub variables yielding a Cronbach's Alpha above .70 being considered reliable.

Kombo and Tromp, (2008) adds that in any social research, sub variables with composite reliability coefficients above threshold of Cronbach's alpha 0.67 for an instrument may be deemed reliable. In addition to this, it is also important to note that in order to ensure reliability appropriate sampling procedures were also used in this study to ensure a representative sample. The questionnaires were also scrutinized by the supervisors of the researcher to judge the items on their appropriateness of the content, and to determine all the possible areas that need modification so as to achieve the objectives of the study. The reliability test for Cronbach's alpha coefficients of internal consistency for the study is shown on table 3:-

Table 3: Data Collection Tools Reliability Test

Variables	Alpha
Land Ownership Policy	0.842
Land Use Policy	0.801
Women Economic Empowerment	0.854

Source: Author, (2016)

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Cronbach Alpha was established for every sub variable based on the specific research objective in order to determine if each scale would produce consistent results composite reliability test as shown in table indicate that most of the items were above 0.802 hence the tools were deemed reliable and would produce similar results should the research be done later on or in a different context. The independent variable measure with the highest α value was land control (0.881) and the least was land use while the dependent variable (Women Economic Empowerment) had α of 0.854.

FINDINGS

Questionnaire Return Rate

A total of 78 questionnaires were issued and 76 were returned back for analysis. This represented 97% response rate, which is considered reasonable to make conclusions for the study and yield reliable and valid results. Coopers and Schindler (2009) reasons out that a 50% response rate is adequate, 60% good and above 70% rated excellent. This assertion is also confirmed by Kothari, (2009) who emphasizes that any response rate above 60% is enough to draw reasonable conclusions in a survey and correlation research designs.

It is important to highlight one important fact that this high response rate can be attributed to the data collection procedures, where the researcher pre-notified the potential participants and applied the drop and pick method where the questionnaires were picked at a later date to allow the respondents ample time to fill the questionnaires.

Demographic Data

Demographic data was included in this study since the researcher intended to fully understand the characteristics of the population in terms of age, gender, level of education, length of service among other parameters. In addition to land tenure policies in African context where the study was based is shrouded by complex issues that culturally classifies gender based on sex hence there is a need to profile the respondents so as to understand their responses.

After coding data whereby 1 represented respondents who are male, are aged between 18-28 Years, Have served for 0-10 Years, holds a diploma and below, and have served for 1-5 years in Arua. In addition to this, Code 2 represented respondents 29-38 Years, 11-20 Years of Service and first degree. However, Code 3 represented age between 39-48 Years, 21- 30 Years of Service and 2st Degree and above. Lastly code 4 represented response for employees aged 49 and above, 16 Years and above in service and those officers who have served in Arua for over 16 years. Finally, it is also essential to note that the codes 1,2,3 and 4 were represented by letters A,B,C and D respectively in the questionnaires where the sample were requested to tick only one choice per question on demographic characteristics. Results are as shown in table 4:-

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Table 4: Demographic Data

Demographic Details	Response Category	Frequency	Percentage
Gender	Male	41	34.7%
	Female	77	65.3%
	Total	**118**	**100%**
Age of the Respondents	18-28 Years	19	16.1%
	29-38 Years	48	40.7%
	39-48 Years	30	25.4%
	Above 49 Years	21	17.8%
	Total	**118**	**100%**
Length of Service with the Government of Uganda	0-10 Years	9	19.6%
	11-20 Years	16	34.8%
	21-30 Years	18	39.1%
	Above 31 Years	3	6.5%
	Total	**46**	**100%**
Level of Education of the Respondents	Diploma &Below	8	17.4%
	1ST Degree	35	76.1%
	2nd Degree &Above	3	6.5%
	Total	**46**	**100%**
Length of service as government officer in Arua	1-5 Years	20	43.5%
	6-10 Years	6	13.0%
	11-15 Years	10	21.7%
	Above 16	10	21.7%
	Total	**46**	**100%**

Source: Field Data, (2016)

In table 4, majority of the respondents were females (65.3%). This may be attributed to the fact that this study basically targeted women economic empowerment hence they were at the core of the research. 34.7 %(N=41) males is an indicator that the study respondents obeyed the a third gender rule for representation as demanded by the affirmative action. Majority of the respondents were aged between 29-38 years with very few falling within the above 18-28 Years age bracket (16.1%). In addition to this, the study also found that majority of the officers have served with the government of Uganda for a period between 21-30 years (39.1%). This implies that these officers are experienced and understand fully the effects of land agricultural land tenure policies on women economic empowerment and other variables that may affect the topic under investigation. These officers were drawn from key sectors in the government hence this level of experience is very vital for validity and reliability of data.

The study also found out that majority of the officers who participated in this survey hold first degree (76.1%). This implies that the workforce apart from being experienced have the needed qualifications to deliver on their jobs and understand the operations including key issues affecting agricultural land tenure policies in the district. Majority of the respondents (43.5%) have worked in Arua district between 1-5 years. Those who have worked as

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government officers in Arua for 11-15 years account for 21.7%. However, these findings indicate that most of the officers who participated in this study had different length of stay at current station with most of them having served more than 10 years. It is imperative to note that most of the officers have served for long in other stations. It is the assumption of the researcher that those five years is enough to grasp and analyse key trends and operations in a work station especially for veteran employees who have served in other stations in similar capacities.

Descriptive Statistics

Data collected was subjected to descriptive statistical analysis technique which generated frequency distribution tables for all the sub variables. The aim of this analysis was to use numbers to summarize data so as to describe its characteristics, (Cheryl, 2009).

It is important to note that code 1 in the SPSS denoted Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree while 5 strongly Disagree. The analysis was done objectively under the following sub headings which are in congruent with the sub variables investigated.

Land Ownership Policy

Respondents were asked to rate their opinion based on the statements presented in the five point Likert Scale and the results were as shown in table 5:-

Table 5: Land Ownership Policy

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
In Arua District, most land is communally owned	13.6%	5.1%	17.8%	25.4%	38.1%
In Arua District, women have a right to own land	24.6%	5.9%	13.6%	29.7%	26.3%
In Arua District, the available land policy frameworks protect women's land ownership rights	8.5%	9.3%	30.5%	31.4%	20.3%
In Arua District, women have a right to transfer or sale land	5.9%	22.0%	19.5%	28.0%	24.6%
N=118					

Source: Field Data, (2016)

In table 5, the statement: In Arua District, most land is communally owned has 38.1% strong disagreement. This means that majority of the respondents opines that land in Arua is not under communal ownership. Majority of the respondents disagreed (29.7%) with the statement that in Arua District, women have a right to own land. This implies that women have limited rights when it comes to land ownership.

In table 5, most respondents are neutral (30.5%) and disagreed (31.4%) with the assertion that in Arua District, the available land policy frameworks protect women's land ownership right. This point to the fact that most respondents are skeptic about the available legal frameworks that protect women's ability to own land in the district. When respondents were requested to indicate their rating on the statement: In Arua District, women have a right to transfer or sale land. Majority of the respondents somehow disagreed (28.0%). This indicates that women do

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not have absolute rights to transfer land in the district. All these findings confirm the findings of Goldstein et al (2015) who found out that communal land ownership increase chances of female headed households investment on land and productivity by 39%. Similarly, SIDA (2015) and Aguilar et al (2014) research study found direct relationship to exist between women land right/ownership, food security, women economic empowerment and poverty reduction.

Land Use Policy

Respondents were asked to rate their opinion based on the statements presented in the five point Likert Scale and the results were as shown in table 6:-

Table 6: Land Use Policy

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
In Arua District, government agencies enforce land use regulations	6.8%	7.6%	16.9%	33.1%	35.6%
In Arua District, government agencies enforce proper land use management systems	9.3%	5.1%	12.7%	27.1%	44.9%
In Arua District, government agencies enforce proper management of adjudication of land use conflicts	13.6%	8.5%	27.1%	23.7%	25.4%
In Arua District, Customary Land Use Practices is still dominant	42.4%	4.2%	5.9%	25.4%	22.0%
N=118					

Source: Field Data, (2016)

In table 6, majority of the respondents strongly disagreed (44.9%) with the statement that government agencies enforce proper land use management systems. This means that farmers are not adequately advised on eco-friendly and sustainable agricultural practices. However the study found customary land use practices (42.4%) to be the dominant land tenure system being practiced in Arua district. These findings are similar to the results of the study by Heather and Mercedes (2015) who found out that when women are able to use land and forest based resources conflicts is reduced. Jayne and Headey, (2015) found that due to increase in demand and use of land for investment in rural parts of Africa, sometimes land is transferred without the knowledge of the wife and this substantially affect their economic wellbeing and ability to use land as a resource for sustainable development.

Women Economic Empowerment

On women economic empowerment which was the dependent variable, the respondents were asked to rate their opinion based on the statements presented in the five point Likert Scale and the results were as shown in table 7.

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Table 7: Women Economic Empowerment

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
In Arua District, Women have Personal Autonomy regarding Land Tenure	10.2%	1.7%	20.3%	40.7%	27.1%
In Arua District, Women have a right to participate in household decision process regarding Land Tenure	5.1%	3.4%	13.6%	46.6%	31.4%
In Arua District, Women are consulted on matters regarding Land Tenure	13.6%	5.1%	23.7%	23.7%	33.9%
In Arua District, Customary Women have rights to freely move on the agricultural land	7.6%	5.9%	22.9%	32.2%	31.4%
N=118					

Source: Field Data, (2016)

In table 7, majority of the respondents strongly disagreed that women are consulted on matters pertaining to land tenure (33.9%). This means that in most households the husband has power to sell or transfer the ancestral land without consulting the wife even if the piece of land is where farming is done. This confirms World Bank (2014) and Ajani amnd Mgbenka (2013) findings on the level of consultation during sale of agricultural land in rural parts of Africa.

Inferential Statistics

Data was further subjected to inferential statistical analysis of Spearman Rank Correlation and Multiple Linear Regression using SPSS. The main aim of subjecting this data specifically to inferential statistics was to test the null hypotheses.

Correlation Statistics

Spearman Rank Correlation analysis technique was used to establish the strength and direction of relationships between the variables in the data collected. The results of the analysis are as indicated in table 8:-

Table 8: Correlation Statistics

	Women Economic Empowerment	Land Ownership Policy	Land Use Policy
Women Economic Empowerment	1.000		
Land Ownership Policy	.636^{xx}	1.000	
Land Use Policy	.062	.084	1.000

****. Correlation is significant at the 0.01 level (2-tailed), *Correlation is significant at the 0.05 level (1-tailed), N**=118

Source: Field Data, (2016)

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In table 8, land ownership policy is statistically significant (rho= .636) to women economic empowerment. This implies that land ownership policy accounts to 63.6% of women economic empowerment. All these findings echo the findings of the study done by Melesse and Bulte (2015) who found out that correlation exists between land certification agricultural productivity among women in rural areas. Similar findings were also reported by Deere et al (2013) who found out that land property rights and gender distribution of wealth in Ecuador are correlated.

Multiple Linear Regression/ Hypotheses Testing

In order to test the null hypotheses, the researcher subjected data further to multiple linear regression. Multiple regression was used because it is essential in predicting a single variable from one or more independent variables, (Were, 2015). The model computed the regression coefficients, R Square, t and p values. It is important to note that in this analysis Durbin Watson values were computed because the researcher wanted to test the presence of serial correlation among the residual variables with values ranging from 0 to 4. According to Chatterjee, Samprit; Simonoff, Jeffrey (2013) values close to 0 indicating a strong positive correlation while those close to 4 indicating a strong negative correlation.

F Change value was also included in order to measure the likelihood of the model as a whole in defining a relationship that emerged by chance with the basic assumption that the lower the F value the greater the chance that the relationships in the model are real.

In this study, collinearity was included since the investigator desired to test the correlation among the predictors in the regression since it facilitates the separation of predictors which may be redundant as explained by Field, (2009). According to Baguley, (2012) in multiple linear regression analysis, this can be achieved through tolerance which demonstrates the fraction of distinctive information that a predictor provides in the regression model. When interpreting results of the tolerance, it is imperative to note that values close to 1 implies that there are no problems with multicollinearity while values approaching 0 indicates presence of severe multicollinearity problems. According to David (2015) and Were, (2015) it is important to include tolerance in hypothesis testing since it is a factor by which the sample size needs to be increased to match the efficiency of the analysis with no multicollinearity.

Variance Inflation Factor on the other hand aims at quantifying the severity of multicollinearity in an ordinary least squares regression analysis. In addition to this, by testing variance inflation factor in any statistical analysis provides a solid basis on how much larger the error variance for the unique effects of a predictor in relations to a situation where there is no multicollinearity, elliotte and Woodward, 2010).

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The results of the multiple linear regression are shown in table 9:-

Table 9: Multiple Regression

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	β	**Std. Error**	**Beta**	**t**	**Sig**	**Tolerance**	**VIF**
(Constant)	.904	.254		3.559	.000		
Land Ownership Policy	.678	.056	.622	12.195	.000	.994	1.006
Land Use Policy	.030	.051	.030	.593	.554	.994	1.006
MODEL SUMMARY							
R Square		.390					
R Adjusted		.385					
Durbin Watson		2.124					
F Change		75.565					
Sig		.000					

DV- Women Economic Empowerment, N=108

Source: Field Data, (2016)

Hypothesis 1

In table 9, land ownership policy has unstandardized β value of 0.678, Standard Error of 0.056, Standardized Beta Value of 0.622, t value of 12.129, p value of 0.000, Collinearity Tolerance value of 0.994 and VIF 1.006. The β value of 0.678 indicates that land ownership accounts for 67.8% of the women economic empowerment. The tolerance value of 0.994 indicates the absence of multicollinearity between the variables. The variance inflation factor value of 1.006 further confirms absence of collinearity issues that may compromise research validity and reliability.

The results in table 9 also indicate that there is a positive significant statistical difference between land ownership policy (p=.000) and women economic empowerment. This automatically means that the null hypothesis is rejected since $p<0.05$. Based on these findings, it is clear that land ownership policies have strong effect on women economic empowerment. This is true because when women have title rights on land under crops or animal production, they feel motivated to utilize effectively to improve their economic wellbeing. It is important to note that most women provide the largest share of smallholder labour in agricultural production in rural areas in Africa while women own very few pieces of land, hence when they get the power of the title they feel inspired and motivated to maximize it.

These findings confirms the findings of the study done by Akinda and Adeyemol (2013) who found out that property rights especially by women significantly affects agricultural production. Since agriculture is the main source of livelihood in rural areas, this study findings directly points to the fact that property rights significantly affects women economic empowerment. Kumar and Quismbing (2014) found out that inheritance practices which

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affects land ownership rights significantly affect the pace of community development in rural Ethiopia. This research findings is similar to the study by Galiani and Schargrodsky, (2011) who found that land ownership/ rights motivates women to work hard and achieve better returns on investments. Ali et al (2014) found out that land tenure regulations especially land ownership policy is significant to environmental sustainability since when an individual own land, especially women, they become more responsible by ensuring that eco-friendly agricultural practices are adopted for sustainability and higher yields. These findings by these recent research studies are reminiscent of the study findings by Burgi and Ali (2008) who established that when women have secure land tenure, agricultural production increases significantly while environmental degradation increases inversely. John, Nombo and Mdoe (2012) found land ownership to significantly and positively to affect women economic empowerment (p=.019) and overall R Square value of .316 between the variables.

Hypothesis 2

In table 8, land use policy has unstandardized beta (β) value of .030, Standard Error of .051, Standardized Beta Value of .030, t value of .593, p value of 0.554, collinearity tolerance value of 0.994 and VIF 1.006. It is important to note that this sub variable has almost perfect values for collinearity statistics with tolerance value of almost 1 (.971) and the lowest VIF value of 1.030. Having noted that, it also important to underline the fact the null hypothesis was confirmed here since p>.05. This means that land use policy has positive (β=.030) insignificant (p=.554) effect on women economic empowerment. Therefore, there is no statistical difference between land use policy and women economic empowerment in Arua district.

The findings of the study is inconsistent with most studies in Africa. However, a pilot study in Rwanda by Ali et al (2011) found land use to be statistically insignificant to women economic empowerment. Notable studies that have demonstrated existence of positive statistical relationship between land use policy and women economic empowerment include a study done by Stickler and Hunington (2015) who found out that in Africa, customary land tenure system is dominant and this significantly affect agricultural production especially when the customary laws restricts autonomy of women to use land for farming. OECD (2008) found out that gender and sustainable development are correlated. The researcher further argues that for sustainable development to be attained the role of women in development must not be undermined especially on rights on use agricultural land for economic empowerment.

Multiple Linear Regression Equation

The equation for the study was:-

$$Y = \alpha + \beta 1X1 + \beta 4X2 + \varepsilon$$

Where:-

α = a constant or intercept;

β = slope or change in government policies;

X1= Agricultural Land Ownership Policy

X2= Agricultural Land Use Policy

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ε = the "noise" or error (intervening/moderating variables such as political and social factors)

Y= Women Economic Empowerment

In table 8, assuming that α =0 and by substituting the values in the equation, we have:-

$Y = \alpha + .678X1 + 030X2 + \varepsilon$

Based on the multiple linear regression equation values as shown in table 8, for every unit increase in effective implementation of land ownership policy, there is .678 increases in women economic empowerment. For every unit increase in land use policy, there is .030 increases in women economic empowerment. Model summary in table 8, also indicated that R square is .419 while R adjusted value was .385. This means that the overall effect of land tenure policy sub variables combined affects women economic empowerment by 38.5.

Finally, the F change value of 75.565 at overall sig value of .000 indicate that the full model is statistically significant and real. Durbin Watson value of 2.124 further confirms the absence of serial correlations between the residual variables.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the analysis, the study concludes that the available land ownership policies and legal frameworks in the district do not protect women rights when it comes to land transfer. This means that women are disadvantaged since land sale or transfer is controlled by the husbands. Therefore, the sale or transfer may hamper normal agricultural activities and reduce income to women who do not enjoy land ownership rights. Further correlation and regression analysis confirmed that land ownership significantly affects women economic empowerment. Therefore, the study concludes when land ownership policy promotes women land rights and the legal frameworks are effectively enforced, women are bound to grow economically.

The second objective sought to establish the extent to which agricultural land access policy affects women economic empowerment in Arua District. Descriptive statistics results showed that women do not have equal access to agricultural land, cannot use land as collateral to acquire credit facilities to improve agricultural output and the study also concluded women equal access to share farm resources including access to money generated as a result of sale of farm produce.

The third objective intended to find out the extent to which agricultural land control policy affects women economic empowerment in Arua District. Based on the results of the regression it is clear that agricultural land control policy significantly affect women economic empowerment. The fourth objective investigated the extent to which land use policy affect women economic empowerment in Arua District. However research concluded that agricultural land use policy insignificantly affect women economic empowerment.

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Recommendations

On the issue of agricultural land ownership policy, the study recommends that the government of Uganda specifically the ministry of land and agriculture immediately conduct an awareness campaign on land rights as contained in the national land act 1998. In addition to this more agricultural and land officers need to be deployed at the district level to coordinate land ownership and access process including land transfers targeting women headed households. This will empower women at the grassroots level on their rights and motivate them to put more efforts in agriculture for economic prosperity. In order to make land ownership be accessible, the land officers should strive to support the creation of a systematic registration system, which is accessible to illiterate women and men where legal tenure documents signatures by creating options for biometric data like fingerprints to be used instead of a signature. This can also be attained through dialogue and consensus building at the community level on land titling and registration processes which is gender sensitive or those which do not deny women rights to own agricultural land.

Concerning agricultural land control policy, the study recommends that the district agricultural officers also need to sensitise women on their rights to control farm inputs and outputs including generated from such activity since they provide bulk labour. In addition to this, these officers should also educate female farmers at the grassroots level on the available credit facilities and modalities on how to acquire credit based on agricultural land or farm outputs. This will ensure that the needed capital which may be lacking or hindering women economic development is solved. This can be done through partnership and participatory approaches by inviting the credit institutions such as banks, micro credit institutions and even cooperatives during farmers open days. This sensitization may also cover areas related to value chain addition, post-harvest management, sustainable farming practices and land tenure systems.

Finally, there is a need to conduct further study in this area by use of other research designs. This is based on the fact that there is need to carry out longitudinal research designs or case studies which are able to yield more qualitative rich data which quantitative design adopted in this study could not attain. In addition to this out of the four hypotheses one was supported hence there is a need to critically carry out further research quantitatively to find out the extent to which land use statistically affect women economic empowerment.

REFERENCES

Ajani, Onwubuya and Mgbenka (2013) Approaches to economic empowerment of rural women for climate change mitigation and adaptation: Implications for policy. *International Journal Advance Agricultural Research*, 1 (1): 37-42

Aguilar, A., et al. (2014) *Decomposition of Gender Differentials in Agricultural Productivity in Ethiopia.* The World Bank, Policy Research Working Paper Series: 6764

Alexandria Collier (2013) Empowerment in Uganda: An Exploration of Women SRHR Empowerment in Central Eastern Uganda. *Journal of African Development*, 2(4): 234-256

Ali, D. A., K. Deininger and M. Goldstein (2014) Environmental and Gender Impacts of Land Tenure Regularization in Africa: Pilot Evidence from Rwanda. *Journal of Development Economics*, 1(1).

2053-2199 (Print), 2053-2202(Online)

Ali, D. A., K. Deininger, and M. Goldstein (2011) *Environmental and gender impacts of land tenure regularization in Africa: Pilot evidence from Rwanda*. The World Bank, Policy Research Working Paper Series: 5765.

Arua District Information Portal. (2009)*Arua District background information*. (Online) Retrieved on June 24, 2015, from http://www.arua.go.ug

Asghar and Sale (2012) Normality test for statistical analysis: A guide for non-statisticians. *International Journal of Endocronology Metabolism*, 10(2): 486-489

Bagnoli, A. and Clark, A. (2010) Focus groups with young people: a participatory approach to research planning. *Journal of Youth Studies*, 13, (1): 101-19.

Bosco, F. and Herman, T. (2010) Focus groups as collaborative research performances. In: D. DeLyser (ed) *The Sage Handbook of Qualitative Geography.* London: Sage, 193-08.

Burgi, J. T. (2008) The dynamics of tenure security, agricultural production, and environmental

degradation in Africa: Evidence from stakeholders in Northeast Ghana. *Land Use Policy* (25): 271-285

Burns, A. C., & Bush, R. F., (2010) *Marketing Research*. Upper Saddle River, NJ: Pearson Education.

Cheryl Thomson (2009) Descriptive data analysis. *Air Medical Journal of Endocrinology Metabolism*, 10(2): 486–489

Coles, C. and Mitchel, J. (2011) *Gender and agricultural value chains: A review of current knowledge and practice and their policy implications*. ESA Working Paper Number 11. (Online). Retrieved on 5/12/2015 from www.fao.org/economic/esa

David (2015) *Multivariate Statistics: Concepts. Models and applications.* (Online). Retrieved on 12/3/2016 from

Deere, C. D., A. D. Oduro, H. Swaminathan and C. Doss (2013) Property Rights and the Gender Distribution of Wealth in Ecuador, Ghana and India. *Journal of Economic Inequality*, 11(2): 249-265.

Deininger, Fang, Songqing and Hari (2014) Inheritance law reforms, empowerment, and human capital development: Second generation from India. World Bank working Group. Policy Research Working Paper: 7086

Doss Cheryl, Chiara, Amber, Agnes and Mara (2013) *Gender Inequalities in Ownership and Control of Land in Africa: Myths Versus Reality. IFRI Discussion 01308.* International Food Policy Research Institute.

Dralega Carol (2015) *Rural Women and ICT in Uganda: Communities of Practice and Communication Practices for Development*. Oslo. Oslo University

Elliott AC, and Woodward WA. (2010) *Statistical analysis quick reference guidebook with SPSS examples.* 3rd ed. London: Sage Publications

FAO, (2010) *Global Forest Resources Assessment 2000- Main Report*, FAO Forestry Paper Number 140. Rome, FAO,

Field (2009) Discovering *statistics using SPSS.* 3 ed. London: SAGE publications Ltd

Galiani, S. (2011) The Dynamics of Land Titling Regularization and Market Development. *Working Paper*, Helsinki.

GeshawTennaAlemu, (2015) Women's Land Right Policy and Household food Security in Ethiopia: Review. *International Journal of African and Asian studies*, 12: 56-66

Glenn, Nampindo, Aguti and Plumptre, (2004) *The value of Uganda's Forests*: A livelihoods and ecosystems approach; Wildlife conservation society, Albertine Rift Programme EU Forest Resource Management and conservation programme National Forest Authority. Kampala.

2053-2199 (Print), 2053-2202(Online)

Glenn Israel (2016) Determining Sample Size. University of Florida. (Online). Retrieved on 10/20/2016 from: https://edis.ifas.ufl.edu/pdffiles/PD/PD00600.pdf

Goll II, Nick, Li Jianhua., McKay Jr & John S., (2014) Analysis on the Causes of Deforestation and Forest Degradation in Liberia: *Application of the DPSIR Framework Research Journal of Agriculture and Forestry Sciences* 2(3): 20-30

Goldstein, M., Houngbedji, K., Kondylis, F., O'Sullivan, M. and H. Selod (2015) *Formalizing Rural Land Rights in West Africa. Early Evidence from a Randomized Impact Evaluation in Benin.* World Bank. Policy Research Working Paper: 7435

ILO, (2010) *Accelerating action against child labour*: Global Report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work.

Chamberlin, J., Jayne, T. S., and D. Headey (2014) Scarcity amidst abundance? Reassessing the potential for cropland expansion in Africa. *Food Policy*. 48 (1): 51–65

Jayoti Gupta (2006) *Property Ownership of Women as Protection for Domestic Violence: The West Bengal Experience*. Kolkata. Centre for Social Sciences.

Jayne, T.S., Jordan Chamberlin, Derek D. Headey (2014) Land pressures, the evolution of farming systems, and development strategies in Africa: A synthesis. *Food Policy*, 48: 1-17

Jayne, Caleb, Sara, Mercedes Stickler (2016) *The role of land policy in agricultural transformation and inclusive economic growth: Implications from Africa. 2016 World Bank Conference on land and property rights.* World Bank, Washington DC, March 14-18, 2016.

John Jactone, Nombo Caroline &MdoeNtengua (2012) Determinants of Women Empowerment in the onion Value Chain: A case of Simanjiro District in Tanzania. *Journal of Sustainable Development*, 3(10): 89-98.

International Food Policy Research Institute (2012) Women empowerment in Agriculture Index WEAI. (Online). Retrieved on 10/11/2015 from *www.ifpri.org*

Kabeer, N. (2008) *Mainstreaming gender in social protection for the informal economy.* London. Commonwealth Secretariat.

Kabeer, N. (2005). 'Gender Equality and Women's Empowerment: A Critical Analysis of the Third Millennium Development Goal,' in *Gender and Development*, 13(1): 13-24.

Karim A. H. M. Z. (2013) Impact of a Growing Population in Agricultural Resource Management: Exploring the Global Situation with a Micro-level Example, *Asian Social Science*, 9(15):14-22

Klaus Deininger, Ayalew Daniel & Takashi Yamano (2006) *Legal Knowledge and Economic Development: The Case of Land Rights in Uganda*. Invited paper for presentation at the International Association of Agricultural Economists Conference, Gold Coast, Australia. August 12-18, 2006.

Klaus, Fang & Sara, (2015) *Smallholders Land Ownership and Access in Sub Saharan Africa*. A new Landscape? World Bank Working Group, Agriculture and Rural Development Team. (Online). Retrieved on 2/1/2016 from: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/06/02/090224b082ee89c4/1_0/Rendered/PDF/Smallholders000a00a0new0landscape00.pdf

Klesen Stephen and Lawson David (2007) *The impact of Population Growth on Economic Growth and Poverty Reduction in Uganda*. (Online). Retrieved on 12/12/2015 fromwww.researchgate.net/publication/5081419

Kombo, D.K. and Tromp, D.L.A., (2006). Proposal *and Thesis Writing*. An introduction, Nairobi: Paulines Publications Africa

2053-2199 (Print), 2053-2202(Online)

Kothari, C.R., (2009). *Research Methodology: Methods and Techniques,* (2nd Ed.). New Dehli:
New Age International Publishers Ltd.
Knight, R. (2010) *Statutory Recognition of Customary Land Rights in Africa*: An Investigation into Best Practices for Law making and Implementation. FAO Legislative Study No. 105. Rome: Food and Agriculture Organization of the United Nations
Kothari, R., (2009) *Research Methodology: Methods and Techniques,* (2nd Ed.). New Dehli:

New Age International Publishers Ltd
Kristensen P (2004) *The DPSIR Framework. Paper presented at the 27-29 September 2004 workshop on a comprehensive / detailed assessment of the vulnerability of water resources to environmental change in Africa using river basin approach*. National Environmental Research Institute, Denmark, Department of Policy Analysis, European Topic Centre on Water, European Environment Agency, UNEP Headquarters, Nairobi, Kenya
Kumar, N. and Quisumbing A., (2012) Inheritance Practices and Gender Differences in Poverty and Well-Being in Rural Ethiopia. *Development Policy Review*, 30(5), 573-595
Lakwo Alfred (2006) *Micro Finance, Rural Livelihoods and Women Empowerment in Uganda. Leiden African Studies Centre.* Leiden University.
Melesse, M.B. and E. Bulte. (2015) Does land registration and certification boost farm productivity? Evidence from Ethiopia. *Agricultural Economics.* 1: 1–12
Mostofa, G., Tarequel, I., Haque, M. and Islam, M. (2008) Mathematical Modelling of Bangladesh. *Research Journal of Applied Sciences*3 (6): 416-420
National Bureau of Statistics, (2012) *Key Indicators for South Sudan*, Juba South Sudan. National Bureau of Statistics
Ministry of Lands, Housing and Urban Development (2013*) The Ugandan National Land Policy.* (Online). Retrieved on 16/12/2015 from http://landportal.info/sites/landportal.info/files/the_uganda_national_land_policyfebruary_2013.pdf
Mugenda and Mugenda (2009) *Writing Research Proposals.* Nairobi. ACTS Publishers
Nkonya Ephraim, Jagger Pamela, Ssali Henry &Sserunkuuma Dick (2004*) Strategies to Increase Agricultural Productivity and Reduce Land Degradation: Evidence from Uganda*. Contributed Paper Selected for presentation at the 25th International Conference on Agricultural Economists, August 16-22, 2003, Durban South Africa. DOI: 10,1016/J.agecon.2004.09.006
Nkonya, E., J. Pender, K. C. Kaizzi, E. Kato, S. Mugarura, H. Ssali, and J. Muwonge. 2008. *Linkages between landmanagement, land degradation, and poverty in Sub-Saharan Africa: The case of Uganda*. Research Report159. Washington, D.C.: International Food Policy Research Institute.
Nitya Rao (2011) *Women's access to land: An Asian perspective*. Paper presented to expert group meeting in Accra Ghana, 20-23 September, 2011.
Otu, J.E., Joseph, K. U., Eja, E. I. (2011)Impact of Population Growth on Forest Resource Degradation in Ikom Local Government Area. *Universal Journal of Management and Social Sciences*, 1(1):42-51
Oseni, G., P. Corral, M. Goldstein and P. Winters (2014) *Explaining Gender Differentials in Agricultural Production in Nigeria*. The World Bank, Policy Research Working Paper Series: 6809

2053-2199 (Print), 2053-2202(Online)

Pepijin Schrenemachers, Berger Thomas and Jens Aune (2007) Simulating Soil Fertility and Poverty Dynamics in Uganda: A bio economic Multi Agent Approach. *Journal of Ecological Economics*, 64: 387-401. DOI: dx.doi.org/10./016/j.ecolecon.2007.07.018

Orodho John A., (2008). *Techniques of Writing Researcher Proposals and Reports*: In Education and social sciences. Masola Printers. Nairobi.

Osso, W.Y. and Onen, D., (2009). *A general Guide to Writing Research Proposal and Report. A Handbook of Beginning Researchers.* Revised Ed. Nairobi: The Jomo Kenyatta Foundation.

Peterman, A., J. Behrman, and A. R. Quisumbing (2010) *A review of empirical evidence on gender differences in nonland agricultural inputs, technology, and services in*

Republic of Uganda (1998) *Land Act 1998*. Kampala, Uganda: Government Printer.

SIDA (2009) *Women Economic Empowerment*: Key issues and policy options. Ministry of Foreign Affairs Sweden. Retrieved on 1/3/2016 from: www.sida.org

SIDA (2014) *A quick guide to what and how increasing women access to land*. SIDA. Retrieved on 1/3/2016 from: www.sida.org

SIDA (2015) *Gender tool box*. SIDA. (Online). Retrieved on 1/3/2016 from: www.sida.org

Teshale Berhane and Gebre Miruts (2015) Rural Women Land Use Rights in Tigray Regional State: The Case of Kafta Humura Woreda. *Journal of Culture, Society and Development*, 10(1): 47-62

Tsikata, D.; Golah, P.,(2010) *Land tenure, gender, and globalization: research and analysis from Africa, Asia and Latin America.*Zubaan, New Delhi, India, and International Development Research Centre, Ottawa, Canada. (Online). Retrieved on 12/12/2015 from: web.idrc.ca/en/ev-149320-201-1-DO_TOPIC.html

Thapa, S., (2008) *Gender differentials in agricultural productivity: Evidence from Nepalese household data.* Working Paper. Trento, Italy: University of Trento.

Tripp, A. M., (2004) Women's movements, customary law, and land rights in Africa: The case of Uganda. *Africa Studies Quarterly 7* (4): 1-19.

UKAID (2014) *Agriculture and Women's Agriculture and Growth Evidence Paper Series*. London. UKAID.

Uganda Bureau of Statistics, (2013). *2013 Statistical Abstract*. Kampala, Republic of Uganda. (Online). Retrieved on 12/12/2015 from: http://www.ubos.org /

Ugandan National Land Policy Portal (2015) *National Land Policy*. (Online). Retrieved on 13/12/2015 from http://gov.ug/about-uganda/government-policies/national-land-policy

UNECA (2011) *Background Document on Land Policy in Africa: A framework to strengthen Land Rights Enhancing productivity and Secure Livelihoods*. Addis Ababa Ethiopia.

United Nations (2009) World Surveys on the Role of Women on Development: Women's Control over Economic Resources and Access to Financial Resources including Micro Finance. New York. United Nations.

United Nations Development Programme (2008)*2007/8 Human development report*. (Online). Retrieved on10/11/2015 from http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

USAID (2011) *Land Tenure, Property Rights, and Gender: Challenges and Approaches for Strengthening Women's Land Tenure and Property Rights.* Property Rights and Resource Governance Briefing Paper #7. Washington, DC: USAID. URL: http://usaidlandtenure.net/sites/default/files/USAID_Land_Tenure_Gender_Brief.pdf.

USAID (2016) *Land Tenure, Property Rights and Gender: Challenges and Approaches for Strengthening Women's Land Tenure and Property Rights.* USAID. (Online).

2053-2199 (Print), 2053-2202(Online)

Retrieved on 23/2/2016 from http://usaidlandtenure.net/sites/default/files/USAID_Land_Tenure_Gender_Brief.pdf.

USAID (2015a) *Impact evaluation of property rights and artisanal diamond development projects in Guinea*. (Online). Retrieved on 3/3/2016 from: www.usaid.org.

USAID (2015b) *Impact evaluation of land administration to nurture development in Ethiopia*. (Online). Retrieved on 3/3/2016 from: www.usaid.org.

USAID (2015c) *Impact evaluation of land certification projects in Ethiopia*. (Online). Retrieved on 3/3/2016 from: www.usaid.org.

USAID (2015d) Impact evaluation of community based forest management program in Zambia. (Online). Retrieved on 3/3/2016 from: www.usaid.org.

WB/FAO/IFAD (World Bank/Food and Agriculture Organization of the United Nations/International Fund for Agricultural Development (2009) *Gender and agriculture: Sourcebook.* Washington, D.C.

Whitehead A. and D. Tsikata (2003) Policy Discourses on Women's Land Rights in Sub-Saharan Africa: The Implications of the Re-turn to the Customary. *Journal of Agrarian Change*, 3(12): 57-112.

Were Philip Onyango (2015). The Link between Demographic Workforce Diversity Management, Employee Retention and Productivity: A Case of the Civil Society Organizations in Homabay County, Kenya. *Journal of culture, society and development.* 8(1): 6-11. Retrieved from ***http://www.iiste.org/Journals/index.php/JCSD/article/view/23279***

World Bank (2012) *Land Policy: Sector Results File: Securing Land Tenure Rights to Reduce Poverty and Promote Growth*. Retrieved on 12/12/2015 from:http://www.worldbank.org/en/results/2013/04/15/land-policy-results-profile

World Food Programme. (2009) *WFP gender policy: Corporate action plan (2010–2011*). Retrieved on 12/12/2015 from http://home.wfp.org/stellent/groups/public/documents/resources/wfp205173.pdf

2053-2199 (Print), 2053-2202(Online)