GENDER RELATIONS IN BEANS CROP PRODUCTION AND MARKETING AMONG SMALL HOLDER FARMERS IN NDHIWA, HOMABAY COUNTY

BY

GEORGE OTIEP OKELLO

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DECLARATION

I, Otiep Okello George, do hereby declare that this project paper is my original work and has not been submitted for a degree to any other University or academic institution other than the Institute for Development Studies, University of Nairobi.

Signature:…… Date……..

OTIEP OKELLO GEORGE

T51/87139/2016

This project paper has been submitted to the University of Nairobi with my approval as the University Supervisor.

Signature:…… Date……..

PROF. PATRICK O. ALILA

Institute for Development Studies
UNIVERSITY OF NAIROB

DEDICATION

I dedicate this work to my loving wife: Lucy Anne Nombi; my father John Okello Otiep, and my colleagues at Caritas Homa Bay for their support, and encouragement throughout the study period.

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Education is life in itself as it involves living through a continuous reconstruction of experiences and the development of all those capacities or capabilities, which enable an individual to control the environment. In light of the foregoing statement from John Dewey, Many Thanks to the Almighty God for seeing me through the entire period of my Masters degree program. His guidance, strength and wisdom have been my fortress.

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May God bless you all abundantly!

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AfDB	African Development Bank
ASDSP	Agricultural Sector Development Support Programme
CARITAS	Development and Humanitarian arm of the Catholic Church
CIAT	International Center for Tropical Agriculture
CIDP	County Integrated Development Plan
CultiAF	Cultivate Africa's Future Fund
DRC	Democratic Republic of Congo
DR	Direct Respondents
ECABREN	Eastern and Central Africa Beans Research Network
FAO	Food and Agriculture Organization
FGDs	Focus Group Discussion
HIV	Human Immunodeficiency Virus
IDS	Institute for Development Studies
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IFSP	Integrated Food Security Project
KALRO	Kenya Agriculture and Livestock Research Organization
KAT	Katumani
KIs	Key Informants
KG	Kilogram
KNDP	Kenya National Development Plan
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
MOALF	Ministry of Agriculture, Livestock and Fisheries
NGO	Non-Governmental Organization
PABRA	Pan Africa Bean Research Alliance
SDGs	Sustainable Development Goals
SPSS	Statistical Packages of Social Sciences
UBOS	Uganda Bureau of Statistics
UNDP	United Nations Development Programme

ABSTRACT

Beans are major sources of food and nutrition security and income among small-scale farmers in Kenya. Stallholder beans production in Kenya is dominated by women who are however underprivileged by disparities in form of control over and access to production resources as contrasted to their male counterparts. The study examined gender relations in beans crop production and marketing among smallholder farmers in Ndhiwa, Homa Bay County. The study's overall objective was to identify and examine gender relations that influence beans production and marketing among the small-scale farmers in Ndhiwa area. The study adopted descriptive study design and employed mixed method approach, incorporating both qualitative and quantitative data sources in the field research with the smallholder beans farmer identified as the unit of analysis. Seventy five (75) respondents out of 217 smallholder beans farmers were sampled by use of systematic random sampling technique and 8 key informants were also purposively identified to participate in the study. Structured questionnaires and focused discussion groups were utilized to collect the data. The data was then analyzed using Statistical Package for Social Scientist (SPSS v20). The study findings highlighted disparities between male and female farmer with regard to decision making power, access and control of productive resources and utilization of income. It established that men had better access and control over productive resources than women, influenced decisions on household production activities, marketing of beans and utilization of the benefits from beans produce. While Women provided labor in production and marketing process yet were underprivileged in terms of access, control of land and credit and had low decision making power and influence on production arrangements and utilization of the benefits accrued from the produce. The study also revealed that household decisions on the control over benefits from beans produce were made based on established gender roles that conform to their traditional social norms. Women were made decision on quantities that was to be saved for food after harvest, while, men who are socially responsible for providing cash, influenced the use of cash from beans as well. The study recommended gender mainstreaming to be integrated in all beans production activities with a view to promoting bean production in Ndhiwa Sub County.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Gender equality is crucial for every country and every society in the world. Moreover, it is a precondition for sustainable development. For governments, gender equality is not a policy option, it is a human right (UNDP, 2011). However, we still live in a world where women's effort is undervalued. A world where women have less control over resources than men. In fact gender inequality has been highlighted as one of the main contributing factor to poverty among smallholder farmers in many developing countries (Saito & Spurling, 1992).

According to FAO (2005), about one third of Sub Saharan Africa's population generally remains hungry because the importance of women in smallholder crop production is underestimated. In Kenya, for example, agriculture sector plays a very important role in the rural economy. Over 80 percent of the total population in Kenya earn their livelihoods from rural food production (MOA, 2009). Unfortunately, rural food production face various challenges among them, socio cultural barriers which are gender based. Despite the roles women play in crop production, they find difficulty in accessing and controlling over productive resources.

More than 90% of women in rural areas work in subsistence production for their daily livelihood. If given equal opportunities as men, the society as a whole would benefit in household food security and economic growth, hence sustainable development (Ministry of Agriculture, 2009).Failure to promote women's participation in rural agriculture would therefore lead to chronic poverty especially among the poor rural households (Oxfam, 1994).

There is need to fully involve women for sufficient food production since most of the households largely depend on domestic food production to meet their subsistence needs.

To understand the gender relations in household food crop production. The study sought to examine and analyze gender relations in beans crop production among the smallholder farmers. Beans crop is one of the most important legumes globally. It is important for food and nutrition security for many poor rural and urban households, especially in sub Saharan Africa (Larochelle et al., 2015). This is not only because it provides a cheaper source of protein, but also because it is richer in micronutrients with long term healthy benefits (PABRA, 2014). In Kenya beans ranks second after maize as a food security crop and a major source of human nutrition. The crop doubles as a source of income for many Kenyan smallholder farmers and traders due to the increasing demand both in the household and export markets. The other factors for the rising demand, is that, besides individual consumers, beans also have high institutional demand including schools, and hospitals (Karanja, 2016, Mauyo et al., 2016, Larochelle et al., 2016).

In light of high importance of beans in household diets and economies, its production is dominated by women. In Kenya, women contribute over 70 percent of labor used in beans production. Although this has been changing as the crop transforms from just being a subsistence to a commercial crop (KALRO-CulTIAF, 2016).

Homa Bay County is one of the beans growing region in Kenya, and Ndhiwa is the main production hub in Homa bay county (ASDSP, 2015). It is worth noting that, beans consumption continues to increase in Homa bay. The resent studies show that County's beans per capita consumption has increased from 29.7kg per capita in 1999 to over 59kg in 2015 (KALRO,2015). This compares with the national consumption levels at 66kg per capita per

year. At a period when the demand for beans is increasing in the study area, there is need to produce enough to meet the growing demand.

1.2 Problem Statement

While beans constitute the foundation of food and nutrition security among many households in Ndhiwa, opportunities within the smallholder beans production are not distributed equally among men and women. This is because access to productive resources remains low particularly for women. Additionally, women bear the burden of labor within the household beans production, yet their value in the sector has often been ignored (ASDSP, 2015).

According to MOA, (2013) traditional practices characterized by different assignment of labor tasks, control over decision making and productive resources have been highlighted among other factors which affect beans production in Ndhiwa. Besides traditional practices, Homa Bay County has been categorized among beans production corridors in Kenya. "Beans production corridor is a beans production, consumption and distribution hub through which beans are produced, consumed, traded locally and regionally". As the crop which for a long time been the main source for household nutrition transforms to a commercial crop. Men are increasingly occupying the sector primarily for income, which may impact negatively in household food and nutrition security.

Finally, denying women the same rights and opportunities as men to participate in socio economic development programmes is not only in contradiction with social justice, but also a missed opportunity for poverty reduction. Hence, gender issues in smallholder beans production needs to be understood and addressed in order ensure increased productivity. Consequently, improved household food and nutrition security and increase in income.

1.3 The Research Questions

The following research questions guided the study:

1. How significant do gender relations influence beans production and marketing?
2. How do men and women decision making roles in the household vary regarding control over and access to production resources?
3. What benefits accrue in beans production and marketing arrangements that results in equitable returns between men and women?

1.4Study Objectives

1.4.1 General objective

To identify and analyze gender relations that influence beans production and marketing among the smallholder farmers in Ndhiwa sub county, Homabay County

1.4.2 Specific objectives

i. To identify and explain gender relations in smallholder beans production and marketing
ii. To analyze household decision making roles influencing control over and access to production resources, notably agricultural credit and land.
iii. To ascertain different gender based benefits from value addition in various stages of production and marketing process.

1.4 Significance of the study

Beans are the major source of food and nutrition security for the majority poor households in Ndhiwa Sub County. Hence, production of adequate quantities will continue to be crucial since most households still depend on their own production to meet their subsistence needs. It is a fact that difference in control over and access to productive resources between men and women affect beans production in the study area. Consequently, ensuring sufficient production will be the first step in achieving sustainable development goals number one and two of ending extreme poverty and hunger by 2030. However, problems of inadequate production can only be addressed with explicit emphasis on gendered approach to smallholder beans production.

It is therefore expected that this study will identify gender relations in smallholder beans production in Ndhiwa Sub County. The findings will be instrumental in developing strategies and interventions that might enhance productivity through mainstreaming gender issues for smallholder production.

Finally, it is also hoped that the findings would contribute to the body of knowledge in future research and act as a source of reference to all stakeholders in smallholder food crop production sector.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction

In this section there is theory and literature review on concept gender and gender inequality in developing world, women in agriculture in developing countries, gender inequality in the agricultural sector, and smallholder agricultural production in Africa, Gender in smallholder beans production in Kenya and marketing arrangements used by smallholder farmers in Kenya, theoretical literature review of social relation framework and capability approach and gender inequalities, relevance of the theoretical frameworks, operationalization and definition of the key terms as used in this study and finally the conceptual framework of the study.

2.1 The concept gender and gender inequality in developing world

The term gender can be defined in a two dimensional concept. Within the development paradigm, gender is a variable used to analyses policies and how differently these policies influence the way both men and women control and access productive resources. Secondly, 'gender' describes the social relations between women and men and women in a community (WHO, 2003).

According to Tchouassi, (2012) gender refers to socially and culturally constructed features, behavior patterns, and roles that differentiate men from women and vice versa. Lorber, (2008), describes gender as "a social institution based on three structural values: the division of people in two social groups, men and women, boys and girls; then the social construction of distinctive differences between them; and their different treatment, legitimated by social

differences". These differences as created by the society are learned and generally vary between cultures and change over time.

In the pursuit for socio economic growth in developing countries, the concept gender is important because if subjected to social analysis it shows how women's subordination or men's domination over resources and decision making, is socially constructed and that such condition can result into poverty (UNDP, 2005).

According to United Nations, (2009) gender inequality is a long standing social problem that permeates less developed countries. The rising incidences of poverty in developing countries, Kenya in particular, is due to traditional practices which describe how the society allocates its resources to individuals based on their gender. Most of the societies view women as laborers who have no right to own social assets. Hence, high poverty level among them can be attributed to their lack of participation in decision-making especially those relating to control over and access to productive resources (Mathenge, 2009). Surprisingly, in Kenya, Gender Development Index shows near no change in the status of women between 1997 and 2000 (World Bank, 2016).

2.2 Gender inequality in the agricultural sector

Agriculture sector is crucial to sustaining national economic growth and ensuring food security. However, the sector underperforms in many developing countries for varied reasons among them being lack of resources among women to utilize their labor resource. Indeed, although women form a considerable portion of small-scale farmers in Kenya, they are constrained by many factors than men. This hinders their productivity thereby diminishes their contribution to agriculture as a sector (World Bank, 2015).

Most Sub Saharan African countries now recognize that the fight against gender inequalities in agriculture sector is important, particularly in countries where the majority of the populations earn their incomes from agriculture-based activities (Allendorf, 2007). A recent study by IFPRI, (2014), conducted in African countries from sub Saharan region established that women farmers contribute to about 80% of workforce in food production, but own less than 10% of land. According to FAO, (2007) figures on gender and land rights, only 12% of landholders are women. This is shocking because nearly half of women compared to one quarter of men, have land holding of less than 0.5 hectare (Kabutha, (1999).

Damisa and Yahana, (2007), in their research, cited land tenure system in Nigeria as the main factor that affects agriculture. Men are the landlords, while women only access the land for production as ordered by men. For example in 2013, women operated farms was less than 20% which reduced overall agricultural production by 12%. In Kenya, a report by Kenya National Development Plan-article on gender equality in agriculture and development, (2001-2006) shows that gender is a key factor when determining land ownership. Women own less than 2% of the total registered land titles and only between 2-3 percent of the land with titles have joint names. Women's access to land for agricultural work is either influenced by their status in a society or their relationship by their husbands or male relatives (KNDP, 2006).

Besides control over and access to land, a study by FAO, (1996) on agricultural credit schemes in Zimbabwe, Kenya, Sierra Leone, Malawi and Zambia established that women received less than 10% of the credit and only 1% of the total credit goes to agricultural sector. In Kenya, majority of women do not receive credit, they instead use informal channels such as merry go round, family or friends because these channels have got no strict measures to advance credit.

Vedavali and Sharma, (1997) in their work pointed out tradition, cultural norms and religion as the main limitations which put women in a lower position in African society. Thus, tradition and cultural practices give men more powers as compared to women in terms of resource ownership. On the other hand, Religious theory of purity and pollution put women to be submissive to their husband or male relatives and does not guarantee women's full participation in productive activities such as commercial agricultural production. However this view does not concur with the concept put forward by Sangeeta, (1996), and FAO, (2015). Sangeeta believes that empowering women by allowing them access and have control over productive resources, increases realization of sustainable development at a faster pace. While FAO recent statistics show that, agriculture accounts on average for 30 percent of national GDP in sub Saharan African countries, provide about 45 percent of income, and employs over 65 percent of the total labor force. If sub Saharan African countries could harness the full potential of women farmers in agriculture sector, then the impact at household and national levels would be substantial.

2.3 Women in agriculture in developing countries

In developing countries, there is no doubt that women act as backbone for development in rural areas. They provide 43% of labor force in the world, but in some countries the number is expected to rise to 70%. In Africa, small-scale farmers provide approximately 80% of agricultural products produced in the continent. The most interesting thing is that women form a considerable portion of small-scale farmers in Africa. In spite of this, they do not have access to resources required to promote production (Longlands, 2008). This is because there are considerable gender inequalities in the way productive resources important for agricultural production are distributed between men and women across Africa. According to Kishor,

(2005), gender disparities on control over the essential resources for agricultural production are often socially constructed.

Studies by the UN's Food and Agriculture Organization, (2009), and Farming First, (2011) show that women control less acres of land thereby have little access to credit throughout the world. Accordingly, they are less resourced, and mainly work in the informal sector (Kabeer, 1999). Despite the fact that smallholder women farmers contribute to about 60% to 80% of workforce in agricultural sector in the developing countries, less than 20% of women own land. This figure differs from one country to the other with a low of 5% in Mali and a figure high than 30% in Botswana. Nonetheless, in sub-Saharan region as a whole, only 15% of women on average own land thereby receive less than 10 percent of agricultural credit offered to farmers (FAO, 2015). In countries, like Kenya despite legislative reforms on land tenure system, women continue to have limited access to land; thus their productivity remains low (Human development report, 2015).

2.4 Small holder agricultural production in Africa

Most households in Africa depend on smallholder agriculture for their livelihoods, and most of the agricultural activities, are carried out by smallholder households (FAO, 2010). According to Eastwood et al., (2010), reported that 58.8% of the total labor was in agriculture and that smallholder agriculture was the major source of livelihoods for the households, especially those in rural areas.

Statistics show that, Africa has a population of about 1,291,897,433, with approximately 63.6% of the total population living in the rural areas. Smallholder agricultural production systems employs most of the workforce in the rural areas of African countries. Although there

is no conceptually clear way to define ‘smallholder agriculture’, however, it is clear that most African agriculture takes place on a smallholder systems. For instance, in Kenya, most of farms under food crop production are smaller than 2 acres, and evidence from various household surveys supports the idea that most of the households in the average own land size of about 5 acres. Crop farming is probably between one and two acres in most of the households (MOALF, 2014)

Data on agricultural production show that, farm lands of less than 2 produce to about 30% of total agricultural output in Africa, while farms of 4 and above produce another 50% (Herrero et al., 2017). The figures show that most of the smallholder farms are efficient, low cost, and are able to compete in the market if smallholder women farmers would have equal opportunities to farming as their male counterparts (Larson, 2014). However uncertainty regarding access to land has been a major challenge to smallholder farming, most specifically, in East Africa. Accordingly, due to under-development of the agricultural sector, food insecurity has been rampant in the region. Furthermore, the land in the region has been sub-divided into small portions complicating the mechanization process (Jayne et al., 2006).

2.5 Gender in smallholder beans production in Kenya

Beans are important food crop not only in Kenya but across the globe. Production of beans in Africa is widespread, but approximately 80% of the total production is concentrated only in ten (10) countries. In terms of area, Kenya is the leading producer in Africa followed by Uganda and then Tanzania. Malawi and Ethiopia rank eighth and ninth, respectively. In terms of production, Kenya comes second after Uganda, with Tanzania keeping its third position (ECABREN, 2000).

Figures on beans production between 2000 and 2010, show that a steady rise in bean production in Kenya. Estimates show that women contributed 70% of the labor that was required to produce the beans and 90% of the total beans produced. This is a clear indication that bean production in Kenya depends largely on women. It is on this basis that, in most of African countries, beans is generally labeled a "woman's crop". The term woman's crop is a feature of smallholder food production in Africa. Even though it might not be easy to it, different scholars have attempted to define the term. Njuki et al., (2009) referred to woman's crop as that which women provide significant proportion of labor. Doss (2001) defines it as the crops that women have considerable control over especially in making critical decisions.

Conventional gender practices in agriculture sector view women's crops as those produced for consumption at home. In this respect, different studies conceptualize woman's crop from different settings and perspectives. For example, in Kenya, beans are considered a woman's crop because over 70% of the labor in their production is provided by women. In addition, decisions relating to these products are also made by women; thus, women know much about these crops (CIAT, 2012).

Previous studies provide varying estimates on men and women participation in beans' production. (MOA, 2003), highlights smallholder beans farming as a female-dominated task in Kenya. However, because men consider themselves as income providers, then they are in most cases in control over income from beans (IFAD 2013).

Onsongo, (2011), analyzed social patterns within beans production and utilization in rural Kenya. He noted that social practices are the key obstacles to beans production. Women suffer from poor access to productive resources and social networks from which they borrow valuable

information on production activities. Smallholder beans production in Kenya is below the potential as a result of both social and physical environments (FAO (2011).

2.6 Marketing arrangements used by smallholder farmers in Kenya

Like many other developing countries, Kenya's farming is highly dominated by smallholder farmers who cultivate in less acres and are among the poorest people. On the other hand Kenyan Agricultural market is comprised of many smallholder producers both of whom do not have adequate capacity to effectively participate in the market. Literature reveals that farmer participation in formal markets is very important in that humans derive benefits such as rural employment and income from farming (MOA, 1999).

Considering that smallholder food production is one major agricultural systems in Kenya, women are expected to be highly involved, particularly for food crops such as beans. Numerous studies have consistently showed that gender is a significant determinant of market participation. Women undertake 60% of smallholder marketing, and have access to farm output especially when quantities are in small number, but when in large quantities, men take control over every decision (UNDP, 2006).

2.7 Theoretical Framework

According to Swanson and Richard, 2013, theoretical framework is a collection of interrelated ideas that explains a phenomena under investigation. Also out different categories of issues to be factored for analysis and draw attention to key issues to be explored. This study will use two gender interrelated theoretical frameworks namely the social relation framework of Naila Kabeer (1994), and capability approach and gender inequalities by Amartya Sen.

The two describe and explain how tasks are shared in the household and the importance and influence of human capabilities as a function which promotes empowerment.

2.7.1 Social Relation Framework

To understand gender relations in smallholder beans production in Ndhiwa Sub County, the social relations framework of Naila Kabeer (1994) is used. This framework helps in the analysis of the existing gender inequalities with regard to resources and allocation of responsibilities and power. It also describes the structural relationships that create and produce systematic differences between men and women. Hence, explores ways of reforming these relationships through social systems that dominate the market, community and the state.

In the context of the study "gender relations in beans crop production and marketing among small holder farmers", the framework help analyses gender disparities at the household with regard to how productive resources, responsibilities and tasks are allocated, value and power are distributed between men and women beans producers. According to Kabeer and Subramanian (1996), men are culturally assigned the role of a breadwinner in the family which works in their favor when it comes to household distribution of resources and decision making. For example, men influence decisions regarding household income generating activities, while women are assigned unproductive roles such as child care and nurturing which are nonproductive.

Farnworth, (2012) argues that if women would have adequate access and control over resources, chances are that they can be more productive both socially, economically and politically. To ensure equal and equitable distribution of resources, power and responsibilities between men and women for economic, social and political development. This framework will

help the researcher to understand, analyze and explain the gender differences among small household beans producers in NdhiwaSub County.

This framework will be backed up by the Sen's capability approach and gender inequalities. According to Amartya Sen's approach, capabilities refer to the potential in people to function efficiently. Sen argues that the capability approach should always be used when making normative evaluations especially those relating to poverty measurement, social justice issues, efficiency evaluations, inequality analysis, cost-benefit analysis and development ethnics. He argues that for inequality analysis, capability is determined in form of wellbeing and entitlements. The entitlements are in form of access and control over resources (such as land, labor, income, time and other properties), education, social relations, access to information and community resources, political empowerment, and support from the state and mobility. These translate into bargaining power of household members and act as their fall back positions and someone's bargaining power is also determined by his/her ability to survive outside the family.

Sen also noted that capabilities are real opportunities for enhanced well-being. However, capability is affected by various factors which include mental well-being, personal violence, social networks, education and knowledge, support from NGO's and state, domestic work and non-market care, shelter and environment, mobility, time autonomy, leisure activities, religion, respect and dignity. According to Lizarraga et al., (2007) besides capability, household decision making is affected by age, sex and social norms. This approach will be used to understand how entitlements of men and women in the household affect their participation in beans production and marketing.

2.8 The Relevance of the Frameworks for this Study

Social relations framework is to help the researcher understand household and community experiences of inequalities and power asymmetry that exist between men and women. It further aid in understanding the systemic causes and structures of gender inequalities and entitlements. Also it will help explain the perception of gender in particular how the society considers and allocates resources between men and women disproportionately which affect adversely women capabilities to fully use their knowledge and potentials for productive gain. On the basis on the analysis the researcher will make recommendations to inform policy and program planning that can guide social change interventions and advocacy efforts for purposes of social and structural transformation in Ndhiwa.

2.9 Definition and Operationalization of the Key Concepts

2.9.1 Access and control: The opportunity and ability to make use and define the use of resources needed for productive work. In this study, women and men are defined as having diverse levels of access and control over resources they need for agricultural production.

2.9.2 Food security: Refers to a situation whereby all people in a community have access to safe and sufficient amounts of nutritious food that meet their dietary needs for promotion of healthy life (FAO, 1996).

2.9.3 Gender: Categorization and identification of social relations between men and women, boys and girls in terms of their roles and responsibilities and attributes that make male individuals as men and female individuals as women, as well as children as boys and girls, provided by the social considerations of a given society (WIC, 2005; Tchouassi, 2012)**.** For this study two gender categories are used: men and women.

2.9.4 Gender relations: Refers to acceptable behaviors for men and women that are socially determined on the basis of cultural practices.

2.9.5 Household: This is at a minimal level a collection of persons living together under a common roof. The persons may not necessarily be members of the same family, but often make common production, consumption and marketing decisions.

2.9.6 Marketing: Defined as a social process by which the producer (the customer) create and exchange produce or products with the client (the buyer) for value of money – Philip Kotler, (20113).

2.9.7 Production: Refers to land cultivation and raising beans crops for household consumption and income generation.

2.9.8 Resources: Refers to opportunities or what is required for agricultural production such as land, credit and labor.

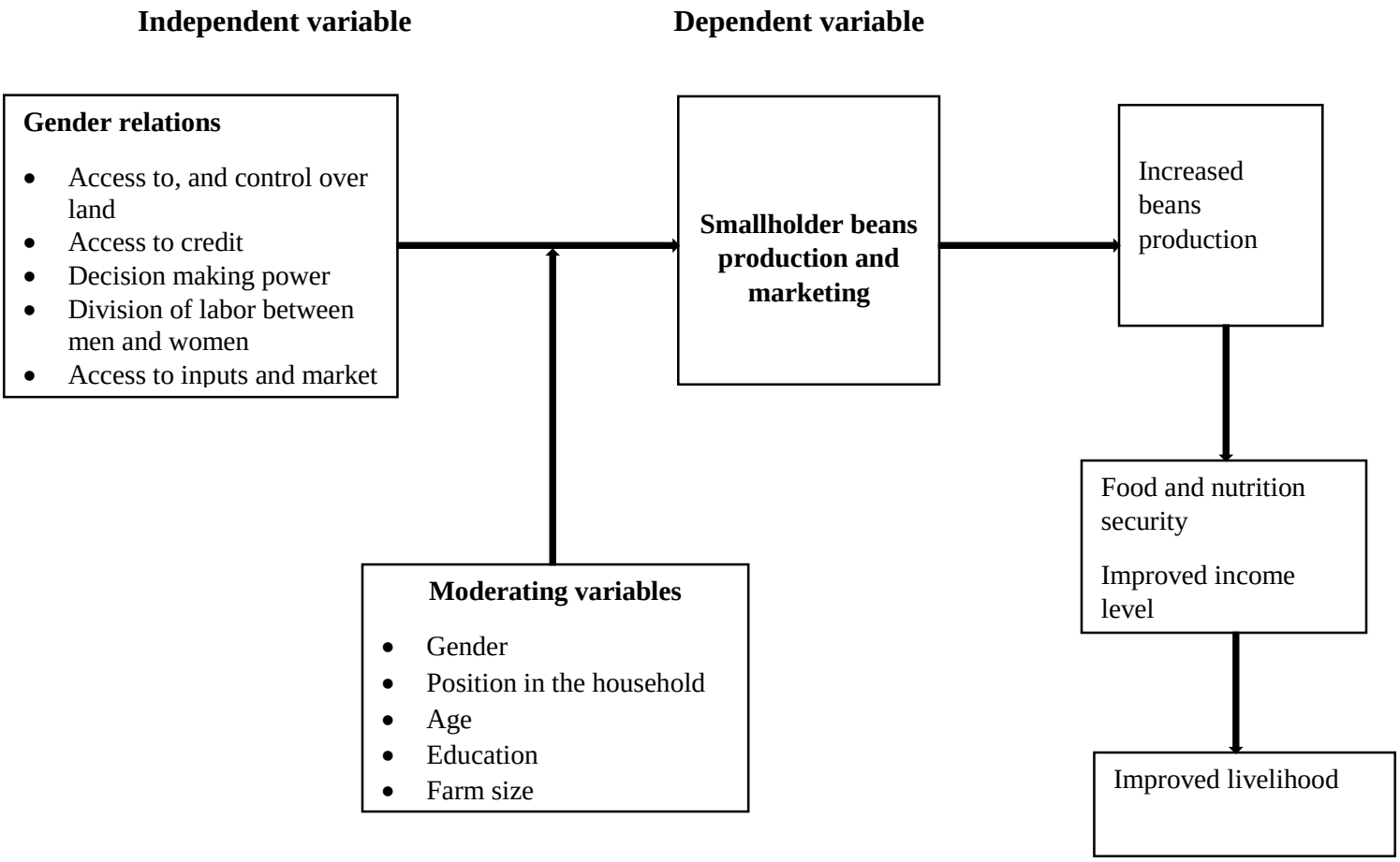
2.9.9 Smallholder farmers: Individuals holding an average land capacity of not more than 2 acres on which they cultivate beans.

2.10 Conceptual Framework

This study will look at how gender relations among the smallholder beans growers influence beans production and marketing. To understand 'Gender relations' this variable has been operationalized as the access to and control of productive resources by men and women for beans crop production. The study will also capture the extent of participation of men and women in crop production and marketing in terms of decision making and how roles and responsibilities are shared thereof.

The conceptual framework below, therefore illustrates the links between the study's independent and dependent variables. The independent variable is gender relations, while the independent variable is smallholder beans producers.

2.10.1Conceptual framework (Authors Conceptualization)



Source: Author 2018

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section describes the study area and highlights the mode through which the research was conducted. It consists of research design, study population, data sources, sampling procedures, data collection techniques and method of data analysis.

3.1 Study Area

The study was carried out in Ndhiwa Sub County, Homa Bay County. The area was selected due to its position as one of the major beans producing zones in Homabay County and in Kenya (CIAT, 2013).

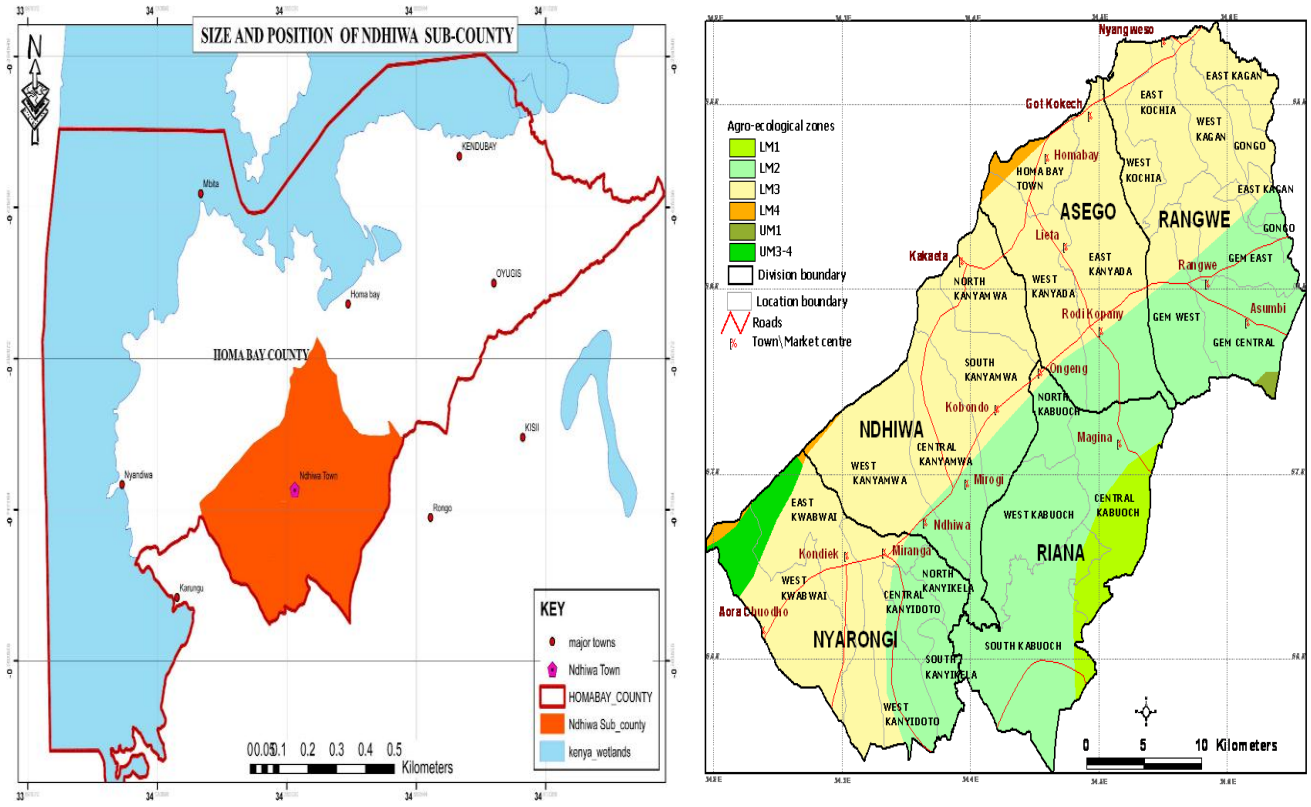
Beans production and marketing was also chosen considering its role in the diet in many households, also because it forms the main source of food and nutrition security and income generating crop, to the majority smallholder farm families in the sub county (MOA, Ndhiwa Sub-County 2014).

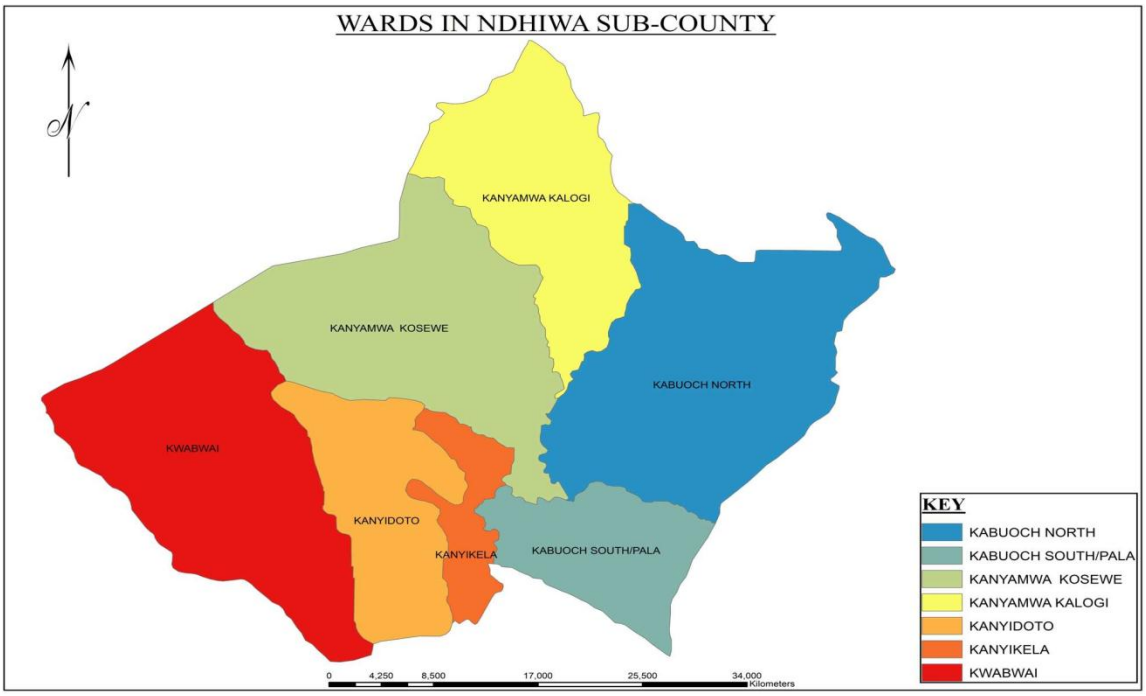
Ndhiwa is located within the County of Homa Bay in Nyanza region of Kenya and is dominated by Luo community. Administratively, It is divided into seven wards including Kanyidoto, Kanyamwakologi, Kanyamwakosewe, Kanyikela, Kawabwai, Kabuoch south and Kabuoch north with a total population of 172,212 and a household number of 37,113 as per 2009 population census (Republic of Kenya, 2009). It covers 711 km² with arable land estimated at 638 km² (63,800 ha). Land holding per farm family is small, 46% of the population own sizes averagely ranging between 2 – 4 acres, while 34% own less than 2 acres (Kenya National Bureau of Statistics, Population and Housing Census, 2010).It is projected that land sizes may

decrease per household in future due to increasing population, which may affect agricultural activities by 2030 (Ministry of Agriculture, 2015). Currently, 93% of people in Ndhiwa use land for agricultural production, out of 93% practicing agriculture, 88% are smallholder farmers who grow subsistence crops such as maize, beans, groundnuts, potatoes and cassava. Beans crop is considered a food and nutrition security by many households in Ndhiwa hence ranks second after maize in order of importance, however widely grown under small-scale system as secondary crop or an inter-crop of maize or sorghum (HomaBay county multi sectoral strategic plan 2014/2015 - 2018/2019).

In spite of great potential in her fertile arable land and favorable weather, the Sub County still experience low level of development with poverty level currently standing at 50.2% with age dependency ratio of 100:107. Food poverty and poor nutrition is the single most important risk that affects majority of the population, followed by low levels of income. This condition is largely attributed to by the lowered women's opportunity to access and land and credit and low decision making power on agricultural production process (Ndhiwa Sub County integrated development plan 2014 – 2019).

3.2Map of Ndhiwa Sub County





Ndhiwa Sub County and administrative wards. Source: GoK, 2013.

3.3Research Design

The study adopted descriptive research design. The aim was to collect data from the respondents on their experiences, perception and opinions in relation to gender issues that influence beans production and marketing in Ndhiwa Sub County.

This design is used to examine population by selecting sample to analyze and find out occurrences. It also helps in quick data collection and in most cases utilized to describe population on the basis of a sample (Oso and Onen, 2009). The design is important in exploratory studies because it allows researchers to gather data, summarize, present and interpret it (Kombo & Tromp, 2006).

The research design adopted therefore allowed the study to describe, analyze, record and present conditions the way they were from the sample. Also, it allowed the study to generate descriptive and numerical data that was meant to measure relationship between various variables.

This study employed both quantitative and qualitative approaches. The qualitative approach helped explore and describe and analyze the content, experiences and views of the respondents on relationship between the variables, while quantitative data sought to find and analyze number of men, women producers, level of production, quantities consumed and sold for income and the values of the sales, which have complemented the quantitative data and enhanced an in-depth understanding of how gender relations influences beans production and marketing among the smallholder farmers in Ndhiwa sub county.

3.4Unit of Analysis and Target Population

Olive and Abel, (2003), define target population as people or objects from which researcher make general observations relating to target population. While Mugenda & Mugenda, 200, refers to population as "an entire group of individuals, events or objects having a common observational characteristic". Population in a research is therefore a group of objects or individuals from which sample comes from. The sample for this study was smallholder beans farmers in Ndhiwa Sub County, drawn from 3 locations (Kanyikela, Kawabwai and Kanyamwa Kosewe). The study population thus consisted of 217 (men 94, women 123) farmers who have been consistently growing beans on not more than 2 acres of land and have been practicing for at least 3 years (6 seasons).

The list of the farmers was obtained from the office of Ministry of agriculture Ndhiwa Sub County– cultivate Africa beans project). In the list, was the names of the smallholder beans growers segregated by gender, telephone contacts and the locations of the farmers.

3.5 Data Source

The data source for the study included survey respondents (smallholder beans farmers, agricultural experts, beans traders, credit officers and opinion leaders).

3.6 Data Collection and Sampling Techniques

The data collection method was through a survey, key informants interviews (KIs) and focused group discussions (FGDs).The study adopted a multistage sampling technique which included; purposive sampling and systematic random sampling techniques to pick survey respondents. According to Bryman and Bell, (2003), sample represents a section of the target population that is selected to participate in a study. According to Kothari (2004), the sample selected

should be representative of the target population. Besides, it should be efficient, flexible and reliable.

3.6.1 Survey

This was conducted by use of structured questionnaires. The direct respondents were 75(Men 32, Women 43)small holder beans farmers. They were picked by use of systematic random sampling procedure. Using the list of 217 smallholder beans farmers obtained from the office of Ministry of Agriculture, a comprehensive numbered list was randomly compiled, and every third number in the list was taken to form sample size.

3.6.2 Key Informant Interviews

This was conducted to generate detailed and in depth information about smallholder's beans production in Ndhiwa Sub County. A total of eight key informants were interviewed based on their expert knowledge and general experience in beans production in the area. These people were purposively identify and were comprised of agricultural professionals from ministry of agriculture, research organization (KALRO), and nongovernmental organization, two community leaders (area chief and women leader), credit officer from community bank and one beans traders. The interview was conducted with the aid of interview guide containing specific questions corresponding to the broader theme of the study.

3.6.3 Focus Group Discussion

Two focused group discussions were conducted to provide a wide range of information which was used to explore broadness of issues affecting smallholder beans production in Ndhiwa. One was conducted at the ward level and another one at the sub county level. The participants at the ward level included; farmers (men and women), ward leaders (men and women leaders),

ward credit assistants, agricultural experts at the ward level and beans traders in the local markets. While at the sub county level, participants included; farmers, community leaders, credit officer from credit institution in Ndhiwa, agricultural experts at sub county level, and beans traders in Ndhiwa market. The participants were purposely identified based on their knowledge and experience on beans production. The discussions were guided by the use of interview guide corresponding to the broader objective of the study.

3.7Data Analysis

The study adopted the use of both qualitative and quantitative data analysis techniques. The data was recorded by filling in responses of the respondents into the questionnaire. Data cleaning to eliminate outliers and illegal characters was done to ensure validity. The quantitative data was coded then analyzed using Statistical Package of Social Sciences (SPSS V20). Qualitative data was analyzed using content analysis technique.

The Dey's (1993) three stages approach of analysis would be used for the qualitative data, this will involve, data description, data classification and the concept interconnection. The data will thus be coded based on the emerging themes and interpretation done on the interconnection between the themes.

3.8Data Needs Table

The data needs table below breaks down, the data collection methods (tools) that was used to collect data and the kind of data that was collected and the respondents in the study. This research used both quantitative and qualitative research methods.

Table 3.1: Data Needs Table

Research questions	Description of data needed	Data	Measurement	Type of data	Source of data	Instrument
How significant do gender relations influence beans production and marketing?	Relationship between men and women in terms of Access to and control over Land, credit, inputs, Labor for beans crop production and marketing	access to land credit inputs labor	Nominal	Qualitative	Informants	Questionnaire & FGD
How do men and women decision making roles in the household vary regarding access to and control over production resources?	How individuals Education level, position in the household, employment, age and farm size influences individuals decision making power in the household	Education HH position Employment Age Farm size	Ordinal Nominal Nominal Interval Interval	Quantitative Qualitative Qualitative Quantitative Quantitative	Informants	Questionnaire & FGD
What benefits accrue in beans production and marketing arrangements that results in equitable returns between men and women?	The utilization patterns of the returns accrued from beans production and marketing	School fees Health Household consumption	Interval Interval	Quantitative Quantitative	Informants	Questionnaire & FGD

CHAPTER FOUR

STUDY FINDINGS AND THE DISCUSSIONS

4.0 Introduction

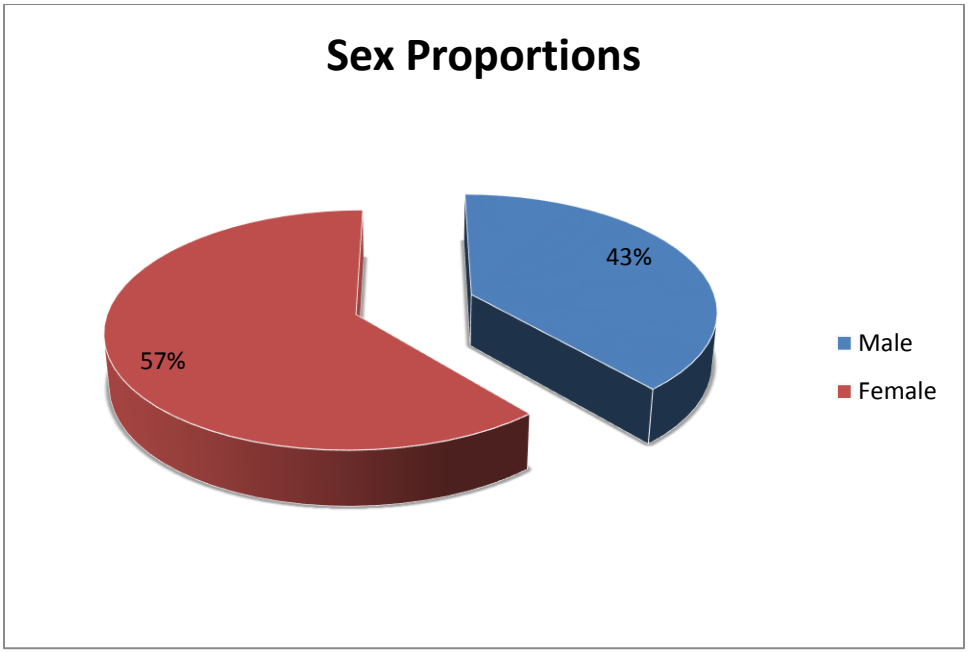
This chapter presents the study findings and gives detailed discussions on the findings presented based on the study's main objective. The broader objective was to identify and analyze gender relations that influence beans production and marketing among the smallholder farmers in Ndhiwa Sub County, Homa Bay County. More specifically the study sought to identify and explain gender relations in smallholder beans production and marketing, analyze household decision making roles influencing access to, and control over production resources, notably land and agricultural credit and finally ascertain different gender based benefits from value addition in various stages of production and marketing process.

4.1 Response rate

This section shows the response rate for the sampled respondents. Data was sourced from 75 smallholder beans farmers and 8 KIs from Ndhiwa Sub County. Out of 75 sampled smallholder beans farmers and 8 KIs identified for the study, all were interviewed, thus a response rate of 100%. Questionnaires were developed, printed in hard copies and directly administered to the respondents.

According to Ministry of Agriculture, Ndhiwa Sub County, (2018), the number of smallholder women beans producers accounts for about 70% of the overall smallholder beans growers in the study area. It is on this basis that more women than men participate in the study. Structured questionnaire that was administered on a face-to-face basis was utilized to collect data. Later on the data was analyzed using SPSS program. The response rate was as shown in Figure 4.1 below.

Figure 4.1: Respondents segregation by gender



Source: Author, (2018)

The results Figure 4.1 above of 57% female and 43% men was attained because access to the respondents was made possible through the support of the village elders who introduced researcher to the respondents.

4.2 Study findings

This section presents the analyzed data from the respondents and the discussions based on study's objectives. Starting with demographic characteristics.

4.2.1 Objective 1: Gender Relations in Smallholder Beans Production and Marketing

The data gathered about demographic characteristics of the sampled smallholder beans farmers respondents constituted age and gender, household type and size, marital status, level of education and sources of household income. The demographic characteristics are important because most of the household productive activities are influenced by them. Data were analyzed and discussed in relation to influence of demographic aspects on objective one of the study; gender relations in smallholder beans production and marketing.

i. **Ages and Gender Characteristics**

The age and gender factors were integrated in the study with the consideration that different age groups and gender among the smallholder beans farmers could display different levels of perception towards decision making, access and control over household assets for beans production and marketing purposes. Age by gender, for example, in the case of younger generation male or female could, show perceptions in contrast to middle aged or older groups regarding beans production.

Age structure for the sample was spread between years 18 to above 60. Table 4.1 below shows the age categories and distribution of age by gender.

Table 4.1: Age categories of the respondents

4.1.1 Age Distribution		
Age categories	**Score (%)**	
18-30	9.3%	
31-40	38.7%	
41-50	20.0%	
51-60	21.3%	
above 60	10.7%	
4.1.2 Age Distribution by Gender		
18-30	Male	3.3%
	Female	6%
31-40	Male	17.5%
	Female	21.2%
41-50	Male	8%
	Female	12%
51-60	Male	11%
	Female	10.3%
60 and Above	Male	4.7%
	Female	6%

Source: Author, (2018)

The findings show that (38.7%) of the people interviewed were aged between 31-40 years, 21.3% were between age group 51-60, 20% (41-50), 10% were above 60 years and 9.3% (18-30). There was a distinct difference in grouping between males and females across all the age categories. The most represented age group in smallholder beans production among the respondents was 31-40 women (21.2%) and men (17.5%), this could be because age 31-40is the most productive age group in the human growth and development cycle. A category of people full of energy to employ in farming activities.

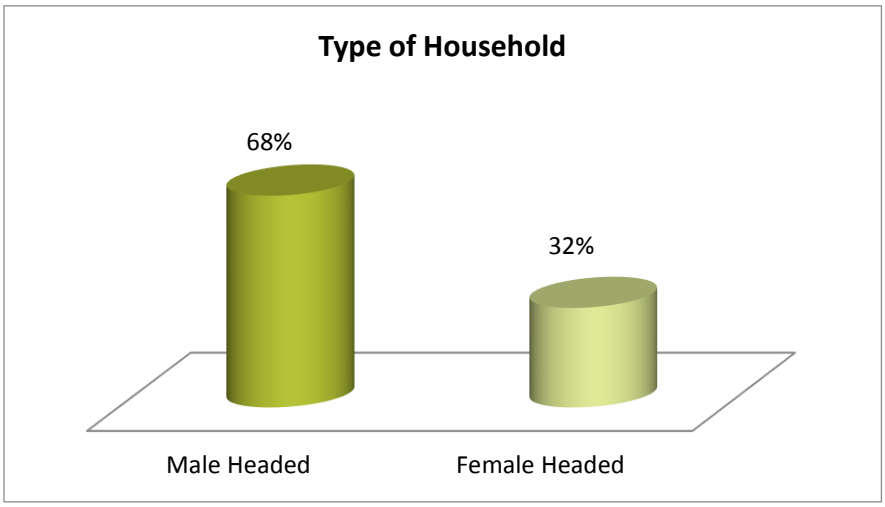
Age group 18- 30 both male and female had a low representation (9.3%), followed by age group 60 and above (10.7%). It can be said of the two age groups (18-30 and 60 and above), that age group18-30 are represented by youths at their early growth stage still in their economically active age, and could be engaged in non-farming activities for quick income. In

the case of age group 60 and above they are in their advanced age, hence reduced labor output for agricultural activities. From the above results it is evident that a productive age group, 31-50, was represented significantly by the respondents. The report shows that smallholder men and women beans producers in the middle age were the majority as compared to their male counterparts. The findings is supported by Babangida, (2016), report that middle age farmers play significant role in small scale agricultural production in Sub Saharan African countries (Babangida, 2016). However, the finding do not completely conform to CIAT (2001) finding that beans crop is mainly produced by small scale women farmers who earn most of the benefits. The finding could be as a result that men have started appreciating the potential of beans acting as a cash crop in the area.

i. Household Type and Size

Household type namely male or female headed have different power relations and influence on access to and control over household productive resources. Conversely, the size of the household is important in beans production as it is used to determine production in terms of labor provision and the extent to which members face difference on opinions regarding production activities. The distribution of the household by the number of household type and members is illustrated in Figure 4.2 below.

Figure 4.2: Household Type and size of the sampled respondents.



Source: Author, (2018)

It was observed that, 68% of the households were headed by males whereas females headed only 32% of the households. This is flanked by notable average Household size of 7 members. Disaggregated by gender, the average household size of the households headed by males was seven while those headed by female was four. From the results above it can be concluded that male headed households are the majority and that the household size are fairly large.

This state was argued to have repercussions on household beans production, food and nutrition security and income in the study area. During focus group discussions, landownership was found to be culturally perceived as a right of the male headed households and the community still perceived women land rights as culturally wrong, culturally women are not allowed to inherit land, and had low power and control over land. Consequently, food and nutrition insecurity and low income among the smallholder beans producers.

In terms of household size, it was argued, that larger families have good source farm labor which can enhance farm productivity, however in relation to subsistence, it was noted that a

larger family had the ability to consume more of the farm produce which had an effect on the amount of beans to be saved for sale. The findings contradict Raphael, (2014) report which observed that household size has a great role to play in agricultural activities, however, the number of members in a family cannot be used to justify the potential for productive farm work, and amount consumed in the household. This is due to the fact that, farm productivity and household consumption can be affected by some other important factors such as sex, age, and health status of the family members.

ii. Marital status of the respondents

This section examined the marital status of the sampled respondents. Marital status was important for the study to understand and describe relations of the diverse marital status in beans crop production, keeping in mind the fact that household decisions making process on productive processes is a fundamental role of marriages and that the view of each party in any marriage arrangement is significant. Marriages also provide an opportunity for families to work as a unit providing labor for farm work. The marital status in the study included those who were married, divorced or widowed at the time the data was collected. The results on marital status of the respondents were as illustrated in Table 4.2 below.

Table 4.2: Marital status distribution of the sampled respondents.

Source. Author, (2018)

Marital Status	Overall count by percentage	Type of House Hold	
		Male headed	Female Headed
Married	73.3%		
Divorced	2.7%	68%	32%
Widowed	24%		

Majority of the respondents (73.3 %) were married meaning that they were living as couples at the time of the study, 2.7% were divorced (women) and 24% were widowed. From the findings above, it is evident that outstandingly, a large proportion of the smallholder beans producers in Ndhiwa Sub County were married at the time of the study.

The response by KIs on beans production approach, the sub county crops officer (KI) reported that beans production vary from one household to the other, but generally the women take a leading role, however in a limited households the approach was by couples in practice. The officer attributed the involvement of the men to the increasing importance of beans in household income. The finding conform with Siri *et al*. (2016), report that married smallholder farmers are more likely to use family labor for agricultural production, which may be central to sustainability and stability of the household food crop production (Siri *et al*., (2016).

iii. Level of education attained by the respondents

The study examined the participants' education levels with a view to understand the extent to which those levels influenced their decisions and have control over productive resources. This idea is qualified by Liberio, (2012), Gichangi*et al*. (2012) who noted that education is a greater

weapon that empowers individual's ability to influence decisions. Education levels were categorized into four main levels namely: no formal education, primary education, secondary education and tertiary education. Table 4.3 depicts the respondents' education levels.

Table 4.3: Education levels of the respondents

Education level	Pooled (%)	Male headed (%)	Female headed (%)	Total count (%)
No formal education	10.7%	14.3%	85.7%	100%
Primary education	74.7%	75%	25%	100%
Secondary education	13.3%	70%	30%	100%
Tertiary education	1.3%	100%	0%	100%
Total count (%)	100%			

Source. Author, (2018)

The results were analyzed and presented by categories. For the sample used 74.7% had attained primary education, 13.3% had secondary education, 10.7% had no formal education and 1.3% had tertiary education. Categorized by gender, primary education level had 75% of men and female 25%, no formal education had 85.7% of females and 14.3% males, while only 1.3% of male respondents had attained tertiary education.

The data shows that better proportion of the respondents had attained primary education level. It also revealed that a larger number of the women respondents had no formal education, which translates to high level of illiteracy among the women respondents and whether they could influence decisions towards beans production remained a challenge. With the low education level as observed above.

The results above qualifies why beans production toped 97.3% as the chief source of livelihoods among the respondents as compared to only 2.7% of the respondents who were engaged in other income generating activities as shown in table 4.4below.

Table 4.4: Household source of income

Household source of income		Pooled (%)	Source of income by type of House Hold		Total
			Male Headed	Female Headed	
Household source of income	Other sources	2.7%	100%	0%	100%
	Beans farming	97.3%	67.1%	32.9%	100%
	Total count	100%			

Source. Author, (2018)

From the findings above, it is clear that beans production is the major source of income for most of the respondents. By household type, 67.1% of male and 32.9% of female headed households reported to directly depend on income from beans. The result validated the claim that men are increasingly occupying beans production sector primarily for income generation.

4.2 Objective 2: Household Decision Making Roles Influencing Access to, and Control over Production Resources; Land and Credit

Decision making is notably a key aspect of gender relations in cultural practice context in most communities in Africa. The study sought to establish how household decision making is practiced vis-à-vis control over and access to land and credit by respondents. This was important since land and credit are very important factors for production. Respondents were requested to state their status on control over and access to land in Ndhiwa Sub County and the responses obtained are contained in table 4.5 below.

Table 4.5Household decision making and access to land

Influence on household decision making roles		Count (%)	Access to land			Total
			Males	Females	Both	
Household decision making	Men	68%	83%	12%	5%	100%
	Women	25%				
	Both	7%				
	Total (%)	100%				

Source. Author, (2018)

From table 4.5 above, it emerged that 68% of the male respondents had influence on household decision making process as compared to 25% of the females, while only 7% of the respondents reported that both had equal influence on decisions made in their households. The study also investigated beans production approach in Ndhiwa Sub County and found out that production practice were either individually, by couples or as a family. Overall, those that reported individual production approach were 52%, followed by couples 40% and only 8% as a family. In terms of access to land, the respondents were asked if they had access to land for beans production and it came out that men (58%) had more access to land as compared to women (25%), while 17% of the respondents noted that they both had equal access to land. The results shows that there was gender disparity in access to land clearly indicating a higher number of women involved in beans production among the smallholder farmers mainly depend on their male counterparts decisions on production trend. This report does not concur with Amali and Ebele (1998) that women's involvement in farm work is due to their higher access to land as compared to their male counterparts.

Land being a critical factor of production, then it lies at the heart of political, economic and even social life of people (Emeasoba, 2012). In order to find out the land ownership patterns and the authority over land control, it was important to ask the respondents their opinions regarding land ownership in the study area. Understanding the nature of land ownership and control in the study area was important for the study to establish gendered relationship and patterns of authority on how land was used under beans production. The results were as indicated in the table 4.6 below.

Table 4.6: Land ownership characteristics.

Crosstab

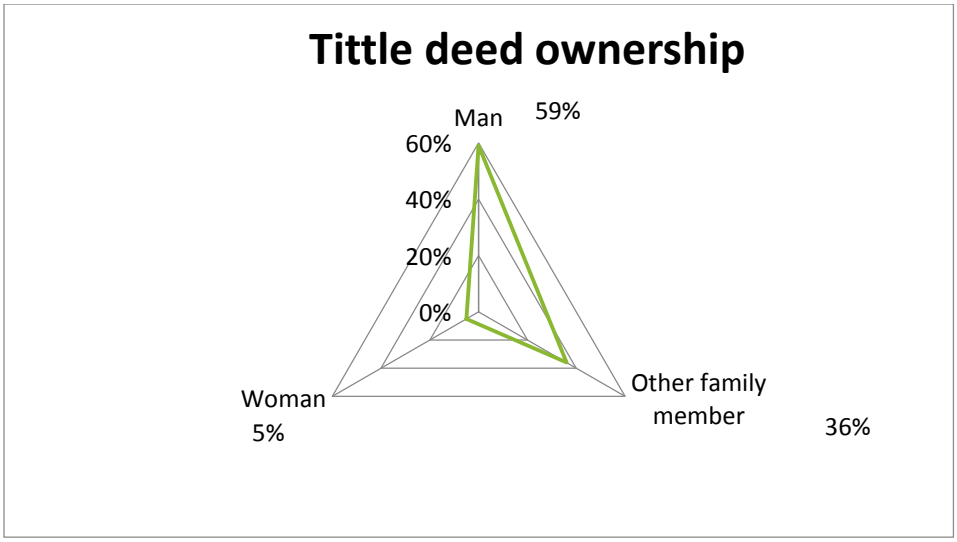
			Pooled (%)	Type of House Hold		Total
				Male Headed	Female Headed	
Type of Land Ownership	Family	Count	59%	28	16	44
		% within Type of Land Ownership		63.6%	36.4%	100.0%
		% within Type of House Hold		54.9%	66.7%	58.7%
		% of Total		37.3%	21.3%	58.7%
	Individual	Count	40%	23	7	30
		% within Type of Land Ownership		76.7%	23.3%	100.0%
		% within Type of House Hold		45.1%	29.2%	40.0%
		% of Total		30.7%	9.3%	40.0%
	Leasehold	Count	1%	0	1	1
		% within Type of Land Ownership		0.0%	100.0%	100.0%
		% within Type of House Hold		0.0%	4.2%	1.3%
		% of Total		0.0%	1.3%	1.3%
Total		Count		51	24	75
		% within Type of Land Ownership		68.0%	32.0%	100.0%
		% within Type of House Hold		100.0%	100.0%	100.0%
		% of Total	100%	68.0%	32.0%	100.0%

Source. Author, (2018)

The results show that 59% of land is owned as a family members, 40% by individual family members, and only 1% under leasehold. The study revealed that women had less control over land. This concurs with Kabutha (1999) that among small scale farmers in West Africa, females own less land. During focus group discussions participants also confirmed that in Ndhiwa Sub County, land ownership is very important in agricultural production but the patterns of the control is mostly by men.

A closer comparison to land ownership is who owns the title deed as a symbol of authority, the results in the Figure 4.3 below demonstrates land ownership by title deeds.

Figure 4.3. Illustrates land ownership by Tittle Deed.



Source: Author, (2018)

From the findings, 59% of land with tittles are owned by men as compared to only 5% owned by women and 36% was owned as a family.

Land is a pre-requisite for beans production. The size of land under the crop production has a direct influence on the level of production. It is clear that women had less control over land which had negative effect on beans production.

Tables 4.7 shows the proportion of land which was put under beans production and table 4.8 shows the quantities harvested.

Majority (40%) of the respondents claimed that they had allocated only an acre of land to beans production mostly under intercrop in practice. This resulted into low yields as illustrated in the Table 4.8.

Table 4.7: Shows Proportion of Land under Beans Crop

On what Proportion do you grow beans

Acres		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.5	27	36.0	36.0	36.0
	.8	1	1.3	1.3	37.3
	.9	1	1.3	1.3	38.7
	1.0	30	40.0	40.0	78.7
	1.5	4	5.3	5.3	84.0
	2.0	5	6.7	6.7	90.7
	2.5	2	2.7	2.7	93.3
	4.0	1	1.3	1.3	94.7
	5.0	1	1.3	1.3	96.0
	7.5	1	1.3	1.3	97.3
	50.0	1	1.3	1.3	98.7
	75.0	1	1.3	1.3	100.0
	Total	75	100.0	100.0	

Source. Author, (2018)

Table 4.8 Quantities of Beans Harvested

Beans Harvest

Kg		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5-10 Kgs	2	2.7	2.7	2.7
	10-30 kgs	7	9.3	9.3	12.0
	30-60 Kgs	17	22.7	22.7	34.7
	60-90 Kgs	10	13.3	13.3	48.0
	More than 90 Kgs	39	52.0	52.0	100.0
	Total	75	100.0	100.0	

Source. Author, (2018)

From the Table 4.8 above, Most of the respondents-48% reported between 60-90Kg of harvest. This figure is below the land potential of 230Kg per acre under intercrop (MOA, 2012). During 2016 crop year, averagely 11,900 smallholder farm families planted beans in about 5,590 hectares yielding a total of 3,913T. Which according to (CIAT/KALRO, 2016) was very much below the expected total output. An estimated 90 percent of bean production, storage, and trading is led by women. Despite the enormous importance of beans for Ndhiwa households. However, farm production has been fluctuating and to some extent remains flat (MOA, 2014) Credit is another vital resource for agricultural production because it influences acquisition of farm inputs and general farm operations. The study sought the views of the study respondents on the ability to access credit. The responses were a shown in Table 4.9 below.

Table 4.9: Proportions of Men and Women who Got Credit.

Sex * Do you get credit to produce beans Cross tabulation

			Do you get credit to produce beans		Total
			Yes	No	
Sex	Male	Count	9	20	29
		% of Total	12.2%	27.0%	39.2%
	Female	Count	12	33	45
		% of Total	16.2%	44.6%	60.8%
Total		Count	21	53	74
		% of Total	28.4%	71.6%	100.0%

Source. Author, (2018)

The results show that higher percentage of the respondents71.6% (male 27%, Female 44.6%) did not receive credit and only 28.4% (male 12.2%, female 16.2%) received credit. Fairly a larger percentage of women 16.2% had received credit as compared to men with 12.2%. This can be attributed women groups which have established merry go rounds that lend to members. This is evident as described in the table 4.10 below showing that out of credit acquired, 71.7% were obtained from merry go rounds, 18.2% from SACCOs and 9.1% were obtained from banks.

Table 4.10: Source of Credit.

			What is your Source Of Credit			Total
			Bank	SACCO	Merry go Round	
Sex	Male	Count	1	2	6	9
		% of Total	4.5%	9.1%	27.3%	40.9%
	Female	Count	1	2	10	13
		% of Total	4.5%	9.1%	45.5%	59.1%
Total		Count	2	4	16	22
		% of Total	9.1%	18.2%	72.7%	100.0%

Source. Author, (2018)

From the results above, access to credit by respondents was low. During focus group discussions, the participants unanimously attributed this to lack of credit security. Female participants highlighted lack of credit security as the main reason that limits them from accessing credit from banks and other financial institutions. Hence the option of merry go rounds that require no security for lending.

During discussions, participants concurred that the couples in the household had an influence on where to invest the loan, however men had more influence over the use of the credit.

4.3. Objective 3: Different gender based benefits from value addition.

The study sought to determine gender disparity in control over the benefits of beans production as the main source of revenue for most of the people in Ndhiwa. Beans grown and consumed by majority of the households, but highly valued by the poor households who have limited means to purchase costly animal protein. Beyond its nutritional importance, beans is relied upon by smallholder producers as an important source of household income due to its high value in the market as compared to other crops being grown in the area.

To determine gender disparity over the benefits from beans production, areas which were examined included: gender roles and performance at various stages of beans production, gender participation in beans marketing, decision making, control over income from sale of beans and the impact of subordination in beans production.

4.3. Objective 3: Different Gender Based Benefits from Value Addition.

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limited means to purchase costly animal protein. Beyond its nutritional importance, beans is relied upon by smallholder producers as an important source of household income due to its high value in the market as compared to other crops like maize and sorghum.

To determine gender disparity over the benefits from beans production, areas which were examined included: gender roles and performance at various stages of beans production, gender participation in beans marketing, decision making, control over income from sale of beans and the impact of subordination in beans production.

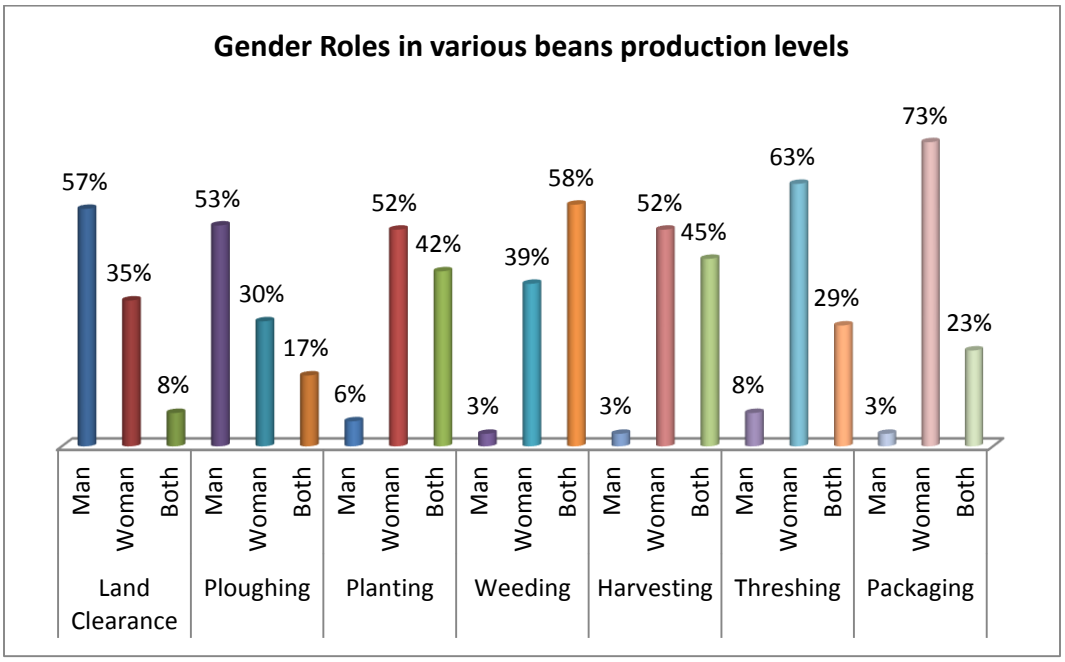
4.3.1 Gender Roles and Performance at Various Stages of Beans Production

Beans production activities involve a series of processes that span from land clearance, ploughing, planting, weeding, harvesting, threshing, packaging, storage upto marketing. According to CIAT, (2013), farm activities account for about 80% of the labor required in the whole production chain as compared to 20% of labor spent during post-harvest activities (CIAT, 2013).

In order to find out the involvement of men and women along beans production chain, the study examined their involvement in various stages. Figure 4.4, summarizes the male and female responses on their level of participation in the stages identified above.

Findings show that women dominate planting (52%), harvesting (52%), threshing (63%) and packaging (73%), while men participated more in land clearance (57%) and ploughing (53%).

Figure 4.4 Gender Roles Performance at Various Levels of Bean Production



Source: (Author, 2018)

These results show that smallholder beans production is managed by both male and female. Their participation is evident in all the stages, although with different intensities. The results further revealed that activities such as planting, weeding and harvesting which were traditionally done by women have been evolving into joint activities. This shows the growing importance of beans to men as well in Ndhiwa community, transforming from pure subsistence to income generating crop. This finding concurred with the responses from most of the KIs who reported an impressive male participation in pre harvest stages in beans production.

4.3.2 Gender Participation in Beans Marketing

Access to and participation in beans marketing by smallholder producers is an incentive and earnings encourage further beans production. The inability to access market means losses or may affect most of the farmers negatively, hence producers may be disinterested in beans

production. To understand the level of gender disparity in access to beans marketing, the respondents were asked to state if they had access to market or not. The responses were as indicated in Table 4.9 below.

Table 4.9: Market Participation of Beans Producers

Market participation	Percent responses	*Who sets the price to sell beans*	Percent responses
Man	22.2	Man	40.4
Woman	48.0	Women	35.0
Both	29.8	Both	24.6

Source, (Author, 2018)

The gender participation in marketing of beans and price determination varied across households. Of the sampled respondents, 22.2% reported that beans marketing is done by men as compared to 48% being performed by women, while 29% reported that both husband and wife perform the task jointly.

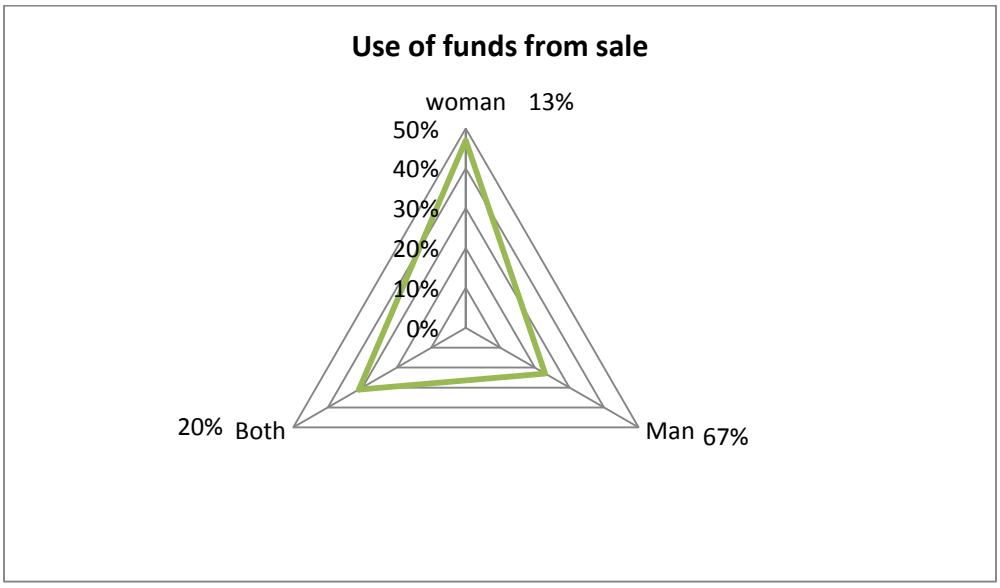
With regard to marketing arrangement, one key informant-sub county agri-business officer highlighted two main beans marketing arrangements commonly used by farmers in Ndhiwa sub County: Informal markets consisting of brokers, traders, individual consumers, and institutions. During the focus group discussions, participants revealed that women and men participate differently in these marketing arrangements. Women dominate the informal markets while men controlled formal markets. However, it was noted by beans aggregator (KI), that informal beans marketing is the main beans marketing outlet in Ndhiwa which she attributed to low household production level.

During the seasons when farmers realized bumper harvest and there was surplus to sale, men took control over marketing due to high returns expected from the sales. This finding concurs with PABRA, (2013) findings, that beans marketing characteristics in western Kenya have gender specific traits that influence the choice of participation. These traits include the bargaining power, trust, quantity for sale, distance to the market and mode of transport.

Besides market participation, respondents were also asked to state who determines the price at which the produce is sold. The responses were as shown in the Table 4.9 above.

The findings indicated that 40.4% of men did set the price as compared to 35% of women, and 24.6%, of the respondents reported that both participated in deciding the prices. The findings demonstrate that despite the fact that women were highly involved in beans marketing, men had larger influence on the sale price of beans. The study also investigated the perceptions of the respondents and participants of the FGDs regarding the use of the income generated from beans. The responses were as presented in Figure 4.5 below.

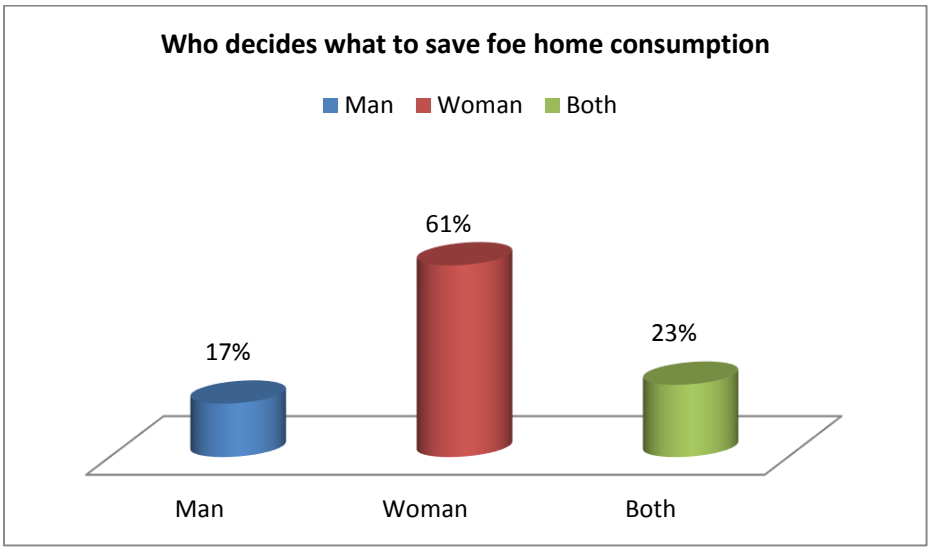
Figure 4.5: Influence on Use the Funds from Bean Sale.



Source: (Author, 2018)

The findings revealed that 67% of men had influence on how to spend the income as compared to 13% of women, and 20% of the respondents reported to have a joint decision making on how to spend the income. During FGDs, participants argued that men, as household heads, are responsible for making money-related decisions, even if the wife does not agree to the decisions, and that women are not supposed to be part of the decisions. According to men, during the discussions, household income from any sector including beans have to be under the control of the men, because women "have weaknesses", "there are decisions which we do not involve our wives simply because they may not agree". So as the head of the house a man has to determine how income should be spent. On the other hand, the study revealed that household consumption was controlled by women as demonstrated in Figure 4.6 below.

Figure 4.6: Influence on Decision Making on Household Consumption



Source. (Author, 2018)

Findings in Figure 4.6 above show that 61% of females interviewed reported as being influential on the quantity of beans saved for household consumption. This was confirmed by male responses during Focus Group Discussions. Men noted that household food security is very important and being that cooking is a social responsibility of the women, they influence quantities saved subsistence.

From the findings, the male gender had more influence and control over the income from beans, while female influenced the quantities for household consumption. In general, from the results, it can be concluded that the percentage of women who influence and have control over the farm produce has been monopolized by the male gender. Lack of control of income from the farm discourages women from full participation in beans production, hence reduced productivity.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the results, presents conclusions and puts forward recommendations of the study based on the findings from interpretation of data collection.

5.1 Summary of the findings

The study established that most beans farmers in Ndhiwa had low level of education. Specifically, the majority women farmers (85.7%) had no formal education, and majority of the farmers 74.7% had only attained primary education which means that the level of education in Ndhiwa community is still very low, especially among the women.

The study highlighted a number of gaps between male and females with regard to access to productive resources, decision making power over bean production and use of income from beans. Results are that men reported being highly involved in field clearing and ploughing of the land. On the other hand, women reported higher involvement and participation in planting, weeding, harvesting, threshing and packaging. Accordingly, it can be concluded that, women stood out to be the main farmers in smallholder beans production, while men were more visible in control over productive resources. For example, landownership was highly gendered with a higher percentage of male reported having authority over land as compared to females. Additionally, the study indicated that men and women did not have equal access to land for use. This is because culturally men can inherit land and had more buying power as opposed to women. The study also established that majority of women and men who grow beans did not obtain credit especially in financial institutions. Most of the credit acquired were from merry go round. This is because banks were reported to have conditions that discriminated against

the poor beans producers from accessing these financial institutions for assistance. Besides, some institutions had a specific time line of repayment of loans that proved difficult for the poor men and women beans growers to achieve due to minimal returns.

Level of disparities between male and females are highlighted with regard to decision making power over bean production, access and control over productive resources and use of income from beans. Results are that men are highly involved in bush clearing and ploughing of the land. While for women higher involvement and participation was reported in planting, weeding, harvesting, threshing beans and packaging. The indication of these results is that, women are major players in smallholder beans production, while men were more visible in control over productive resources and household income. Land ownership for instance was highly gendered with a higher percentage of male reported having authority over land as compared to females. In addition it was found that men and women had access to land, however men had more access than women. In addition, they did not have equal control and land ownership. The study also established that majority of women and men who grow beans did not obtain credit especially from financial institutions like Banks and SACCO. Though a few men reported to have received credit from Banks and SACCO. Women never acquired loans from the Banks due to tough rules set by the Banks like use of collaterals which they did have. Also long distance to the facilities was a barrier to access the credit facilities, especially by women. Merry go rounds were found to be the main source of credit for women, they formed groups, saved their own money and loaned themselves from the savings.

The study noted at the household level that women greatly influenced decision- making on what needed to be consumed, while men influenced what was to be sold and how to utilize the income. These results show that decisions on different gender based benefits from beans

production and marketing were made based on established roles for men and women who conform to social norms. For example, women were found to be the primary participants in the preparation of beans for home consumption, in particular the decision on the quantities to cook for the family. Consistent with this role, women reported that they make the decision on how much of the beans to save from harvest for household consumption. Men on the other part had control over pricing of beans produce and income accrued from the sales. This is because men especially as determiners are the ones who are socially accorded the responsibilities for generating income for the family, hence had the prerogative and authority to determine how to utilize the returns and benefits from beans farming.

5.2 Conclusion

The study has demonstrated that gender disparity still exists among the smallholder beans crop producers in Ndhiwa Sub County.

The study concludes that: majority of women in smallholder beans production were illiterate, which to a larger extent explains why they have minimal influence in household beans production activities in the study area, men had more access and control over land, while women had more access to credit through merry go rounds than men. However men dominated decision making and influence on household production activities, in particular, marketing of beans, utilization of the benefits, except quantities of the produce to be saved for food. Women, on their part, dominated particular stages of beans production participating more in post-harvest handling activities and local marketing.

5.3 Recommendations

Women were found to be the main providers of labor and time in production marketing process yet were underprivileged in terms of access, control of land and credit and had low decision making power and influence on production arrangements and utilization of the benefits accrued from the produce.

In order to realize higher household beans production for food and nutrition security and increase in income, it is important to enable women have access and control of productive resources. It is suggested that the community should be fully sensitized on gender rights to enable them appreciate the importance of gender equality in development and that equal access and control over resources by both men and women enhances their productivity. To achieve the above recommendations

Development organizations (private sectors and the government) through their sectoral departments should develop policy options on gender mainstreaming in smallholder beans production and marketing practices, incorporate the policies in their development programmes and make a deliberate effort to sensitize the community on the policies for an improved involvement of both men and women beans farmers in production process, consequently improved living standards.

5.4 Area for Further Study

Based on the study findings and conclusions, the following area has been recommended for further research.

Role played by development partners in reducing gender inequality in smallholder agricultural production.

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APPENDICES

APPENDIX I: RESEARCH QUESTIONNAIRES: INTERVIEW SCHEDULE FOR BEANS FARMERS (DIRECT RESPONDENTS)

GEOGRAPHICAL INFORMATION

Questionnaire code:_____ **Name of Enumerator: _____** **Date: ____/____/____**	**Administrative area:** County…… Sub-County……. Ward: …….. Location: …… Sub-Location: …… Village: ……

1.0 IDENTIFICATION OF RESPONDENT AND HOUSEHOLD COMPOSITION			
1.1 Name of respondent: Phone contact: 1.2 Sex: Male [ ] Female [ ]	1.3 Age of the respondent (Tick) 1. 18-30 [ ] 2. 31-40 [ ] 3. 41-50 [ ] 4. 51-60 [ ] 5. Above 60 [ ]	1.4 Marital Status (tick) 1=Single [ ] 2=Married [ ] 3= Divorced [ ] 4= Separated[ ] 5= Widowed [ ] 6=Other (specify)	1.5 Current level of education (Tick) 1=No formal education 2= Primary education 3= Secondary education 4=Tertiary education 5=N/A
1.6 Are you a household head 1 Yes [ ] 2 No [ ]	1.7 If no, relationship to the household head 1=Head [ ] 2=Spouse [ ] 3=Child [ ] 4=Parent [ ] 5=Sibling [ ] 6=Grandparent [ ]		
1.8 Household type 1 Male headed ((Divorced, widow, single) 2. Female headed (Divorced, widow, single) 3. Other…… ……..	1.9 What is your main source of income? 1 Beans Farming 2 Other sources, specify		

2.0 HOUSEHOLD COMPOSITION				
2.1 How many people currently live in your household	(18 – 26) years old	(27 – 35) years old?	(36 – 50) years old	51 and above
Males				
Females				

3.0 THE STRUCTURE AND NATURE OF BEAN PRODUCTION; LAND, CREDIT ACCESS AND DECISION MAKING

3.2 What is the size of your total land holding (in acres)? ----------
1.1 Mode of land ownership: (1)Family owned (2) Individual Owned (3) Lease hold
3.3 Is land owned with a tittle deed? (1) Yes (1) No

3.4 Have you grown beans in the last 3 years (6) seasons?
1. Yes [ ]
2. No [ ]

3.5 Do you grow beans in this piece of land?	3.6 If yes what proportion of this land has been used for beans production in the last 3 years (In acres)? ----------	3.7 What quantities on average, do you harvest per season (in Kg)
2 Yes [ ] 3 No [ ]		
3.8 Do you have the access and control over land to produce beans?	3.9 If No, who decides where and land size to produce beans?	3.9.1 Under what practice do you normally grow beans?
1 Yes 2 No 3 Both	1 Man [ ] 2 Woman [ ] 3 Other (specify)	1 Pure stand [ ] 2 inter crop [ ] 3 other specify
3.9.2 How do you produce your Beans	3.9.3 Why do you grow beans?	3.9.4 Who makes decisions on the following?
1 As an individual [ ] 2 As a family [ ] 3 Other specify	1 For commercial purposes [ ] 2 For HH consumption [ ] 3 Others, specify	1 Land clearance. Man [ ] Woman [ ] Both [ ] 2 Ploughing. Man [ ] Woman [ ] Both [ ] 3 Planting. Man [ ] Woman [ ] Both [ ] 4 Weeding. Man [ ] Woman [ ] Both [ ] 5 Harvesting. Man [ ] Woman [ ] Both [ ] 6 Threshing. Man [ ] Woman [ ] Both [ ] 7 Drying. Man [ ] Woman [ ] Both [ ] 8 Storing. Man [ ] Woman [ ] Both [ ] 9 Packaging. Man [ ] Woman [ ] Both [ ] 10 Packing in store. Man [ ] Woman [ ] Both [11 Marketing. Man [ ] Woman [ ] Both [ ] 12 Other, Specify
3.9.5 Do you have access to credit for beans production	3.9.6 If yes, which is the main sources	3.9.7 Who has the control over the credit for beans production?
1 Yes [ ] 2 No [ ]		1. Man [ ] 2. Woman [ ] 3. Other (specify)

4.0 BEANS CONSUMPTION AND MARKETING ARRANGEMENTS			
4.1 Do you normally consume beans produced? 1. Yes [ ] 2. No [ ]	4.2 If yes, do you usually decide what quantities of beans the household eats 1. yes [ ] 2. No [ ] 3. Either [ ]	4.3 What quantities of beans do you consume per week? 1. Below 1kg 2. 1-2kg [ ] 3. 3-5 kg [ ] 4. 6-10kg [ ] 5. Above 10kg[ ]	
4.4 Do you sell your beans produce? 1. Yes 2. No	4.5 Do you decide on what quantity to be sold? 1. Yes [ ] 2. No [ ]	4.6 If yes, what quantities do you normally sell per season (in Kg)? ---------- -----	4.7 Do you have the control over the sales? 1. Yes 2. No
4.8 Which is your main selling arrangement? 1. Sell to nearby spot markets 2. Sell beans randomly to dealers 3. Sell beans randomly to brokers, 4. Other Specify	4.9 Who has the control on the pricing of the beans produce? 1. Man 2. Woman 3. Other (specify)	4.9.1 Are the returns obtained from the beans sales divided equally? 1. Yes [ ] 2. No [ ]	Who determine the utilization of the returns accrued from the sales? 1. Man 2. Woman 3. Other (specify)
5.0 GENDER ISSUES INLUENCING BEANS PRODUCTION AND MARKETING			
5.1 What are some of the main gender dynamics influencing beans production in your household? Suggest possible solutions			
5.1.2 Gender dynamics influencing beans production		way forward	

APPENDIX II: INTERVIEW SCHEDULE FOR KEY RESPONDENTS/INFORMANTS

Name of the Respondent……

Designation……

Department……

BEANS PRODUCTION IN NDHIWA

Section A

The overview of crops and livestock production in Ndhiwa

A) Main crops:
B) Main Livestock
C) Production challenges
D) Key sectors involved in crop and livestock production

Section B

Nature of beans production

Q1. Who are the major beans growers in this area and why them?

Q2. What is the common practice under beans production in the area?

Q3. Do men and women have equal access to and control over land for beans production?

Q4. Who decides on the various aspects of bean production (in this area) and what aspects are these i.e. land preparation, planting, weeding……..

Q5. Who normally controls beans produce?

Q6. Do men and women of this area have equal access to credit facilities, if yes then where. If not then why?

Q7. Who mostly takes part in selling the beans produce?

Q8. What are the common marketing arrangements in the area? i.e. farm gate, brokers etc

Q9. What determines the market price?

Q10. Who determine the utilization of the returns accrued from the sales?

Q11. What are some of the major gender issues or dynamics that influence beans production and marketing in the area?

Q12.How have they influenced beans production and marketing?

Q13. What is your office doing to ensure gender equity in beans production?

APPENDIX III: INTERVIEW SCHEDULE FOR FOCUS GROUP DISCUSSIONS (FGDs)

1) **Introduction**

Historical background of beans production and marketing in Ndhiwa Sub County

2) **Nature of beans production**

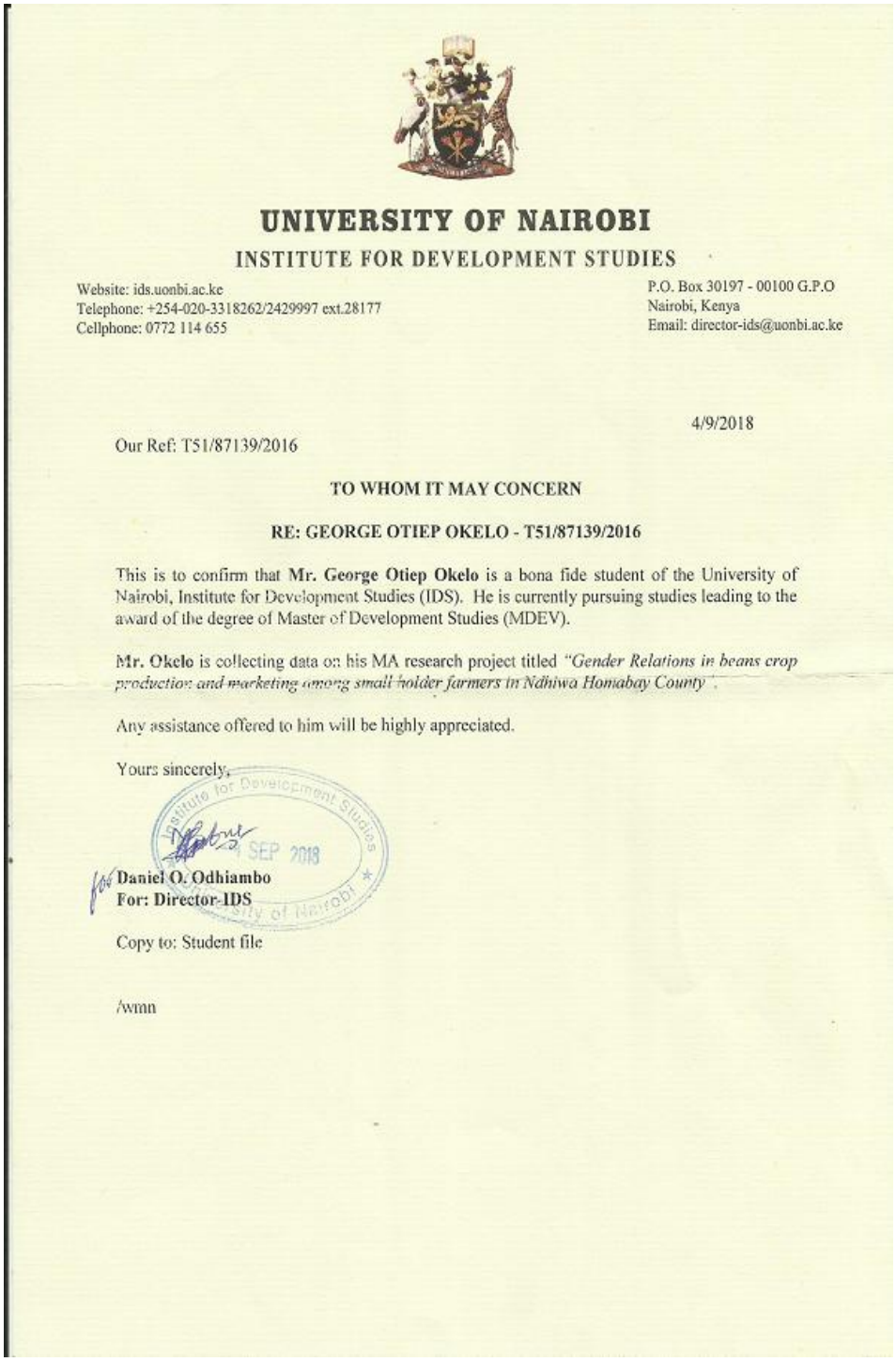
Beans crop production in relation to;

i. Access to and control over land and credit for production?
ii. Decision making on what size of land to put under beans production?
iii. Who has access and control over production inputs (seeds, manure)
iv. Who decides what proportion of harvest to be consumed at household level and sell

3) **Production systems**
   i. Which varieties and why the varieties
   ii. Production practices (pure or intercropping)
4) **Participation of men and women in different stages of production**
   a. Land clearing
   b. Ploughing
   c. Planting
   d. Weeding
   e. Harvesting
   f. Threshing
   g. Drying
   h. Sorting
   i. Packing
   j. Packing in the store
5) What influences the stage at which men or women participate in
6) What are the stages along the production process where there is greater value?
7) Within a household, who typically makes the sale from this crop? Who makes the sale of the processed products? Can either partner make the sale, at any given time?
8) What happens at the household level, when earnings from the crop or processed products come into the household? How is the money from the crop or processed product distributed between spouses/and with other family members?

9) What are the advantages or disadvantages that men and women have in equal participation in production process and finding markets and negotiating sales for the beans produce? Why do you think that is?
10) Identify some of the major gender issues that influence beans production and marketing in the area?
11) In what ways do the identified issues affect beans production and marketing
12) What do you think should be done to promote Gender equality in beans production?

APPENDIX IV: RESEARCH LETTER



UNIVERSITY OF NAIROBI

INSTITUTE FOR DEVELOPMENT STUDIES

Website: ids.uonbi.ac.ke
Telephone: +254-020-3318262/2429997 ext.28177
Cellphone: 0772 114 655

P.O. Box 30197 - 00100 G.P.O
Nairobi, Kenya
Email: director-ids@uonbi.ac.ke

4/9/2018

Our Ref: T51/87139/2016

TO WHOM IT MAY CONCERN

RE: GEORGE OTIEP OKELO - T51/87139/2016

This is to confirm that **Mr. George Otiep Okelo** is a bona fide student of the University of Nairobi, Institute for Development Studies (IDS). He is currently pursuing studies leading to the award of the degree of Master of Development Studies (MDEV).

Mr. Okelo is collecting data on his MA research project titled *"Gender Relations in beans crop production and marketing among small holder farmers in Ndhiwa Homabay County"*.

Any assistance offered to him will be highly appreciated.

Yours sincerely,

Institute for Development Studies
SEP 2018
City of Nairobi

for **Daniel O. Odhiambo**
For: Director-IDS

Copy to: Student file

/wmn