INFLUENCE OF SELECTED FACTORS ON YOUTH PARTICIPATION IN AGRICULTURE IN KAJIADO NORTH SUB-COUNTY, KENYA

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DECLARATION AND RECOMMENDATION

Declaration

I declare that this thesis is my original work and has not been previously submitted for the award of a degree in this or any other University.

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Recommendation

This thesis has been submitted for examination with our approval as the University supervisors.

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DEDICATION

This study is dedicated to my dear husband George Kiunga and our children Lorna, Lenny and Lynn; my father Rev Zachary Njeru and my mother Sarah Njeru whose prayers, efforts and support were not in vain.

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ABSTRACT

About 60% of the Kenyan population is comprised of youth. Agriculture provides over 80% of employment opportunities and livelihood to Kenyans. However, while youth unemployment is rising, youth engagement in agriculture is declining. Kenya's service and industrial sectors have not created enough jobs for the youthful labour force. Declining youth engagement in agriculture has implications on household and national food and nutritional security, unemployment and underemployment which may undermine the Government's efforts to ensure the 10% national economic growth through agriculture as envisioned in the country's Vision 2030. This study investigated the influence of selected factors on youth participation in agriculture in Kajiado North Sub-County focusing on youth 18-35 years old. The study used a Cross-Sectional Survey Design and was guided by five research objectives. Stratified random sampling was used to obtain a sample size of 397 respondents consisting of 192 male and 205 female youth. A census was used for agricultural and youth officers. The Sub-County was purposively sampled because of its potential for agricultural productivity and for having the highest number of educated unemployed youth compared to other Sub-Counties in the County. Data were collected using two questionnaires, one for youth and the other for agriculture and youth officers. The instrument's content validity was ascertained by a panel of five experts from the Department of Agricultural Education and Extension. A pilot test was conducted in Kajiado East Sub-County to determine the instrument's reliability coefficient, which was 0.86α and 0.80α for youth and for officers respectively. Both reliability coefficients were above the 0.70 threshold for acceptable reliability in educational research. Qualitative data was classified into common themes to identify the emerging trends and was analyzed by Pearson Product Moment Correlation Coefficient (PPMCC). Frequency tables and percentages were used to summarize the data. The results showed a statistically significant positive relationship between the selected factors: youth access to land ($r=0.345$, $p=0.01$), finances ($r=0.197$, $p=0.01$) and markets ($r=0.330$, $p=0.01$) and youth perception of agriculture ($r=0.675$ $p=0.01$) all of which influenced their participation in agriculture. The policy-makers, development practitioners and other actors in the Sub-County and in Kenya as a whole should develop a coherent and integrated initiative to address core challenges facing the youth when entering the agriculture sector. The initiative should improve youth perception of agriculture and increase their access to the agriculture sector, offers great opportunities for agricultural productivity as well as food and nutritional security and sustainability.

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LIST OF ABBREVIATIONS AND ACRONYMS

AEO	African Economic Outlook
AGRA	Alliance for a Green Revolution in Africa
AITC	Agriculture in the Classroom
ASALs	Arid and Semi-Arid Lands
ASDS	Agricultural Sector Development Strategy
CIA	Central Intelligence Agency
COMESA	Common Markets for Eastern and Southern Africa
FAO	Food and Agriculture Organization
FANRPAN	Food, Agriculture and Natural Resources Policy Analysis Network
FSPs	Financial Service Providers
GDP	Gross Domestic Product
GNA	Ghana News Agency
GOK	Government of Kenya
HAI	Help Age International
ICT	Information Communication Technology
IFAD	International Fund for Agricultural Development
ILO	International Labour Organization
IVR	Integrated Voice Recording
KNSMBYS	Kajiado North Sub-County Monthly Bulletin on Youths' Situation
MDGs	Millennium Development Goals
MIJARC	International Movement of Catholic Agricultural and Rural Youth
MFIs	Micro Finance Institutions
MoA	Ministry of Agriculture
NAADS	National Agricultural Advisory Services
NACOSTI	National Commission for Science Technology and Innovation
NYDP	National Youth Development Policy
OECD	Organization for Economic Cooperation and Development
PAFPNET	Pacific Agricultural and Forestry Policy Network
PMA	Plan for Modernization of Agriculture
PPMCC	Pearson Product Moment Correlation Coefficient

PRSPs	Poverty Reduction Strategy Papers
SACCOs	Savings and Credit Cooperative Organizations
SHGs	Self Help Groups
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
SRA	Strategy for Revitalizing Agriculture
SSA	Sub-Saharan Africa
STI	Science, Technology and Innovation
UIRI	Uganda Industrial Research Institute
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Program
UNDESA	United Nations, Department of Economic and Social Affairs
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN-HABITAT	United Nations Centre for Human Settlements
UNICEF	United Nations International Children Education Fund
USDA	United State Department of Agriculture
YIAP	Youth in Agriculture Program

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Agriculture's share of employment contribution in the world is 35% compared to 86.8% in Sub Saharan Africa (SSA), hence it is the basic sector of Africa's economy (Alliance for a Green Revolution in Africa (AGRA), 2015). Food and Agriculture Organization (FAO) (2015) and The World Bank (2014) revealed that the population in sub-Saharan Africa is predominantly rural and agriculture remains their main occupation. Unfortunately, agricultural growth in Sub-Saharan Africa still lags behind that of the population culminating in the continuous food importation; thus, poverty and food insecurity remain widespread in Sub-Saharan Africa (International Fund for Rural Development (IFAD), 2014). The World Bank (2014) observed that domestic food markets are not given the needed attention as a potential engine of agricultural growth since there is notable high national food import dependence, which is a major cause of food insecurity. Strengthening the agricultural sector to ensure food sustainability is therefore of significant importance in SSA (Poulton & Kanyinga, 2013).

Globally recognized as a significant producer of tea, coffee, horticultural products, dairy and meat products, Kenya's agricultural sector makes up 30% of total Gross Domestic Products (GDP), accounts for 65% of national exports earnings, caters for over 80% of employment opportunities and provides a livelihood to about 80% of the population (Central Intelligence Agency (CIA) World Facts, 2014). Kenya is a food deficit country which import up to 20% of its annual cereal requirements even in a good harvest implying that it continues to be plagued by high poverty linked to food insecurity (IFAD, 2014). A report by FAO (2014) revealed that poverty in Kenya is mainly a rural phenomenon, with 68% of the poor living in the rural areas. Rural households rely on agriculture for most of their income mainly from smallholder farming, which produces the majority of Kenya's agricultural output. Thus, growth in agriculture is a key factor for overall performance of the economy and poverty reduction (Poulton & Kanyinga, 2013). World Bank (2014) indicated an evidence that agriculture-led growth in Kenya is more than twice as effective in reducing poverty as growth led by industry, thus there is a need to boost smallholder productivity and develop non-farm activities in order to enhance better performance in agriculture.

Kenya government identified agriculture as a key sector of focus in its 2008 blueprint for economic and social development, followed by a revision of the Strategy for Revitalizing Agriculture (SRA) which was adopted to create improved agricultural legislation (GoK, 2013; Kangai, Mburu & Nyikal, 2011). In 2010 the SRA, originally intended to run from 2004-2014, was superseded by the Agricultural Sector Development Strategy 2010-2020 (ASDS) that foresees a food secure and prosperous nation by 2020 and aims to achieve a paradigm shift from subsistence to commercial agriculture. Emphasizing agricultural growth and smallholder productivity however as a pathway out of poverty raises a major concern, especially given the ageing farmer population that is averaged at 60 years; on whether Kenyan youth sufficiently participate in agriculture and on various underlying factors affecting their participation.

Noorani (2015) observed that there is insufficient youth participation in agriculture even though this class of people is the most productive of any society as they are in the prime of their lives physically and mentally. Purvis (2014) underscored agriculture as one of the foundation pillars of any society and argued that it can only function as such, if this insufficient youth participation is reversed. Thus, improving youth productivity in the agricultural sector and exploring effective livelihood diversification is imperative for any nation to develop (Purvis, 2014). Youth with dynamism and flexibility have the potential as agents of positive change and this should be ensured by enhancing their participation in agricultural development programs. In the most adverse and risky situations, youth have an extraordinary resilience and ability to cope (AGRA, 2015).

Youth are the driving force behind economic prosperity in future decades, only if policies and programs are in place to enhance their opportunities (Brooks, Amy, Goyal, & Zorya, 2013). According to Ghana News Agency (GNA) (2014), 60% of Africa's population resides in rural areas and the large majority of this population is made up of the youth. However, poor participation of youth in farming is a threat to the future of agriculture and the Continent's rural economic transformation. It is also evident from the Uganda National Bureau of Statistics (UNBS) (2012) that formal jobs are viewed as a solution to youth unemployment, although prospects of finding these kind of jobs is limited, as the number of youth entering the labour force far outweighs the number of jobs available in the formal wage sector. Agriculture is thus

likely to continue being a source of employment and livelihood especially for countries that heavily depend on it. However, Brooks, Zorya and Gautam (2012) reported that agriculture in Uganda is not a viable source of employment as it remain highly unattractive to the youth. Studies by Bezu and Holden (2014) and Noorani (2015) indicated that Ethiopia has not attracted young people to agriculture despite the country's serious food insecurity.

Available literature (FAO, 2014; ILO, 2013) in SSA suggests an ageing farming population with a mean of 55 years and high unemployment rate of youth of 75%.Youth unemployment rate in SSA is related to higher levels of poverty. It is estimated that 20.1% of youth in SSA who are employed earn only USD 1.25 or less per day. This level is referred to as the 'working poverty rate implying that most young people in SSA work by necessity rather than by choice. This situation can be changed by encouraging youth participation in agriculture (AGRA, 2015; ILO, 2013; OECD, 2015).

A report by CIA World Facts on Kenya (2014) show that Kenya's population is over 45 Million with young people 15-35 years accounting for 70% of the population. The increase in the number of youth is estimated to increase in the next 20 years (World Bank, 2015). While Kenya is a lower middle income economy with a Gross National Domestic Range of USD 1,034 to 4,125 per capita, the rate of urbanization is 4.34% annually with urban population in Kenya standing at 25.2%. Figure 1 shows a high youth unemployment and dependency ratio.

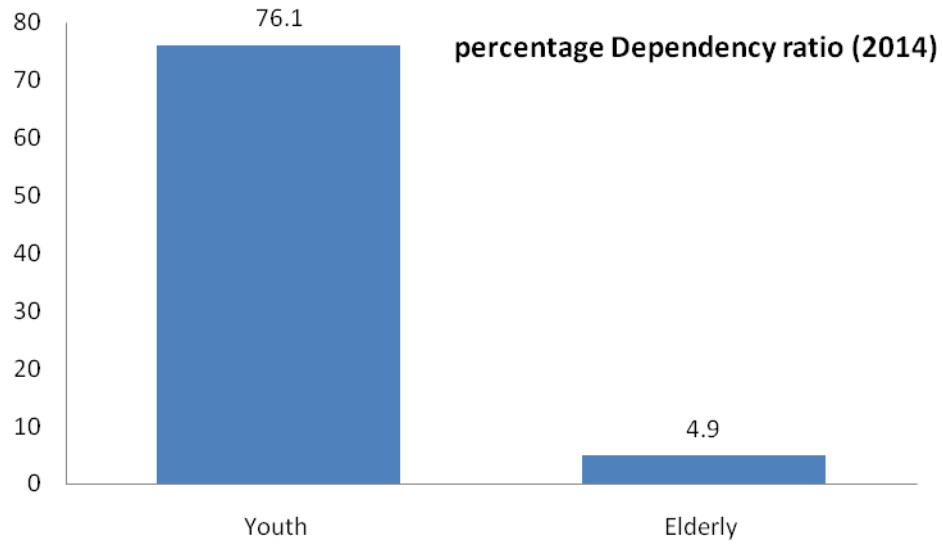

Figure 1: Kenya dependency ratio in 2014

Source: CIA World Facts on Kenya (2014)

Kenya's constitution defines youth (a phase between childhood and adulthood, characterized by processes of sexual maturation and growing social and economic autonomy from parents and caregivers) as individuals 18 to 35 years old (Noorani, 2015; KNBS, 2013). Brooks *et al.* (2013) argued that Kenya can tap on the youth as future farmers by employing policies that raise productivity, reduce real food prices, boost rural incomes, and create jobs. Policies should aim at making farming a viable commercial business in an effort to attract the youth towards agriculture (Anyidoho, 2012). While agriculture can certainly benefit from youthful energy, youth should see agriculture as profitable, competitive and dynamic activity. However, migration among the youth to urban centers has been on increase in a bid to achieve a standard of living not associated with agriculture. According to Swarts and Aliber (2013), most of the migrants are young adults, usually shortly after leaving or completing secondary school with employment as the primary motivation.

Bezu and Holden (2014) showed that non-agricultural careers are more stable and more remunerative in view of the factors that influence youth in successfully participating in agriculture. Leavy and Hossain (2014) indicated that youth's interest in farming is likely to be positively related to their ability to gain access to the resources needed to farm. In the Kenyan context, access to land, finances as well as viable markets among others are likely factors

limiting youth participation in farming (Noorani, 2015). Proctor and Lucchesi (2012) revealed that with perennial crops such as tea, coffee and cotton, farmers in Kenya are generally in their 50-60 years, they own land and the title deeds, and are unlikely to relinquish control of the land except through inheritance.

Youth access to finances is likely to influence their participation in agriculture. Studies by IFAD (2014) and United Nations Capital Development Fund (UNCDP) (2012) indicated that young people make up a smaller proportion of overall formal Financial Service Providers (FSPs) clientele than adults. Accessing viable markets for agricultural products may influence youth participation in agriculture. Leavy and Hossain (2014) showed that many young people possess limited experience and knowledge how markets work; they often lack business management and entrepreneurial skills. Youth poor perceptions of agriculture too are likely to influence their participation in agriculture since farming is perceived to be a difficult life (Noorani, 2015).

The study was carried out in Kajiado North Sub-County of Kajiado County. It is situated north-west of Nairobi city, covers an area of 11,754.9 km.^{2} and comprises of four Wards namely Ngong, Ongata Rongai, Olorua and Ngaimurunya. It lies in an attitude of about 1600 m above sea level. The rainfall pattern is bi-modal with two distinct rain seasons. Long rains occur between March and June while the short rains fall between October and December. Rainfall quantity received varies with altitude averaging to about 1,067.5 mm annually and ranging from 640 mm in some areas to as high as 1,495 mm per annum (Amwata, 2013). Temperatures range from a minimum of 12^{o}C in July to a maximum of 30^{o}C in March with a mean of 21^{o}C. Soils are mainly loamy though alluvial soils (silts) are found along seasonal river valleys while some parts in Ongata Rongai Ward have black cotton soils which become water-logged during the rainy seasons (Amwata, 2013). Total population projection in the area was 300,529 persons with 100,525 youth comprising of 49,269 males and 51, 256 females (KNBS, 2009) (Table 1)

Table 1

Youth Population Projection in Kajiado North Sub-County

Ward	Male youth	Female youth	Total Population
Ongata Rongai	13,834	14,836	76,144
Ngong	13,448	13,820	80,932
Olorua	11,700	11,800	73,932
Ngaimurunya	10,287	10,800	69,521
Total	**49,269**	**51,256**	**300,529**

Source: KNBS, Population and Housing Census, 2009

Over 40% of the youth in the Sub-County had formal education beyond primary but about 70% lacked formal jobs (Kajiado North Sub-County Monthly Bulletin on Youth's Situation) (KNSMBYS), 2014). About 80% of the population engaged in various subsistence agricultural value chain activities. The Sub-County was selected for study because it has potential for agricultural productivity with semi-arid area of only 8% (MoA, 2013). It also had a large number of educated unemployed youth and its close proximity to Nairobi city shows a reliable outlet market for agricultural products.

According to MoA (2013), labour in the agricultural sector in the Sub-County was dominated by older farmers comprising 62.5%. Agriculture was not embraced by the youth who perceived it as an occupation for the old, illiterate and the poor. The misconception led to rural outmigration among the youth to the nearest urban centers to seek for better livelihood. Majority of the youth who remained contributed to family labour with little income accruing to them thus, they hardily practiced agribusiness (KNSMBYS, 2014). Many youth who accessed youth fund did not invest it in agriculture but in small micro-enterprises that were quick in generating easy and cheap cash (MOA, 2013). Youth who practiced agriculture relied on traditional and labour intensive production techniques; thus they concentrated on a narrow range of agricultural commodities mainly staple crops like maize, other cereals and few horticultural produce (MoA, 2013).

Low investment in infrastructure such as roads, hubs for produce consolidation, cooler houses and processing plants necessary for evolving of efficient value chains is likely to have made the

sector unattractive to the youth (Swarts & Aliber, 2013). A report by FAO (2015) indicated that increased and sustained productivity in agriculture ensures food and nutritional security and contributes immensely to the health and well-being of the people. The contribution of the youth in this regard is paramount but is not well investigated in the study area. It is against this background that the study sought to determine the influence of selected factors on youth participation in agriculture in Kajiado North Sub-County.

1.2 Statement of the Problem

About 60% of Kenya's 45 million people are youth aged15-35 years old who constitute 45% of the labour force. Some of these young people work mainly in agriculture, which supports over 75% of the population and contributes 30% to the GDP. Young people were expected to comprise 75% of the Kenyan population by 2015. This tremendous youth population increase, rising unemployment and therefore high dependence ratio poses a great danger to Kenya's economy due to inflation and rising cost of labour, raw materials, food, fuel and other basic commodities. Despite Government's efforts to make agriculture more attractive and profitable to the youth, their participation in the sector is declining as they increasingly migrate to cities in search of remunerative and decent employment. Furthermore, although the youth hold Kenya's future due to their enormous energy and aspirations, most of them in the study area considered agriculture to be less attractive compared to other professions. Reducing youth unemployment through participation in agriculture is a challenge in Kenya since the average age of a farmer is about 60 years and at this age bracket, farmers are less venturous, averse to risks and hesitant to adapt innovations making it difficult to transform agriculture from subsistence to income generating activities. Although youth engagement in agriculture could greatly reduce youth unemployment in the country, 70% youth in the study area were still jobless. There are several factors that influence youth participation in agriculture; for instance access to land, finances, viable markets, gender issues and youth perceptions of agriculture among others. However, information on these factors in the Sub-County were poorly understood and documented, which make it difficult for Kenyan leaders and their development partners to formulate innovative strategies for making agriculture attractive to the youth, as a way of ensuring youth self-reliance, food security, faster economic growth and reducing youth unemployment in the Sub-County.

This study has provided the missing information, which can be used to make informed decision on how to improve youth participation in agriculture.

1.3 Purpose of the Study

The purpose of the study was to determine the influence of selected factors on youth participation in agriculture and to help Kenyan leaders and their development partners formulate innovative strategies for making agriculture attractive to the youth in the Sub-County in Kajiado North Sub-County.

1.4 Objectives of the Study

The study objectives were to:-

i. Determine the influence of youth access to land on their participation in agriculture in Kajiado North Sub-County.
ii. Assess the influence of youth access to finances on their participation in agriculture in Kajiado North Sub-County.
iii. Examine the influence of youth access to market on their participation in agriculture in Kajiado North Sub-County.
iv. Determine the significant difference between male and female youth in their level of participation in agriculture in Kajido North Sub-County.
v. Establish how youth perceptions of agriculture influence their participation in agriculture in Kajiado North Sub-County.

1.5 Research Hypotheses

$Ho_{1:}$ There is no statistically significant relationship between youth access to land and their participation in agriculture in Kajiado North Sub-County.

$Ho_{2:}$ There is no statistically significant relationship between youth access to finances and their participation in agriculture in Kajiado North Sub-County.

$Ho_{3:}$ There is no statistically significant relationship between youth access to market for agricultural products and their participation in agriculture in Kajiado North Sub-County.

$Ho_{4:}$ There is no statistically significant difference between male and female youth in their level of participation in agriculture in Kajido North Sub-County.

$Ho_{5:}$ There is no statistically significant relationship between youth perceptions towards agriculture and their participation in agriculture in Kajiado North Sub-County.

1.6 Significance of the Study

Agriculture as one of the foundation pillars of any society. In Kenya for instance, the sector makes up 30% of total GDP, accounts for 65% of national exports earnings, and caters for over 80% of employment opportunities, while providing a livelihood to about 80% of the population. However, there is insufficient youth participation in agriculture even though this class of people is the most productive as they are in the prime of their lives physically and mentally. Thus improving youth productivity in agriculture and is imperative for any nation to develop. The findings of the study would help the government, policy makers, non-governmental organizations and other actors in enhancing youth participation in agricultural production and by extension improving food availability for the rapidly growing population. The findings may describe the opportunities that may encourage young farmers to replace the ageing ones with less energy for agricultural activities. Youth are the ideal catalysts for change, thus with their greater propensity and willingness to adopt new technologies and innovations, the findings would change the way agriculture is practiced and perceived. This would increase youth employment, particularly in the rural areas. The information would be useful to the government in achieving MDG one aimed at ensuring adequate food and over all poverty reduction as well as enhancing economic and social development through agricultural productivity as outlined in Kenya Vision 2030. Further, the findings would make the youth aware of alternatives for the engagement which may lead to reduced youth unemployment as well as reduced crimes and other social problems among the youth.

1.7 Scope of the Study

The study focused on the influence of selected factors on youth participation in agriculture in Kajiado North Sub-County. These include youth access to land, finances and viable markets for agricultural products, youth perception of agriculture as well as the difference between the number of male and female youth in their level of participation in agriculture.

1.8 Limitation of the Study

The study was limited to Kajiado North Sub-County of Kajiado County. The generalization will be confined to that Sub-County. The study envisioned challenges related to time needed to develop rapport with participants and the informants. Given the number of youth and officers who participated in the study, it took time and resources in terms of finances. Similarly, the information provided based on participant's memory resulting in much time spent in recalling some of the information, required through perseverance. There were a few cases of illiteracy that challenged the research process.

1.9 Assumptions of the Study

The researcher made the following assumptions:-

i. That the responses from the selected youth would give a genuine indication of the factors influencing their participation in agriculture in Kajiado North Sub-County.
ii. That the sampled respondents would be free and frank in commenting on factors influencing youth participation in agriculture in Kajiado North Sub-County.

1.10 Definitions of Key Terms

Access to Land: The right to use land either through ownership, inheritance or leasing (Collins, 2014). The same will be adopted for this research study.

Access to Market: Extent to which a consumer or a user can obtain a good or service at the time it is needed (Web Finance, 2014). Access to market in this proposed study will mean the ability of the youth to acquire customers for their agricultural produce and services.

Agriculture as a Business: A business that earns most or all of its revenue from agriculture. It may be farming, processing, manufacturing, packaging and distribution of agricultural produce (Web Finance, 2014). In this study this will imply earning income from agricultural related activities.

Background in Agriculture: Having previous experience in the science, art, or occupation concerned with cultivation of land, raising crops and feeding, breeding and raising livestock (Dictionary. com, 2014).

Food Security: A situation that exists when people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2012). It is used in this study to show that agriculture contributes to food security as addressed by the United Nations Millennium Development Goal One (MDG1).

Gender: The fact of being male or female. Used in the study to explain that there could be a difference between males and females youth in their level of participation in agriculture.

Influence: The power or capacity of persons or things to be a compelling force on or produce effect on the action, behavior or opinions of others (Dictionary. com, 2014). This same meaning will be adopted in this study.

Motivate: To make somebody want to do something. The term is defined by many scholars as; the psychological process that gives behavior purpose and direction (Wood, Gardner, & Harms, 2015); a predisposition to behave in a purposive manner to achieve specific, unmet needs (Dickinson & Boakes, 2014); an internal drive to satisfy an unsatisfied need (Higgins, 1994); and the will to achieve (Kaplan, Katz, & Flum, 2012). For this research study, motivation is operationally defined as the inner force that can drive the youth to participate actively in agriculture geared to promote economic development.

Opportunity: Period of time when the circumstances are right for doing something. The term is operationalized in the study to show the opportunities which exist in agriculture that the youth can make use of in order to succeed in agriculture.

Participation: Act of taking part in an activity or event (The Free Dictionary, 2014). It is used in the context to explain how the youth can be encouraged to take part in agricultural activities. This is confirmed by FAO (2013) which explained the role of USDA in bringing younger generations into agriculture by beginning fund programs to proliferate youth involvement.

Perception: A predisposition or a tendency to respond positively or negatively towards a certain idea, object, person or a situation (Business Dictionary, 2014). In this research study the same meaning will be adopted.

Relationship: Way in which two or more things are connected (The Free Dictionary, 2014). This is operationalized in the study to imply that for the selected factors to influence youth participation in agriculture, they have either positive or negative relationships with the youth participation in agricultural activities. This also shows that influence can be measured in terms of relationships.

Youth: Are those persons between the ages of 15 and 24, without prejudice to other definitions by member States (United Nations, 2012). In the context, youth will mean persons between 18-35 years and this implies the age category of the targeted group for the proposed study.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter is organized into:- Youth involvement in rural development, importance of agriculture to the economic development of a nation, youths' participation in agriculture in different parts of the world, factors that inhibit youth participation in agriculture, existing and emerging opportunities in agriculture. The chapter concludes with a presentation of the theoretical and conceptual framework of the study.

2.2 Youth Involvement in Rural Development

The definition of youth in Africa varies from society, culture, and tribe. It also varies across time, space, as well as within societies. Ghana, Tanzania and South Africa define youth as those between the ages of 15-35 years; Nigeria and Swaziland define it as those between 12-30 years while Botswana and Mauritius define youth as those between 14-25 years (AGRA, 2015). International organizations such as the United Nations and the World Bank define youth as those aged 15-24 years (Maiga, Christiaensen & Palacios-Lopez, 2015). In Kenya, constitutional definition suggests that youth fall within 18-35 years of age and this has always been the general definition of youth (KNBS, 2009; Noorani, 2015).

The involvement of youth in development, decision-making and in the implementation of programs is critical to economic development of rural areas and a nation at large. Rural development is facilitated by the ability of local people to mobilize resources aimed at addressing the local needs. Youth are in a position to be among the stable and long-term contributors to this process as they represent a vast and often untapped resource for immediate and long-term community development (Chibuzor *et al.,* 2014). Program and policy planners should understand the role and impact of the youth in the community development process. Rural community development is a very topical issue in many parts of the world, especially among the developing countries. According to Adesiji, Omotesho, Komolafe, Oni and Adereti (2014), the rural areas are characterized by abject poverty, malnutrition, diseases, illiteracy and poor health facilities among others. Thus, policies and strategies should be formulated to redress these situations and create room to improve the standard of living of the people. For instance,

organization of the rural youth in order to enhance their participation in agricultural programs, goals and objectives is relevant and of paramount importance in enabling community development.

Talò, Mannarini and Rochira (2014) argued that it is necessary to scale up active collaboration between the youth and adults for the long-term success of development efforts. Integrating the youth into committees with adults as mentors enable them to build leadership skills and personal characteristics necessary for future adult involvement. A report by ILO (2013) confirmed that adults should partner with youth to develop the capacity to serve in organizations and become community leaders. Adults need to recognize and develop their own existing capacities, motivations and barriers to partnering with youth (UN, 2012). Once existing capacities are determined, adult outreach to the youth through schools, youth organizations and youth groups can be strengthened in order to increase community attachment (Ooko, 2012).

Youth provide new ideas and voices that stimulate enthusiasm and investment in community structures. Elders need to involve youth in all levels of community and rural development and respect their invaluable contribution to society. Youth should be empowered to become full partners, thereby allowing them to establish a vested interest in long-term participation and contribution to their community (AGRA, 2015). In schools, student government groups, school entrepreneurship and business education organizations that promote local community development by teaching life skills, fiscal responsibility and leadership should be encouraged (UN, 2012).

2.3 Importance of Agriculture to the Economic Development of a Nation

About two thirds of the poor world populations are mainly concentrated in rural areas which are predominantly agricultural-oriented (World Bank, 2014). Agriculture sustains food and nutritional security and constitutes the main source of employment of the majority, thus contributing to other aspects of economic development (Aksoy, 2012; FAO, 2013). Since almost all rural households depends on agriculture, and given the large contribution of the sector to the overall economy, one might expect agriculture to be a key component of growth and development (Yakubu & Akanegbum, 2015). However, whereas agriculture-led growths play an

important role in reducing poverty and transforming the economies of many Asian and Latin American countries, the same has not occurred in Africa.

Most African countries have not yet met the criteria for a successful agricultural evolution, and factor productivity in Africa's agriculture lags far behind (Booth & Golooba-Mutebi, 2014). This failure has led to growing concerns in the international development community about the relevance of agriculture to growth and poverty reduction. Although parts of Africa are disadvantaged by unfavorable natural and geographic conditions, the poor performance of agriculture has often been due to under investment in physical, institutional and human capital (FAO, 2013).

According to FAO (2013), much effort has been put in raising agricultural productivity since it affect the rest of the economy, especially in the early stages of economic transformation (Yakubu & Akanegbu 2015). Through its linkages to the rest of the economy, agriculture can generate patterns of development that are employment intensive and favorable for the poor. Alston and Pardey (2014) and World Bank (2014) argued that though agriculture is generally an important component for Africa's development, its ability to generate growth and reduce poverty varies across and within countries as well as across different agricultural subsectors.

In Kenya, the sector establishes the industrialization framework through supplying raw materials for industries, provides an important platform for expansion of employment, income generation and food security. About 65% of the Kenyan population lives in rural areas, with 80% of rural households depending on agriculture as the main livelihood pillar (Kangai *et al.*, 2011). This implies that the agriculture sector holds an important key to poverty reduction through increased productivity, value addition, improved marketing and linkages to other sectors.

Agriculture is also a market for industrial goods and promotes various off-farm activities such as transportation and agricultural-oriented research programs (Dorosh & Thurlow, 2015). Agriculture supply food constantly thus, saves the country funds that would have rather been used in the importing of food from other countries. The sector as such ensures surplus money to invest in other areas of the economy such as social amenities, roads, hospitals and schools.

Through all this multiplier effects Poulton and Kanyinga (2014) underscored the fact that agriculture is perceived to be an engine of economic growth and development in Kenya.

2.4 Youth Participation in Agriculture

Underemployment is more prevalent among youth than adults and is more prevalent in rural than urban areas (ILO, 2014). Agriculture should be made very interesting so that youth can take it up for a livelihood (Noorani, 2015). In America, the United States Department of Agriculture (USDA) enhances rural and community development by engaging in a variety of programs that support small-scale farmers with the aim of providing leadership on agriculture, natural resources, and related issues based on sound public policy (Brooks *et al.,* 2013). This is through assistance with infrastructure, finances, rural energy loans and outreach programs mainly for socially disadvantaged farmers with limited resources (Future Agricultures Consortium, 2012). USDA recognizes the need to bring younger generations into agriculture, thus funds programs to proliferate youth involvement (Proctor & Lucchesi, 2012). Agriculture in the Classroom (AITC) program is an example that help students gain a greater awareness of the role of agriculture in the economy and society as a whole (FAO, 2013).

Africa is changing rapidly with changes impacting many sectors including agriculture thus, new technologies, products, markets and business possibilities are emerging (FAO, 2014). It is critical for youth to keep up with these rapid changes. Despite the many opportunities in agriculture, youth are generally reluctant to meaningfully engage in agriculture as a source of their livelihoods preferring to pursue ever-elusive white collar jobs in urban areas (Noorani, 2015). Youth possess unique capabilities (dynamism, strength, adventure, ambition), and these are assets for agriculture. They represent the most active segment of the population as well as the engine that do most productive work of the society (World Bank, 2014). The youth present an opportunity for a sustained effort to participate in agricultural development programs, as they possess greater potential and capacity to drive positive change, thus, African governments should introduce policies to help their engagement in agriculture.

In Nigeria, agriculture is the main thrust of national survival, employment, food and foreign exchange earnings (Anyidoho, 2012). Youth in agriculture are a very important structure for land

and agrarian reform; which go a long way to promoting their interest in agriculture (Sumberg *et al.*, 2012). Though youth have desirable qualities that can promote agriculture, most of them have strong apathy towards it (Anyidoho, 2012). There is therefore mass unemployment and lack of sustainable livelihood activities among the youth (World Bank, 2013). Larger youth population represents the link between the present and the future as well as a reservoir of labour, thus development of agriculture depends on them. Nigeria introduced various agricultural development scheme programs with the aim of up-scaling youth participation and boosting food production and farmer's income through provision of agricultural infrastructure, inputs and effective extension work (Future Agricultures Consortium, 2012).

In East Africa, the Tanzanian National Youth Development Policy (NYDP) was developed in 1996 to train the youth in modern agriculture and livestock production. Gemma, Swaibu and Musa (2013) underscored the attempt by the Ugandan Government to stimulate youth's interest in agricultural production and processing through targeted interventions that included the National Agricultural Advisory Services (NAADS) and the Plan for Modernization of Agriculture (PMA). Gemma *et al.* (2013) further confirmed that NAADS was mandated to develop a demand driven, farmer-led agricultural service delivery system targeting the poor subsistence farmers with emphasis to women, youth and people living with disabilities. Yet, the Uganda Industrial Research Institute (UIRI) was set up with special approaches to cater for youth engaged in agriculture activities (Brooks *et al.*, 2013; FAO, 2014).

Further Literature points to the fact that agriculture remains a key sector where the surplus unemployed youthful labour force can be employed in Kenya (Future Agricultures Consortium, 2012). Agriculture currently plays a major role in the lives of the many young people and it is projected to remain so even in the next few decades (World Bank, 2014). With improved agricultural productivity, more and better jobs are likely to be created. Not only does a modern and productive agricultural sector have the potential to overcome food insecurity, it can offer employment opportunities to young people (Dalla Valle, 2012).

The ever increasing demand for agricultural products both regionally and internationally creates an opportunity for the youth to actively engage in agriculture and earn income from agricultural

activities. Furthermore, most African countries are producing below the potential yields implying that more improvements are possible with increased labour and land productivity (Brooks *et al.*, 2012). Despite the recognition of the potential of the agriculture sector internationally and nationally, literature points to the decline of youth interest and engagement in farming. Yet, the young people should be at the fore front of revitalizing agriculture since they tend to be more innovative (Vale 2012; Noorani, 2015). Indeed, if their contribution is matched with the right skills and capital, the much needed youth dividend can be realized.

Gemma *et al.* (2013) revealed that specific factors affecting youth employment in agriculture have received little research attention nationally and the empirical studies to explain the relative exodus of Kenyan youth from the agricultural sector are scanty. However, many efforts by the Kenya government are underway in bid to lure youth into the sector. (ASDS) for instance is a strategy where the government commits to involve young people by making agriculture more attractive to them (GoK, 2013). Through transforming agriculture from subsistence to commercial farming, youth are likely to be motivated to engage in farming. Some corporation like the Agriculture Finance Corporation (AFC) has a micro-credit facility known as *Stawisha* (Kiswahili for sustain) aimed at young people. It gives loans in the range of Kshs. 5,000-1 million and allows flexible repayment (GoK, 2013). The same corporation has also started *Vuna* (Kiswahili for harvest) account that is designed for groups and individuals in agricultural business, hence an additional opportunity for the youth.

Youth Enterprise Development Fund (YEDF) was established in 2006 by Kenyan government as an initiative to address unemployment among the youth. The main objectives of YEDF were to provide loans to youth enterprises, attract and facilitate investment for youth enterprises, market products and services for youth enterprises, provide business development services and employment for the youth (Jin & Jayne, 2013). The YEDF also has the 'Agri-Vijana Loan', targeting young people keen on undertaking agribusiness. Under this scheme, youth groups receive appropriate training and equipment necessary to launch profitable farming enterprises (GOK, 2013). The 'Uwezo fund' is a youth and women's fund with an allocation of KES 6 billion aimed to expand access to finance through grants and credit to promote youth and women

businesses and enterprises at the constituency level, thereby enhancing economic growth towards the realization of the goals of Vision 2030 (Kanali & Mutua, 2013).

2.5 Factors that Inhibit Youth Participation in Agriculture

There are several factors that inhibit the youth from participating in agriculture as outlined as follows:-

2.5.1 Access to Land

Access to land is important for young people trying to earn a livelihood in agriculture. Proctor and Lucchesi (2012) observed that access to land contribute to household food security and act as a means for employment creation. It serves as security and collateral for accessing credit, marks youth's identity, upgrades their status, and often enables participation in community decision making organs and producer's organizations (MIJARC, IFAD & FAO, 2012).

Youth from all over the world see access to land as fundamental for entering farming, yet they face greater challenges than adults (Purvis, 2014). Moreover, the challenges faced by young men in accessing land are multiplied for young women as women constitute only a small proportion of all farm holders (FAO, 2014). Although the challenges faced by young people are poorly documented and vary between regions and countries (and even within countries), it is possible to identify certain recurring issues. It is well articulated that mechanism for accessing land is through inheritance and since transfer often happens at a later age, youth have to wait many years before inheriting their share of the family land (AGRA, 2015; MIJARC, IFAD & FAO, 2012).

It is rare to encounter land transfer in developing countries, because land ownership is perceived as adult privileges hence, youth are expected to wait until adulthood to own land (FAO, 2014). In many parts of Latin America and the Pacific however, traditions prescribes that one can only own land once they have established a family of their own, while in many parts of Africa, it is taboo for young people to access the family land while the parents are still alive (UN-HABITAT, 2011). While waiting for their inheritance, many youth enjoy subsidiary land rights and work on the family land for little or no remuneration, a situation that is very dominant in Kenya

particularly in Kajiado North sub-County (FAO, 2013; MoA, 2013). In areas where land is owned by the community, decisions on how to use this land are generally taken by the elderly, often ignoring youth interests (Njeru & Gichimu, 2014).

Munang and Mwaura (2015) reported that women in many developing countries do not inherit land and only obtain user rights via a male relative. Several countries have reformed their formal law system so that women are granted equal property and inheritance rights, but the enforcement of these formal laws are challenging because parallel customary law systems might exist denying equal land access for women (White 2012; FAO, 2013). It is difficult for young women to request enforcement of formal laws because they often lack the required knowledge, financial resources and confidence to protest against social norms and traditions (FAO, 2013; World Bank, 2014).

Proctor and Lucchesi (2012) observed that poverty in developing countries forces parents to sell their land to outsiders, excluding younger community members from land access. Large-scale land deals are particularly unfair towards young people, given that they are often not consulted on agreements which may bar them and the next generation's access to land (White, 2012; Mwaura, 2015). The world population is projected to grow from 6.9 billion in mid-2011 to 9.3 billion in 2050. According to World Bank (2015), the size of rural population is expected to continue to grow until 2020. This population growth has resulted in the ongoing sub-division of land and in highly fragmented parcels therefore, youth especially those with many siblings end up inheriting just a very small piece.

White (2012) argued that it is unrealistic to expect youth to purchase land through acquired savings, given high rates of youth unemployment, low wages for most rural youth and high land prices. In developing countries it is an even greater challenge for young women to obtain capital to buy land as they often do unremunerated household work or subsist on low wages (Mwaura, 2015). In addition, loans to buy land are not easily accessible for rural youth, land lease and rental are currently being explored to facilitate youth's access to land. Furthermore, youth often lack knowledge on the existing land tenure systems as these systems can be a highly complex set of overlapping rules, laws, customs and traditions (Proctor & Lucchesi, 2012). Youth's land

rights are frequently not included in policy and legal documents and if they are included, there are no concrete implementation mechanisms (FAO, 2013; Munang & Mwaura, 2015). Young people are not involved in the drafting of policies and laws related to land and find these frameworks unresponsive to their needs.

2.5.2 Access to Markets

Access to market for farmers means the ability to acquire farm inputs and farm services and ability to deliver agricultural produce to buyers (IFAD, 2014). Markets provide the opportunity to generate income, contributing to a reduction in poverty and hunger in developing countries. Markets also drive production to meet consumer demand in terms of quantity and quality (Van Schalkwyk, Groenewald, Fraser Obi & Van Tilburg, 2012). Sustainable access to markets is required to guarantee smallholders an increase in income and to lift them out of poverty. Since rural youth are the future of the sector, MIJARC, IFAD and FAO (2012) indicated that their access to markets is vital for boosting productivity, increasing incomes and reducing poverty and hunger for the years to come. Nevertheless, (AGRA, 2015) observed that young people face a number of challenges while trying to access markets particularly in developing countries. Leavy and Hossain (2014) showed that many young people lack experience and knowledge of how markets work; they often lack business, management and entrepreneurial skills, and like many other smallholder farmers, they lack information about prices.

Rural markets have typically large numbers of producers/consumers and a few market intermediaries often rich businessmen, who influence the government while drafting market policies (Leavy & Hossain, 2014). Many times, youth are not sufficiently organized and lack experience to counter these strong market actors (Munang & Mwaura, 2015). Young rural women face additional difficulties in accessing markets since in many communities their freedom of movement is restricted because of social and cultural prescriptions (FAO, 2013). A major characteristic feature of Kenya's agriculture is the dominance of primary production with little on-farm and off-farm processing of agricultural produce with little efforts to improve the quality and shelf life of produce, thus affecting effective marketing (IFAD, 2014). This translates to low prices, fewer job opportunities and eventually low incomes for young farmers and loss of a substantial part of their income to intermediaries and processors (Poulton & Kanyinga, 2013).

The situation is more hopeless when dealing with perishable produce that are mainly dominated by youth. Brooks *et al.* (2013) confirmed value addition as a key to driving Kenyan economic growth towards attainment of vision 2030.

Inadequate infrastructure is also noted to act as an impediment to youth access to available markets for agricultural commodities. Poulton & Kanyinga (2013) argued that infrastructure is a variety of hardware investments that are often beyond the capacity of a single farmer particularly the youth. They include rural roads, electricity, cold storage facilities, irrigation and water storage and processing technologies (Brooks *et al.*, 2013). The absence of these types of infrastructure services reduces the young farmer's ability to increase production, reduce risks and compete effectively in the market. This is dominant in the study area where low investment in roads, hubs for produce consolidation, cooler houses and processing plants necessary for evolving of efficient value chains has made the sector unattractive to the youth (MOA, 2013).

Multiple taxes could also influence youth access to market for agricultural products. Farmers are subjected to multiple taxes from local authorities and Government departments as they transport and market their products (FAO, 2013). This has contributed to reduced net farm income and created distortions in marketing structures thus discouraging the youth.

2.5.3 Access to Finances

Just like access to land, access to financial services such as savings and loans is fundamental in starting any agricultural activity (Leavy & Hossain 2014). Atkinson and Messy (2012) observed that youth could access land, but they require finance to cover the costs of planting and harvesting, as well as investments in improved productive capacities. According to (IFAD 2012) payment and trading services, such as mobile banking and internet trading, are important tools for selling their produce. Moreover, the agricultural sector is often exposed to adverse natural events that negatively affect production thus, access to insurance schemes is crucial for young farmers (Dalla Valle, 2012). In order to meet these needs, financial service providers (FSPs) like formal banking systems (commercial and development banks), semiformal banking systems (Savings and Credit Cooperative Organizations (SACCOs) and informal banking systems not

officially registered at national level for instance self-help groups (SHGs), village savings and loan associations (VSLAs) can play a very crucial role (Dalla Valle, 2012; IFAD, 2014).

Young people make up a smaller proportion of overall formal FSPs clientele than their overall population demographics would suggest. Providing financial services in rural areas is typically considered high risk due to the unique characteristics of agriculture such as dependence on natural resources and seasonality, long production cycles and vulnerability to variable weather (Leavy & Hossain, 2014). Furthermore, scattered rural populations greatly increase the operating costs of financial institutions and there is much to be done to improve the availability of farm credit to young people in agriculture (Dalla Valle, 2012).

In both developed and developing countries, most FSPs provide few savings or insurance services for youth, focusing more on credit, despite the fact that savings remain extremely important to youth for building up assets for investments and insurance (MIJARC, IFAD & FAO, 2012). In many countries, laws and regulations exclude people below the age of 18 from accessing any financial products and few, if any financial products, are specifically tailored to youth (UNDP, 2012). Research shows that while the majority of micro-finance institutions (MFIs) serve young people above the age of 18, they are rarely recognized as a specific client group and few products are developed to meet their unique needs (Leavy & Hossain 2014; Shrader, Kamal, Darmono & Johnston, 2006).

Many FSPs ask for loan guarantees, such as formal land titles, steady employment, personal guarantors, solidarity group guarantees or more informal guarantees like motorcycles, furniture before releasing funds to youth, all assets that youth do not possess (UNCDF, 2012; Leavy & Hossain, 2014). Furthermore, youth are perceived as a high-risk category because of their limited financial capabilities, often due to their lack of experience. Despite growing recognition of the importance of inclusive finance, there are few innovative models on the reduction of risk when lending to youth (Atkinson & Messy, 2012). Agro-processing companies, input suppliers and traders often supply credit for inputs or farmer insurance but they often charge very high interest rates making many youth fear repayment process (IFAD, 2014).

Information about financial services in rural areas is mostly provided through informal channels like word of mouth and the radio. According to UNCDF (2012), ICTs offers a wide range of products for accessing financial services, such as e-banking, e-business and e-trade through mobile banking and that a third of the world's population mainly urban youth uses the internet. Many rural areas still lack internet connections particularly in developing countries which act as a drawback for youth wishing to stay in rural areas (Dalla Valle, 2012). Agricultural insurance could support young farmers in developing better agricultural risk management strategies for their farms thus, appropriate policies should be drafted and existing services revised to reach a younger clientele (Valle, 2012).

Atkinson and Messy (2012) observed that collective action is lacking among rural youth and they are rarely organized in self-help groups that could provide the means of generating savings and improving the borrowing power of both individual members and the group. In many developing countries, young rural women face additional constraints in accessing financial services due to their higher rates of illiteracy, restricted liberty of action and lack of consent of family members, much of which can be traced to gender discrimination embedded in societal norms (AGRA, 2015)

2.5.4 Poor Perception of Agriculture

A key impediment to the involvement of youth in agriculture has been the lack of national efforts to make agriculture attractive to them (World Bank, 2014). Lack of respect towards farmers and lack of role models among young farmers appear as likely reasons for youth not engaging in agriculture. A study by Ferguson (2011) indicated that girls in India are not interested in marrying farmers which stimulates young men to move away from farming and Asian media play a role in demonizing agriculture and rural areas. Media promotes a western and urban lifestyle and thus negatively shapes rural youth's aspirations related to agriculture (Ferguson, 2011).

Uganda's agriculture is unattractive to the youth partly because it has been used in schools in the administration of punishments to errant and in-disciplined children **(**Agena, 2011). Those under detention in prisons have many times been hired to work on farms with the head of prisoners

cruelly whipping the lazy and weak to match the pace of those who are energetic working ahead of them (Brooks *et al.,* 2012). These cases portray agricultural-related activities as deserving for wrongdoers hence limiting the youth enthusiasm to pursue livelihoods in agriculture. Consequently, possibilities for agriculture-led growth are jeopardized and it is left in the hands of the ageing rural population (Proctor & Lucchesi, 2012).

African Children from rural areas have less access to education than their urban peers. Apart from lack of educational infrastructure in rural areas, finding good and motivated teachers in rural areas may be a big challenge especially in developing countries (UNICEF, 2013). Moving children up from primary to secondary school is not self-evident in many of these countries. In India for instance, some parents are hesitant in investing in secondary education for their daughters as they rather invest in their dowry (Geest, 2010). Not only do rural youth have less access to education, but the education in rural areas is often of less quality and not relevant to rural lives (UNICEF, 2013). African agricultural curricula have disappeared in schools while in Asia it is outdated and inadequate. Therefore, there is a need to include agriculture in the school curriculum from primary school level and that teachers need instill a positive image towards agriculture by explaining to their students the many aspects of agriculture; its importance to everyday life; and its career opportunities (Njeru, Gichimu, Lopokoiyit & Mwangi, 2015).

In most parts of the world, agriculture is seen as a less worthwhile subject, last resort for under-achievers and a dirty job for urban students, hence influencing rural youth aspirations in a negative way (Brooks *et al.,* 2012). Training programs for vocational courses in sub-Saharan Africa and the Arab states mostly reach young men and do not cater to the needs of young women largely due to restricted mobility, young motherhood and limited schooling levels (UNESCO, 2012). Higher education is equally essential for the development of the agriculture thus, creation of high quality universities that focus on agricultural research and establishing linkages with the farming community is very pertinent (Paisley, 2012). United Nations Development Program (UNDP) (2013) confirmed that universities need to be connected with farming communities in order to broaden knowledge, increase research and enhance local problem-solving skills. Unfortunately, in most developing countries, such systems are rarely instituted and access to tertiary agricultural education is low (FAO, 2013; World Bank, 2014).

2.6 Existing and Emerging Opportunities in Agriculture

Many opportunities exist in agriculture in different parts of the world. In the Carribbean, vibrant and expanding market for primary and secondary agricultural commodities offers tremendous opportunities for youth (Purvis, 2014). A report by World Bank (2014) indicates that there are existing incentives and policies that target youth involvement in agriculture which if adopted can encourage them to successfully participate in agriculture. Studies by Purvis (2014) and Gemma *et al.* (2013) revealed that many tertiary training opportunities exist for young persons interested in agriculture that uses integrated approach, combining technical training with life skills thereby, are well adjusted to the rural situation. Gemma *et al.* (2013) further confirmed that, a number of existing agricultural agencies in Latin America offer spaces for dialogue with governments and so youth can participate in the drafting, implementation, monitoring and assessment of policies that affect them. Forums and groupings of organizations exists in Latin America that monitors the effective implementation of rural development policies in favor of young farmers irrespective of their political, cultural or social identity (Proctor & Lucchesi, 2012).

There are opportunities for ICT-Enabled Agribusinesses. CTA (2015) asserts that ICTs are double-edged tools for strengthening agricultural entrepreneurship as they enhance production to consumption efficiency, and create multiple opportunities for a new generation of actors along the agribusiness value chain. There is evidence that ICTs increase the impact of young entrepreneurship and facilitate new avenues of addressing systemic barriers, such as skills acquisition, financing, marketing and business networks (Koira, 2014). Internet enabled solutions help small and medium-scale enterprises (SMEs) to grow as they become effective and efficient, increase the scale of their operations, thereby reaping the benefits of global and regional markets. The proliferation of mobile applications and services, web-based information platforms and social media information increases the choices for youth in pursuing agribusiness opportunities (CTA, 2015).

There is a large agricultural workforce where 65% of Africa's population lives and work in rural areas and the workforce is estimated to be predominantly young by 2040 (Leavy & Hossain 2014). Large opportunities exist to improve yields through increasing fertilizer application rates and irrigating more land. According to Okoboi and Barungi (2012) and World Bank (2011),

fertilizers are applied at average rates of about 110kg/ ha of arable land compared to 254kg ha in India and 468kg/ha in China; thus can be more affordable to youth. Okoboi and Barungi (2012) further argued that there is a huge potential to use of local African sources of rock phosphate to manufacture fertilizer at affordable costs. Pratt (2011) and Purvis (2014) confirmed that around 4% only of cultivated land in Sub-Saharan Africa (SSA) is irrigated leaving over 90% potential land for irrigation; thus the youth can increase agriculture through more irrigation. Agriculture growth projects can be adopted in areas with high agricultural potential to stimulate investment and develop regional value chains (Purvis, 2014; The World Bank, 2014).

In Kenya, there exist new and expanding markets due to rapid urbanization and integration into regional and international markets. This has provided an opportunity to gear agriculture into an accelerated commercial direction (Argent & Begazo, 2015). Kenya imports about 33% of the wheat and over 50% of the rice used in the country (Riedel & Slany, 2014). Wanjiku, Ogada, Guthiga, Karugia, Massawe and Wambua (2012) confirmed that local investment in the cereal sector to reduce importation is an opportunity that can be exploited by the youth. Argent and Begazo (2015) revealed that, in 2012 intra COMESA trade in maize was only 4% implying that 96% was sourced from outside COMESA. In the same year, Intra COMESA trade for cotton and cotton products was only 7% with 93% being sourced from non-COMESA countries. This shows an absence of regional maize and cotton supply chain and value addition which should be improved and tailored in a manner that youth can adopt (Argent & Begazo, 2015).

Due to the diverse agro-ecology, the country can produce a wide range of temperate, tropical and subtropical products. According to IFAD (2014) large and expanding markets for traditional products like maize and other cereals, beef and dairy products, tea, coffee and pyrethrum exist. Kangai *et al.*, (2011) observed that global demand for horticultural products and emerging livestock such as ostrich, guinea fowl, crocodile, dairy goats, silkworms, pigs, frogs, indigenous chicken and emerging crops such as assorted resins and essential oils and aloe remain under-exploited. Future Agricultures Consortium (2012) confirmed that vast opportunities are opening up in the production of bio-fuels from sugar cane, maize, millet, sorghum and other oil-bearing seeds. Youth should be encouraged to exploit these opportunities hence can earn a livelihood in agriculture.

A study by UNICEF (2013) indicated that abundant human resources are available due to primary, secondary and post-secondary education that can be used to change the face of agriculture. Tadele and Gella (2012) indicated that the human resource can be used in training, research to develop new and relevant technologies and to create and expand agribusinesses thereby making agriculture attractive and relevant to the youth.

Daily Nation (2013, October 29) revealed an emerging trend in Kenya where some graduates youth realized the elusiveness of white-collar jobs and turned to agriculture for a living. They defied the curse of joblessness and despite their academic qualifications, they are not averse to soiling their hands where their less creative contemporaries see no money. Daily Nation (2013, October 29) further reported that these youth put their marketing options higher and as they make thousands, they try to lure their fellow jobless youth to join them since there is money in agribusiness. Muiruri (2013) reports that one of the youth a Technical University of Kenya graduate defied a notion among other youth that farming is an old-fashioned way of earning a living. Muiruri (2013) further confirmed that these youth spend considerable time on the internet, reading about animals they keep or crops they grow. Most have active Facebook accounts and Websites and spent most mornings responding to queries from customers or fellow digital farmers.

A study by Swarts and Aliber (2013) revealed that potential for increasing production can be improved and increased in multiples through better use of unused land in traditional farming areas and through irrigated agriculture which could include creating special schemes for youth to hire land for high value farming. The vast livestock potential in the arid and semi-arid areas that cover 80% of the country remains untapped as does the fisheries potential and thus youth in ASALs such as some parts of Kajiado North Sub-County should be motivated to tap and exploit the livestock potential. Increasing yields of crops and livestock are far below their optimum thus, there is vast potential for increasing yields in Kenya, since fields of maize, sugar and dairy are one-tenth of global potential. Swarts and Aliber (2013) argued that tripling national average yields of major crop and livestock production systems in the country is easily achievable.

Poulton and Kanyinga (2013) confirmed that value addition should be undertaken which include processing, branding, quality certification and accreditation, as well as farm-level quality improvements. It is estimated that 91% of total agricultural exports are in raw or semi processed form (Kangai *et al.*, 2011). Thus, the country loses billions in earnings by not adding value to the produce. Potential for adding value to products such as tea, coffee, pyrethrum, hides, skins, milk, beef, fruits and vegetables remains largely untapped. Brooks *et al.* (2013) observed that a change in strategy to locate agro-industries in rural India is reported to have increased the rural per capita income significantly. This is an idea Kenya can borrow and run with and particularly involve the youth in the value addition firms.

2.7 Youth Engagement in Policy Dialogue

All over the world, the youth unemployment rates are higher than adult unemployment rates with Africa facing the world's greatest youth employment challenge (ILO, 2013). Modern agriculture can offer significant opportunities for job creation for youth (World Bank, 2014). However, in order to attract youth to the sector, an adequate enabling policy and regulatory environment is fundamental (ILO, 2013). It is increasingly recognized that youth participation has an important role in decision making and policy dialogue, thus policy-makers should work with the youth.

Too often youth participation in policy remains passive while seniority is frequently associated with authority, and youth are not expected to voice their concerns or have a role in policy development processes (Lintelo, 2011). In many developing countries, young women's participation in policy-making is particularly challenging as a result of traditional beliefs about the suitability of women to hold decision making positions and the persistence of gender inequalities at household level (World Bank & IFAD, 2013). Little information is available on the participation of youth in policy processes specifically related to agriculture and rural development.

A study by MIJARC, FAO and IFAD (2012) shows that rural youth rarely participate in the formulation of policies concerning them, and that in Africa and Latin America, the youth are often not seen as equal parties but rather as uninformed, indecisive and trouble makers. A report

by IFAD (2014) confirmed that national policies related to youth in agriculture are often not implementable because they are designed by others who are unaware of the situation of youth in rural areas. Although some legal documents and policies, including the African Youth Charter, explicitly state youth's right to participate in policy design, many young women and men remain unaware of their rights in this regard. There is a lack of comprehensive data on rural youth as a distinct group, resulting in policies that do not respond to the real challenges faced by rural youth (IEG, 2013).

In order to be able to actively participate in policy dialogue, rural youth need the right skills and since not all rural youth are born leaders, UNCDF (2012) argued that organizations that can represent their interests and which can lobby on their behalf can have an important role to play. MIJARC, FAO and IFAD (2012) contend that rural youth are not sufficiently united thus a major reason for their limited voice in policy-making processes. There are only a small number of organizations representing rural youth, and those that do exist often lack financial resources, are rather small and informal, operate at local level, and have little bargaining power in policy processes (1FAD, 2014). In developing countries, young women face particular constraints to participating in rural organization management for a variety of reasons; they generally have lower literacy levels than men; they often lack the confidence to defend their interests and they have limited mobility and time availability due to the need to combine household duties with a heavy workload (World Bank, 2013).

Governments need to formulate the rural and agricultural development policies and strategies that seek to create an enabling environment for youth participation in agriculture. In Kenya, employment creation is emphasized in the National Youth Policy, where creation of an environment enabling youth self-help initiatives for self-employment is recognized (FANRPAN, 2012). ASDS is the overarching national policy framework for the ministries and other stakeholders involved in Kenya's agriculture sector. This policy framework is anchored in the long-term development plan for Kenya, 'Vision 2030', whose main thrust is to transform Kenya into a middle-income country by 2030 and involve youth in agriculture by making it attractive to them (GOK, 2013, Kangai *et al.,* 2011). In an effort to achieve this commitment, the Government launched a 'farming is Cool' campaign in 2012, which highlighted the possible

monetary returns in farming that can accrue to youth and committed over USD 2 million in loans to youth groups for buying irrigation kits, greenhouses, water tanks, seeds, and fertilizers through the YEDF (Amenya, 2011).

2.8 Interventions that Make Agriculture more Attractive to the Youth

In Africa, the proportion of working youth earning less than US $ 2 per day is over 70%, many of who are found in the rural areas (OECD, 2012). The pressure on policy makers to find employment opportunities for these young people will continue to grow if left unaddressed (UNDP, 2013). Failure to generate opportunity for the youth will undermine both current and future poverty reduction efforts. In Kenya, agriculture possesses significant development potential which, if seized, could generate ample decent and gainful employment opportunities for the youth (FAO, 2013).

It is not only the agricultural sector however that possesses untapped potential, but the youth themselves. As a result, facilitating and incentivizing youth participation in agriculture would not only provide their much needed employment opportunities, but may also help in driving the innovation and growth needed to reduce rural poverty among youth and adults alike (ILO, 2013). Unfortunately, many youth do not perceive agriculture as a viable or attractive means of earning a living. Noorani (2015) observed that the drudgery and low productivity of agriculture is simply not attractive to youth, who instead migrate to cities in search of higher productivity and better-remunerated employment. A concerted and coordinated effort is therefore required by the government, policy makers and development practitioners to develop a more modern agricultural sector to unlock the potential of the youth.

Njeru and Gichimu (2014) argue that the government could promote land reforms and ensure that arable government land is only used for agricultural purpose, fairly distributed among young male and female farmers and that mechanism to be put in place to help youth have sustainable agriculture. FAO (2013) revealed that creation of laws that ensure youth's access to production resources that ensure equal opportunities for young men and women should be adopted. The government ought to implement legally binding consultation mechanisms with rural communities and rural youth movements while drafting policies related to productive resources.

Such policies should respect mother earth and its natural production cycles, and guarantee a healthy and sustainable environment for future generations.

A report by AGRA (2015) revealed that youth inherit small plots of land and lack access to finance to buy more land. In India, cooperative farming has proved to be successful in overcoming this constraint a phenomenon that Kenyan youth can borrow in order to improve their level of participation in agriculture (FAO, 2013). Family land transfer can be considered as a good option, where the elderly can transfer part of their land to youth, where both parties can benefit since elderly lack the necessary capacity to manage their lands in the most efficient way and youth are keen to have their own land and have better access to new technology.

Governments should adopt laws and public policies relevant to youth that will facilitate access to credit for productive resources according to their specific needs (Purvis, 2014). IFAD (2014) argued that governments and farmer's organizations should work out financial support programs specifically directed to young farmers and promote the work, creativity and innovative spirit of young people; for instance organizing contests and the best projects can be rewarded with funding.

According to Njeru and Mwangi (2015), agribusiness centers with storage and processing facilities should be created for young farmers to link them with traders and will act as a venue for training, sensitization and capacity building; particularly on market actors, financing opportunities and new agricultural technologies. Youth ought to be trained on financial sustainability and management of membership-based organizations in order to encourage creation of strong and sustainable young farmer's organizations (FAO, 2013). A report by Brooks *et al.* (2013) revealed that youth organizations can promote and facilitate youth participation in their own structures and can consider need for gender equity and understand the issues affecting rural youth.

Leavy and Hossain (2014) argued that the apparent disconnect between agricultural research system and farm operations needs to be addressed. Research could be organized in a way that the units responsible for a particular commodity are linked to the other institutions that are involved

in the particular commodity so that information can flow directly from research to utilization through ICTs Leavy & Hossain, 2014). Researchers require relevant training on how to package their research findings for the end user and post it into the appropriate communication channel for users to access (IFAD, 2014). Brooks *et al.* (2013) confirmed that the government should ensure promotion of research–extension–farmer linkages to facilitate demand-driven research and increased use of improved technologies. Optimizing on rain fed agriculture and investing heavily in irrigation and other water harvesting technologies holds the key to increased productivity in semi-arid Counties (Brooks *et al.,* 2013; Purvis, 2014). Counties could pick commodities in which they have competitive advantage over others and create trade relations with neighboring Counties (FAO, 2013).

Better production techniques and market-oriented strategies can generate a sustainable source of income while contributing to the supply of agricultural produce to satisfy the world's increasing food demands (Njeru & Mwangi, 2015). A report by Mkulima Young (2013) revealed that ICTs could play a role in countering youth migration to urban areas by enhancing access to market information, production techniques, new technologies and financing opportunities. The use of ICTs enables choice, the option to stay on farms and take full advantage of new technologies and farming techniques, while incorporating valuable traditional practices and knowledge (Brooks *et al.,* 2013).

A study by Purvis (2014) suggested that specialization need to be encouraged in order to re-direct and train youth to specialize either on production, processing or marketing. This will be more effective than when one youth carry out all activities in a value chain. There is need to provide incentives for entrepreneurs in the sector by developing financial packages that are tailored to the diverse production, marketing conditions as well as risk factors (Mkulima Young, 2013). Investment in value addition through processing, branding, quality shelf life improvements would lead to higher prices, new jobs and will eventually increase aggregate incomes for the youth and in the rural community in general (Njeru & Mwangi, 2015).

Swarts & Aliber (2013) observed that sufficient investment in irrigation and other water harvesting technologies to facilitate full time engagement of the youth and shorter waiting time

for economic returns is necessary. This is noted could be very pertinent especially in the dominant marginal areas of Kajiado County. There is need to improve the performance of the agricultural value chains in Kenya in order to deliver reasonable returns to all actors (IFAD, 2014). Currently the value chains for the different commodities are long, un-transparent and cluttered with many players making them inefficient, slow and unresponsive to needs of particularly the producers. A comprehensive approach to value chains for various commodities should be undertaken in partnerships involving the youth.

Tadele and Gella (2012) showed that capacity building activities of rural youth often focus on generating leadership skills. Education and capacity building programs for rural youth should be defined in a more participatory way and focus on agricultural best practices, land laws and knowledge sharing (Tadele & Gella, 2012). Governments should review their youth policies and propose measures which are adapted to rural life, guarantee the rights of rural youth and provide them with a better and more decent life. Kangai *et al.,* (2011) and Leavy and Hossain (2014) expressed the need to address the long held belief that agriculture and rural based activities are for those who cannot make a living anywhere else. Agriculture need to be rebranded as the new unexplored frontier for growth in business opportunities. A report by FAO (2013) confirmed that women and men should have equal access to training and education and that gender aspects should be taken into consideration while deciding the themes and setting the timing of these trainings.

The government and other actors should develop a coherent and integrated initiative to address the core challenges faced by youth when entering the agriculture sector. Njeru *et al.* (2015) confirmed that initiative should involve a transparent multi-stakeholder mechanism that ensures coherence, coordination and cooperation across different national government institutions and agencies, at central and local level, private sector organizations, youth organizations and development partners. Its goal should be to increase youth's access to the agricultural sector that offers great opportunities for agricultural productivity gains as well as food security and sustainability.

2.9 Theoretical Framework

The study was guided by the Skinner's Theory of Motivation (1971) and the 'Push' and 'Pull' Theory by Lewis (1954) and Harris and Todaro (1970). The central argument of Skinner's motivation theory of learning is that learners will undertake a task depending on the reward they expect. A perceived positive reward induces positive motivation and subsequently high achievement while a negatively perceived reward leads to negative attitudes and low achievement. Deci and Ryan (2002) and Wood *et al.* (2015) observed that motivation can be 'intrinsic' (internal) meaning that it comes from within the individual, which is a higher form of motivation that yields lasting results. Individuals are motivated from within to perform, work with less supervision and are usually successful. People with extrinsic motivation do something based on their expectations of external reward/s or punishment/s (Dickinson & Boakes, 2014). Extrinsic motivation normally does not produce a lasting effect because once the external reward is removed, the motivation declines and the individuals are unable to complete the task.

Thus, it is of paramount importance for youth to have intrinsic motivation in order to succeed in taking part in agriculture. According to Deci and Ryan (2002), youth need to feel competent and connected to other people. Youth need to be autonomous, implying the feeling of having control of their own behaviors and goals; hence they will have self-determination and will be intrinsically motivated to participate in agriculture. This theory is relevant for the study since we need youth with self-determination in agriculture as they are the major catalyst for change, hence they should be motivated to participate in agriculture for national economic development. They have the potential to overcome major constraints to agriculture as they are more open to new technologies and practices. Several interventions therefore should be put in place to make agriculture attractive and lucrative to the youth.

The decision of the youth to migrate from rural to urban areas involves both 'push' and 'pull' factors articulated by Lewis (1954) and Harris and Todaro (1970). The 'push factors' include, among others, declining production resources in rural areas such as access to land finances, viable markets and labour. The 'pull factors' are the likelihood of getting better employment opportunities, good educational facilities, marriage opportunities and better recreational activities. Ackah and Medvedev (2012) and Bezu and Holden (2014) underscored the importance

of migration as a transfer of labor from labor-surplus sectors (rural areas) to labor deficit-sectors (urban areas) until a balance is reached. Arizpe (2014) on the other hand, postulate that migrants assess various labor market opportunities available in the rural and urban sectors and choose the one that maximizes their expected gains.

Other researchers (Adekunle, Adefalu, Oladipo, Adisa & Fatoye, 2009; Brooks et al., 2012; Noorani, 2015) argued that economic push factors such as lack of finances, unemployment, lack of land and general rural poverty are important while others suggest that economic pull factors such as perceptions of high wages from urban employment are dominant. This explains why there is a declining involvement of the youth in agriculture in Kenya. This theory is relevant to the study because youth are the main source of labour in agriculture as they should be motivated to participate actively in agriculture (Aksoy, 2012; Bezu & Holden, 2014). However, youth participation in agriculture is on the decline hence, motivating them to view agriculture as a career opportunity requires a multi-level intervention by all the stakeholders in the Sub-County and in Kenya as a whole. There is need to address the long held belief that agriculture and rural areas are for those who cannot make a livelihood elsewhere (Noorani 2015; FAO, 2013). Arizpe (2014) observed that agriculture should be rebranded as the new unexplored frontier for growth in business opportunities to make it attractive to the youth, thus reducing their massive migration to cities.

2.10 Conceptual Framework

Figure 2 depicts the variables of the study and their relationship. The purpose of a conceptual model is to help the reader to quickly see the proposed relationship (Kendall, 2007; Mugenda & Mugenda, 2003). Conceptual framework was developed from the reviewed related literature. The independent variable in this study are selected factors influencing youth participation in agriculture; specifically access to land, access to finances, access to viable markets, gender issues and youth's perception of agriculture. The dependent variable is youth participation in agriculture measured in terms of the activities youth were engaged in specifically crop production, livestock production, marketing, transporting and processing into finished products.

The intervening variables affect the effects of the independent variable on the dependent variables. These are demographic characteristics specifically education level, marital status, age and experience of the youth and were controlled through random sampling. In order to succeed in taking part in agriculture, youth need intrinsic motivation as indicated in the literature. They also need to feel competent, connected to other people and have control of their own behaviors and goals. However, in addition to the motivation, they must have access to production resources such as land, finances and viable markets.

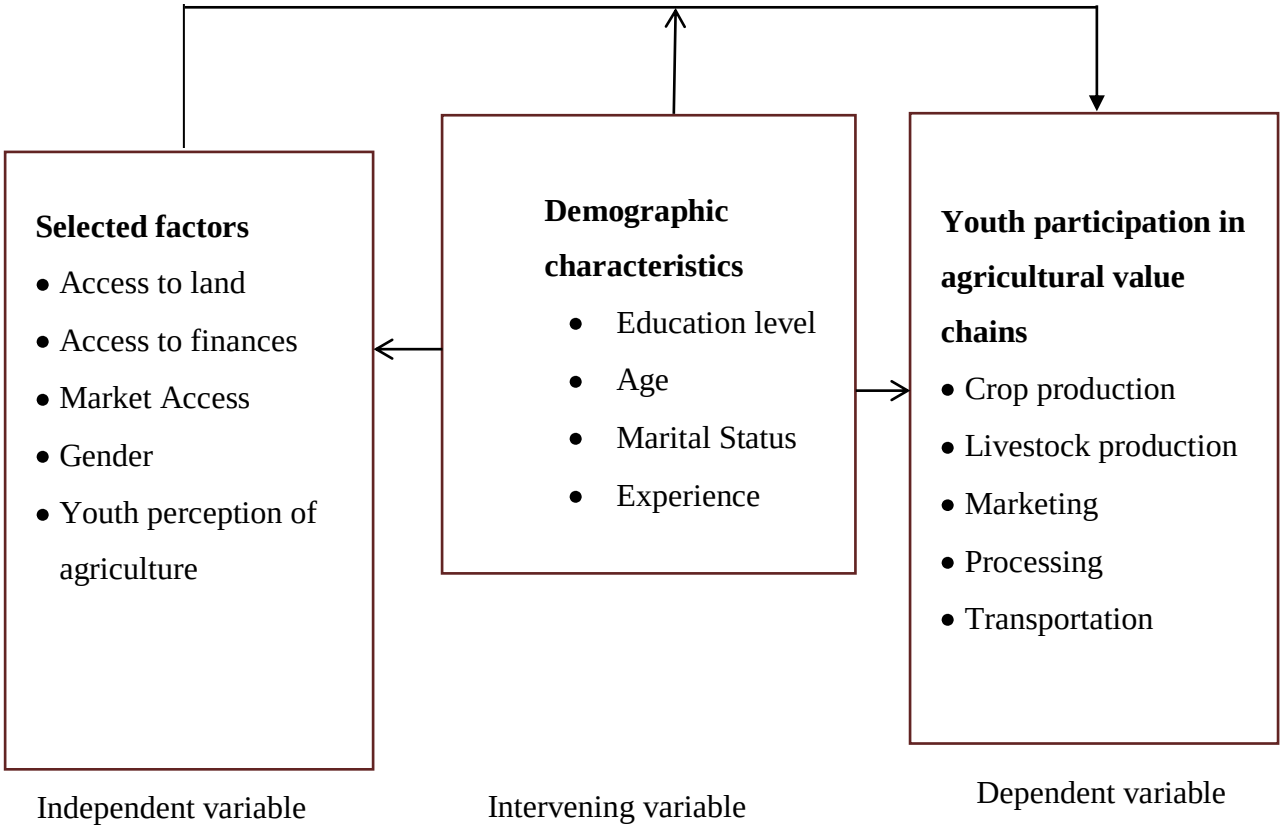

Figure 2: Conceptual framework of the factors influencing youth participation in agriculture in Kajiado Sub-County

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, and the locality of the study, target population, sampling procedure and sample size. It also describes instrumentation, validity, reliability, data collection and data analysis.

3.2 Research Design

The study adopted cross-sectional survey design that enables data collection and making inferences about a population of interest at one point in time (Paul, 2011; Bell & Waters, 2014). The design cut across populations of different characteristics where the researcher used research objectives to gather relevant information that was required for the study. This design was adopted because is faster and inexpensive compared to case and cohort studies and provides self-reported facts about respondents, their feelings, attitudes, opinions and habits (Kombo & Tromp, 2007; Richey & Klein, 2014). The design allows researchers to compare many different variables at the same time and it has greater control over precision of estimates in subgroups (Paul, 2011; Bell & Waters, 2014). Hartas (2015) argued that cross-sectional survey design helps in controlling attrition since it is used at one point in time. Surveys are excellent vehicles for collecting raw primary data for the purpose of studying a large population. By use of cross-sectional survey design, a large population can be studied with only a portion of that population being used to provide the required data. Survey also makes it possible to study things that are not directly observable such as people's attitude and beliefs (Richey & Klein, 2014). By use of this design the researcher gathered detailed information and determined the influence of selected factors on youth participation in agriculture in Kajiado North Sub-County.

3.3 The Location of the Study

The study was carried out in Kajiado North Sub-County in Kajiado County which is situated north-west of Nairobi City. It covers an area of 11,754.9 km^2 and had large population of youth. The Sub-County comprises of four Wards namely Ngong (2718.1 km^2), Ongata Rongai (3416.5 km^2), Olorua (2640.3 km^2) and Ngaimurunya (2980 km^2) and had a total population of 300, 525 persons comprising of 49,269 males and 51, 256 females youth (KNBS, 2009). Over 70% of the

youth lacked formal jobs hence, their dependency rate was high (KNSMBYS, 2014). The study area lies in an attitude of about 1600 m above sea level. The rainfall pattern is bi-modal with two distinct rain seasons. Long rains occur between March and June while the short rains fall between October and December. Rainfall quantity received varies with altitude averaging to about 1,067.5 mm annually and ranging from 640 mm in some areas to as high as 1,495 mm per annum (Amwata, 2013). Temperatures range from a minimum of 12^{o}C in July to a maximum of 30^{o}C in March with a mean of 21^{o}C. Soils are mainly loamy though alluvial soils (silts) are found along seasonal river valleys while some parts in Ongata Rongai Ward have black cotton soils which become water-logged during the rainy seasons (Amwata, 2013). Around 80% of the population was engaged in subsistence agriculture that involved small scale crop and livestock production.

3.4 Target Population

The population of the study is youth in Kenya while the accessible population for the study was the youth from the four Wards of Kajiado North Sub-County. The Sub-County comprised of 81,231 households with a total of 100,525 youth comprising of 49,269 males and 51,256 females youth.

3.5 Sampling Procedures and Sample Size

Kajiado North Sub-County was sampled purposively because of its potentiality in agriculture, being in close proximity to Nairobi, a market outlet for the agricultural output and having the highest number of educated unemployed youth compared to other Sub-Counties in Kajiado County. Census sampling was done to all the fifteen agricultural officers and the six youth officers, since they were few, it was appropriate to sample all. Based on the sampling formula provided by Yamane (1967) and adopted by Israel (1992), a sample size of 397 youth was arrived at.

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

Where

n is the sample size

N is the population size

e is the level of precision or the significance level. Therefore:-

Sample size = $\frac{100525}{1+100525(0.05)^2} = 397$

This sample size was stratified into male and female populations and randomized. By use of proportional to size sampling in Table 2 a suitable sample size for male and female youth in each Ward was arrived at, first by calculating the proportional percentage of male youth and female youth in every Ward and then using the percentage to get the actual sample size for male and female youth. For instance, in Ongata Rongai Ward, male and female youth were 13,834 and 14,836 respectively, hence to get their proportional percentage and their actual sample size:-

$\frac{13834}{100525} x100 = 13.761\%$

Then

$\frac{13.761}{100}$ *x* 400 = 55 male youth

$\frac{14836}{100525} x\ 100 = 14.75\%$

Then

$\frac{14.758}{100}$ *x* 400 = 59 female youth

This was further done for the other Wards to give a total of 397 youths

Table 2

Distribution of Sample Size

Ward	Male Population	Female Population	% Male	% Female	Sample (Male)	Sample (Female)
Ongata Rongai	13,834	14,836	13.761	14.758	55	59
Ngong	12,448	13,820	12.382	13.747	50	55
Olorua	11,700	11,800	11.638	11.735	47	47
Ngaimurunya	10,287	10,800	10.233	10.743	40	44
Total	**49,269**	**51,256**	**49.01**	**50.092**	**192**	**205**

3.6 Instrumentation

Two questionnaires were used as data gathering instrument for the study. The questionnaires were developed by the researcher. The youth questionnaire had 3 sections. Section A gathered data on youth's demographic characteristics. Section B gathered data on youth participation in agriculture while section C gathered data on selected factors influencing youth participation in agriculture. The agricultural and youth officers' questionnaire comprised two sections. Section A gathered data on the officers' demographic characteristics while section B gathered data on selected factors influencing youth participation in agriculture in the Sub-County.

3.6.1 Validity

Kothari (2008) define validity as the extent to which a test measures what the researcher wishes to measure or the degree to which an instrument measures what it is intended to measure. The focus was on face and content validity. According to Barry, Chaney, Piazza-Gardner and Chavarria (2014) face validity can be defined as the appeal and appearance of the instrument. That is if the instrument 'look like' it is measuring what it is supposed to. Sometimes an instrument will elicit biased or incorrect response when respondents do not take the task seriously because of lack of face validity (Barry *et al.,* 2014). Content validity refers to the representative of the items on the instruments as they relate to the entire domain or universe of the content being measured (Kothari, 2008). To have content validity, the measure must sample

adequately the domain of content the researcher claims it measures. Borg and Gall (1996) and Barry *et al.* (2014) argue that instruments' validation can be improved through experts' judgment. The instruments were validated by a panel of five experts from the Department of Agricultural Education and Extension of Egerton University, who judged the appropriateness of the items in terms of content and recommended modifications that improved the validity of the instrument.

3.6.2 Reliability

Reliability is the degree to which a particular measuring procedure gives similar results over a number of repeated trials (Barry *et al.,* 2014). This was established by use of Cronbach alpha coefficient determination method. This is an appropriate method since it involves a single administration of the instrument hence it will yield a greater internal consistency (Hartas, 2015; Kothari, 2008). Reliability was determined through a pilot test which was conducted in Kajiado East Sub-County which has similar characteristics as those in Kajiado North Sub-County. This ensured that there was no contamination during administration of the instrument in the research region. Pilot test also helped the researcher to familiarize with data collection procedures. The piloted questionnaires were scrutinized to identify and review items that were unclear or ambiguous to the respondents.

In conducting a pilot test, the researcher used 30 youth, all agricultural officers and youth officers in the Sub-County. The researcher scored their responses and a Cronbach alpha coefficient determination method was employed to compute the reliability coefficient. This established if the content of the instruments were consistent in eliciting similar responses every time the instruments were administered. The questionnaire for the youth and the one for the officers had a reliability coefficient of 0.862 α and 0.80 α respectively which was above the 0.70 α minimum acceptable for educational research at significance level of 0.05 α set *a priori* (Kothari, 2008; Barry *et al.* 2014).

3.9 Data Collection Procedure

The researcher got an introductory letter to the study area from Board of Post Graduate Studies of Egerton University. The researcher then sought permission to collect data from the National

Commission for Science, Technology and Innovation (NACOSTI). Official request to undertake the study and to access the information from the youth was sought from Youth Officer, Kajiado North Sub-County and the purpose of the study was explained to the respondents. Confidentiality was observed and assured to the respondents. The questionnaire was administered by the researcher to the youth and to the agriculture and youth officers. Prior to data collection, the researcher conducted a preliminary survey of youth, agriculture and youth officers to familiarize with them and with data collection procedures. To make the excise easier, faster and more efficient, the researcher contacted the youth through their respective Ward officers. For few youth who were unable to understand English, the researcher translated the questionnaire into a language they could understand through the help of research assistants.

3.10 Data Analysis

Data was analyzed using quantitative and qualitative methods. Quantitative methods dealt with objective questions of when, where, how many, at what time and to what extent which were coded and analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics of frequency tables and percentages were used to summarize and present the quantitative data. Qualitative data dealt with interpretive and explanatory questions of why, how and in which way; which were categorized into different categories and checked for frequencies or percentages of responses to determine emerging trends. Data on access to land, access to finances, access to market and youth perceptions on agriculture and their relationship with youth participation in agriculture was analyzed by use of inferential statistics of Pearson Product Moment Correlation Coefficient (PPMCC) determination method. This tested the strength of the relationship between these variables and their influence on youth participation in agriculture. The data on gender difference was summarized into categories (males and females) and analyzed using a t-test at 0.001α significance level. It found out if the mean difference between the level of participation in agriculture between the male and female youth was significant.

Table 3

Summary for Data Analysis

Research hypothesis	**Independent variable**	**Dependent variable**	**Method of analysis**
Ho_1: There is no statistically significant relationship between youth access to land and their participation in agriculture.	Youth access to land	Youth participation in agriculture	Pearson Product Moment Correlation coefficient (PPMCC)
Ho_2: There is no statistically significant relationship between youth access to finances and their participation in agriculture.	Youth access to finances	Youth participation in agriculture	PPMCC
Ho_3: There is no statistically significant relationship between youth access to market and their participation in agriculture	Youth access to market	Youth participation in agriculture	PPMCC
Ho_4: There is no statistically significant difference between mal e and female youth in their level of participation in agriculture	Gender	Youth participation in agriculture	t-test
Ho_5: There is no statistically significant relationship between youth perceptions on agriculture and their participation in agriculture	Youth perceptions to agriculture	Youth participation in agriculture	PPMCC

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1. Introduction

This chapter presents results and discussions on the influence of selected factors on youth participation in agriculture in Kajiado North Sub-County. Data was analyzed using Statistical Package for Social Sciences (SPSS version 21) software, and was based on the objectives of the study. The findings are presented in the form of percentage scores and frequency distributions tables. The chapter is divided into the following sections: (i) Characteristics of the respondents, (ii) Youth participation in agriculture, (ii) Youth access to agricultural land (iii) Youth access to finances, (iii) Youth access to markets (iv) Gender differences (v) Youth perceptions of agriculture.

4.2. Characteristics of the Respondents

The characteristics of the respondents have been organized in four categories namely gender, age, marital status and level of education. Composition of the respondents by gender showed more female youth 52% while male youth were 48%. However, these differences were not statistically significant (chi-square .428, df 1, p>.05).

Table 4

Age, Academic Level and Marital Status of the Youth (n=397)

Age (years)			**Academic level**			**Marital status**		
	F	%		F	%		F	%
18-20	53	13.4	No school	29	7.3	Married	217	54.7
21-25	92	23.2	Primary	81	20.4	Single	170	42.8
26-30	111	27.9	Secondary	132	33.2	Divorced	7	1.7
31-35	141	35.5	College	107	27.0	Widower	2	0.5
			University	48	12.1	Widow	1	0.3

4.3 Youth Participation in Agriculture

Youth participation in agriculture was determined by the youth stating sixteen (16) different agricultural activities they undertook. These were beef, dairy, rabbits, poultry, goats and sheep, marketing of agricultural products, value addition, pigs, selling and buying livestock, maize, beans, sorghum, horticultural crops, and sweet potato as well as transporting of agricultural commodities to markets. Youth's responses on their engagement in these activities were added together to give the number of agricultural activities they undertook. This represented their level of participation in agriculture. The results are given in Table 5.

Table 5

Number of Agricultural Activities Undertaken by the Youth

Number of Activity	Frequency	Percent
1	150	37.8
2	102	25.7
3	50	12.6
4	39	9.8
5	20	5.0
6	16	4.0
7	10	2.5
8	2	0.5
9	5	1.3
10	3	0.8
Total	**397**	**100.0**

Mean 2.56±0.095, mode 1, median 2, std. dev 1.89, and range 1 to 10

Majority of the youth, 62.2% engaged in more than one activity. The average number of agricultural activities undertaken was 2.56 with a median of 2 and mode of 1. Youth engaged in only one activity were 37.8%.

4.3.1 Specific Agricultural Activities Undertaken by the Youth

Youth stated the specific agricultural activities they undertook. The frequency distribution and percentages of these activities are given in Table 6.

Table 6

Specific Youth's Agricultural Activities (Multiple Response) (n=397)

Activities	Frequency	Percent
Maize growing	180	45.3
Poultry keeping	161	40.6
Bean growing	119	30.0
Goat keeping	82	20.7
Dairy production	66	16.6
Sheep rearing	61	15.4
Beef keeping	53	13.4
Horticultural crops	49	12.3
Rabbit keeping	45	11.3
Sweet potatoes	42	10.6
Marketing	21	5.3
Sorghum growing	20	5.0
Transporting to markets	7	1.8
Pig rearing	6	1.5
Processing (yoghurt)	4	1.0
Selling and buying livestock	3	0.8

Youth identified sixteen agricultural related activities out of which 10 were related to livestock keeping and five to crop growing. Poultry keeping was the livestock activity most preferred by the youth 40.6%, while maize growing was the most preferred crop activity 45.3%. Selling and buying of livestock was the activity with least participants 0.8%. This is in line with a report by MoA (2013) that indicated that youth who practiced agriculture rely on traditional and labour-based production techniques, thus resulting to concentration on a narrow range of agricultural commodities mainly staple crops like maize and other cereals and few horticultural produce.

MoA (2013) further revealed that these foods are slow to mature and often yield low returns thus discouraging many youth from engaging in agriculture.

4.4 Factors influencing Youth Participation in Agriculture

This section deals with variables considered for the study. The respondent's responses on these variables and their influence on youth participation in agriculture are discussed as follows.

4.4.1 Youth Access to Land

Table 7

Land Size Accessed by the Youth

Land size in Acres	Frequency	Per cent
No access	44	11.0
Less than 1	198	50.0
1 to 5	101	25.0
5 to 10	50	13.0
Over 10	4	1.0
Total	**397**	**100.0**

Half of the youth in the Sub-County, 50% accessed less than 1 acre of land, 25% accessed land between 1 and 5 acres, 13% accessed land between 5 and 10 acres, only 1% were able to access land that was more than 10 acres while 11% did not access land. This showed that access to land for agriculture was a constraint that faced the youth in the Sub-County. These findings support the findings by AGRA (2015) and Proctor and Lucchesi (2012) that most farmers in Kenya are generally in their 50-60 years. They own the land and the title deeds, and are unlikely to relinquish control of it, except through inheritance. It is also in line with a report by the World Bank (2014) that underscored the fact that the size of rural population is expected to continue growing until 2020, and according to FAO (2014) this population growth has resulted in the on-going sub-division of land and in highly fragmented parcels, thus youth especially those with many siblings end up inheriting or accessing very small pieces of land.

4.4.2 Methods used to Access Land

Table 8

Land Access Method

Method	Frequency	Per cent
Family Land	180	45.4
Inherited	116	29.2
Leasehold	62	15.6
Purchased	39	9.8
Total	**397**	**100.0**

Youth identified four different ways of accessing land for agriculture. Less than half of the youth, 45.4% used family land meaning that the land was owned by their parents and they did not own it while 29.2% had inherited the land, meaning that it belonged to them. Those who leased land were 15.6% while 9.8% had purchased land. This concurs with the study by MIJARC, IFAD and FAO (2012) which reported that the mechanism that many youth adopt to access land for farming is through inheritance. But since life expectancy of most farmers has increased in Kenya, Njeru and Gichimu (2014) noted that land transfers often is done at a later age hence the youth have to wait many years before inheriting their share of the family land. These findings also agrees with reports by AGRA (2015) and MoA (2013) that many youth enjoy subsidiary land rights and work on the family land for little or no remuneration while waiting for their inheritance. Further, the study agrees with White (2012) who argued that it is unrealistic to expect youth to purchase land through acquired savings, given high rates of youth unemployment, low wages for most youth and high land price leading to few youth who can afford to buy their own land. Proctor and Lucchesi (2012) also underscored the fact that land lease and rental are avenues being explored to facilitate youth's access to agricultural land thus agreeing with the study findings since a proportion of youth, 15.6% gained access to land for agriculture through leasehold.

4.4.3 Correlation Measure for Youth Access to Land and their Participation in Agriculture

During data analysis, youth responses for each item forming the 6 variables on access to land were converted to scores with the most positive response "Strongly Agree" assigned a score of 5, "Agree" a score of 4, "Neutral" a score of 3, "Disagree" a score of 2 and the most negative response "Strongly Disagree" a score of 1. Total scores for each item were calculated and the mean, standard error (SE), standard deviation (SD) and range were determined as show in Table 9.

Table 9

Descriptive Indicator Statistics for Youth Access to Land (n=397)

Indicator	Mean	SE	SD	Range
Equal opportunity for accessing land by male and female youth	2.927	0.071	1.429	4
Difficulties faced by youth in accessing land	2.297	0.058	1.170	4
Inheritance is the main method of land access	2.297	0.061	1.215	4
Youth farming on family land earn little returns	2.246	0.059	1.180	4
Communal land ownership discourages youth participation in agriculture	2.498	0.060	1.207	4
Land shortage causes youth migration to towns	2.249	0.055	1.108	4
Index of youth access to land	21.40	0.245	4.832	25

The scores for the six indicators created an index of youth access to land that had a mean of 21.40 and varied between 5 and 30. The reliability of the index using Cronbach's alpha was found to be 0.756. Frequency distribution table of the index is given in Table 9.

Table 10

Index of Youth Access to Land

Index	Frequency	Percent
5 to 10	20	5.0
11 to 20	132	33.2
21 to 30	245	61.7
Total	**397**	**100.0**

The hypothesis one: - There is no statistically significant relationship between youth access to land and their participation in agriculture in Kajiado North Sub-County. Correlation analysis of the index youth access to land and their participation in agriculture indicates the results in Table 11.

Table 11

Correlation for Youth Access to Land and their Participation in Agriculture

Variable	r	p	n
Youth participation in Agriculture	0.345	0.01	397
Youth access to land			

The results shows a statistically significant positive relationship (r=0.345, p=0.01) between youth access to land their participation in agriculture. Consequently, the null hypothesis is rejected implying youth access has an influence on youth participation in agriculture. This conclusion supports the work of Proctor and Lucchesi (2012) who, in their study, found that access to land was important for young people trying to earn a livelihood in agriculture. In a subsequent study AGRA (2015) observed that youth access to land was necessary for starting farming, for contributing to household food security and for employment creation. According to MIJARC, IFAD and FAO (2012) access to land serves as security and collateral for accessing credit, marking youth identity, upgrading youth status and for enabling youth participation in community decision making.

4.5 Youth Access to Finances

Table 12

Sources of Finances for the Youth

Ways	Frequency	Percentage
Savings from sources other than salaries	211	53.4
Finances from non-agricultural sources	110	27.5
Finances from parents and relatives	49	12.1
Finances from microfinance institutions	14	3.5
Finances from Salaries	9	2.3
Finances from the Youth Fund	4	1.2
Total	**397**	**100.0**

Table 12 indicates that 53.4% of the youth used savings from sources other than salaries. This was followed by 27.5% who used finances from other businesses outside agriculture. A few youth 12.1% had borrowed finances from parents and other relatives. 3.5% youth had borrowed from microfinance institutions, 2.3% used money from their own salaries and only 1.2% had benefited from youth fund. This showed that few youth (3.5%) gained access to finances through borrowing from the FSPs. This is in accordance with the studies by UNCDF (2012) and Leavy and Hossain (2014) which observed that MFIs providing loans to youth often charged too high interest rates thus discouraging them from borrowing. Many FSPs ask for loan guarantees, such as formal land titles, steady employment, personal guarantors, solidarity group guarantees or more informal guarantees like motorcycles, furniture before releasing funds to the youth, most of the assets that youth do not possess. The study findings are also supported Shrader *et al.* (2006) who argued that many youth often rely on informal sources typically family and friends to obtain access to financial services.

4.5.1 Correlation Measure for Youth Access to Finances and their Participation in Agriculture

During data analysis, youth responses for each item forming the 6 variables on access to finances were converted to scores with the most positive response “Strongly Agree” assigned a score of 5, “Agree” a score of 4, “Neutral” a score of 3, “Disagree” a score of 2 and the most negative

response "Strongly Disagree" a score of 1. Total scores for each item were calculated and the mean, standard error (SE), standard deviation (SD) and range were determined as show in Table 13.

Table 13

Descriptive Indicator Statistics for Youth Access to Finances (n=397)

Indicators	**Mean**	**SE**	**SD**	**Range**
Fear of loans by the youth	3.828	0.065	1.299	4
Lack of adequate finances needed in agriculture	4.115	0.052	1.038	4
High interest rates deter the youth from getting loans	3.763	0.057	1.152	4
Inadequate collateral to acquire loans	4.171	0.045	0.913	4
Lack of enough finances discourage the youth	4.098	0.047	0.939	4
Youth have difficulties in selling their business ideas to financiers.	3.657	0.060	1.199	4
Index of youth access to finance	23.18	0.250	4.981	23

The scores for the six indicator variables created an index of youth access to finances that had a mean of 23.18 and varied between 5 and 30. The reliability of the index using Cronbach's alpha was 0.801 and its frequency distribution is given in Table 14.

Table 14

Index of Youth Access to Finances

Index	**Frequency**	**Percent**
5 to 10	20	5.0
11 to 20	57	14.4
21 to 30	320	80.6
Total	**397**	**100.0**

Hypotheses two:-There is no statistically significant relationship between youth access to finances and their participation to agriculture. Correlation analysis using the index of youth

access to finances and their participation in agriculture was used to test the above hypothesis and the results are given in Table 15.

Table 15

Correlation for Youth Access to Finances and their Participation in Agriculture

Variable	**r**	**P**	**n**
Youth participation in Agriculture	0.197	0.01	397
Youth access to finances			

Correlation analysis between youth access to finances and youth participation in agriculture show a statistically significant positive relationship (r=0.197, p=0.01), therefore we reject the null hypothesis and indicate that there is a statistically significant relationship between youth access to finance and their participation in agriculture, meaning that youth access to finances influenced their participation. This is in accordance with the study by Leavy and Hossain (2014) that access to financial services such as savings and loans just like access to land is of fundamental importance in starting any agricultural activity. The findings support Atkinson and Messy (2012) who observed that youth require finances to cover the costs of planting and harvesting, as well as investments in improved productive capacities. Moreover, the agricultural sector is often exposed to adverse natural events that negatively affect production, hence access to insurance schemes is crucial for young farmers in developing better agricultural risk management strategies (Dalla Valle, 2012).

Furthermore, lending to youth is considered even more risky due to their weak financial base and is often not attractive due to the small size of the loans requested relative to bank transaction costs. A study by IFAD (2014) observed that formal financial service providers perceive lending to youth as risky because they often do not have a saving culture, minimal financial track records, and their education does not equip them with financial literacy. The findings support those of AGRA (2015) that youth often do not possess the assets needed to start farming and may also lack experience in agriculture, and coupled with their limited access to agricultural value chains, makes it difficult for them to engage in contract farming, which would be a valuable strategy to give more security to their loan requests.

4.6 Youth Access to Markets

Table 16

Challenges that Youth faced while Accessing Markets

Challenges	Frequency	Percentage
Poor infrastructures	114	28.7
Limited knowledge on market prices	114	28.7
Limited entrepreneurial skills	63	15.9
Price fluctuation	2	0.5
Limited skills on value addition	14	3.5
Gender issues	10	2.5
Limited ICT skills and literacy	80	20.2
Total	**397**	**100.0**

The result shows that less than one third of the youth, 28.7% cited poor infrastructures and limited knowledge on market prices as major constraints they faced while accessing markets for agricultural commodities. This was followed by 20.2% who revealed that limited skills in ICT was a limiting factor, 15.9% said that they had limited entrepreneurial skills thus were not able to market their products effectively. Few respondents 3.5%, 2.5% and 0.5% indicated that limited skills on value addition, gender issues and price fluctuation respectively were their other constraints. This agrees with the study by FAO (2013) and Njeru and Mwangi (2015) which revealed that rural youth frequently do not have the required knowledge of how to market their products and they lacked information on prices. Yet, young rural women face additional difficulties in accessing markets since in many communities their freedom of movement is restricted because of social and cultural prescriptions. This is also in line with a report by IFAD (2014) and Poulton and Kanyinga (2013), which confirmed that a characteristic feature of Kenya's agriculture is the dominance of primary production with little on-farm and off-farm processing and little efforts to improve the quality and shelf life of produce. This translates to low prices, fewer job opportunities and eventually low incomes for young farmers. The situation is more hopeless when dealing with perishable produce such as milk and horticultural products that are mainly dominated by the youth (Poulton & Kanyinga, 2013).

The study findings also concur with (Brooks *et al.* (2013) study that poor infrastructure is a key impediment to marketing of agricultural commodities and noted to be a variety of investments that are often beyond the capacity of a single farmer particularly the youth. These include rural roads, electricity, cold storage facilities, irrigation and water storage as well as processing technologies whose absence reduces the young farmer's ability to increase production, reduce risks and to effectively compete in the market.

4.6.2 Correlation Measure for Youth Access to Markets and their Participation in Agriculture

During data analysis, youth responses for each item forming the 6 variables on youth access to markets were converted to scores with the most positive response "Strongly Agree" assigned a score of 5, "Agree" a score of 4, "Neutral" a score of 3, "Disagree" a score of 2 and the most negative response "Strongly Disagree" a score of 1. Total scores for each item were calculated and the mean, standard error (SE), standard deviation (SD) and range were determined as shown in Table 17.

Table 17

Descriptive Indicator Statistics for Youth Access to Markets (n=397)

Indicators	Mean	SE	SD	Range
Market structure unfavorable for youth	3.581	0.065	1.299	4
Inadequate information on market prices	3.047	0.052	1.038	4
Limited organizational bargaining power	3.461	0.057	1.152	4
Inadequate access to market	4.156	0.045	0.913	4
Female have problem in accessing markets	3.979	0.047	0.939	4
Limited market information.	3.272	0.060	1.199	4
Index of youth access to markets	21.49	0.238	4.755	29

The scores for the six indicator variables created an index of youth access to markets that had a mean of 21.49 and varied between 5 and 30. The reliability coefficient of the index using Cronbach's alpha was 0.761 and its frequency distribution Table is given below.

Table 18

Index of Youth Access to Markets

Index	Frequency	Per cent
5 to 10	16	4.0
11 to 20	119	30.0
21 to 30	261	66.0
Total	**397**	**100.0**

Hypotheses three: - There is no statistically significant relationship between youth access to markets for agricultural products and their participation in agriculture in Kajiado Noth Sub-County. Correlation analysis using the index of youth access to markets and their participation in agriculture were used to test the hypothesis and the results are given in Table 19.

Table 19

Correlation for Youth Access to Markets and their Participation in Agriculture

Variable	r	p	n
Youth participation in Agriculture	0.330	0.01	397
Youth access to markets			

Correlation analysis between the youth access to markets and their participation in agriculture show a statistically significant positive relationship (r=0.330, p=0.01), hence we reject the null hypothesis and indicate that there is a statistically significant relationship between youth access to markets for agricultural products and their participation in agriculture. This means that youth access to markets for agricultural products influenced their youth participation since youth who had better access to markets had increased engagement in agricultural activities in terms of ability to acquire farm inputs and farm services, and the capability to deliver agricultural produce to buyers.

The findings agrees with those by MIJARC, IFAD and FAO (2012) that sustainable access to markets is required to guarantee smallholder's increase in income and to lift them out of poverty.

The rural youth are the future of the agricultural sector and their access to markets is vital for boosting productivity, increasing incomes and reducing poverty and hunger for the years to come (AGRA, 2015). The findings are also in accordance with those of CTA (2015) that efforts to increase youth participation and boost economic development in agriculture for the region can be amplified through use of integrated approach to ICTs and capacity development thus countering youth migration to urban areas.

4.7 Gender Differences

The respondents gave their take on gender issues and how they influence their level of participation in agriculture. Their responses are indicated in Table 20.

Table 20
Gender Issues in Agriculture

Gender Issues	Frequency	Per cent
Inadequate access to land by female youth	94	23.7
Young motherhood	60	15.1
Inadequate collaterals for female youth	88	22.2
Limited schooling for many female youth	60	15.1
Limited access to markets	95	23.9
Total	**397**	**100.0**

There were several cross-cutting factors on gender whereby 23.9% female youth indicated having limitations when accessing markets, 23.7% were not able to access adequate land for agriculture while 22.2% had inadequate collaterals that could be used to obtain credit for agriculture. Other factors were young motherhood 15.1% that limited their participation as well as limited schooling 15.1% that led to limited skills and lack of use of innovations in agriculture.

Hypothesis four: - *There is no statistically significant difference between male and female youth in their level of participation in agriculture in Kajiado North Sub-County.* The level of male and female youth participation in agriculture measured in terms of the number of agricultural activities they undertook, their mean, standard deviation as well as standard error was summarized in Table 21.

Table 21

Group Statistics for the Level of Participation in Agriculture

Variable	Gender	n	Mean	Std. Deviation	Std. Error Mean
Agricultural participation	Male	207	2.8732	2.02036	.14111
	Female	190	2.2292	1.69989	.12268

A t-test was done to find out whether the mean difference between the male and female youth in their level of participation in agriculture was significant. The results were summarized in Table 22.

Table 22

The Mean Difference for Level of Participation between Male and Female Youth

T	Df	Sig. (2-tailed)	Mean difference
3.425	395	.001	.64400

The male youth had higher levels of participation than the female youth. The mean difference was found to be significant (t=3.425, df 395, p=.001). The study showed that female youth who took part in agriculture were more than male youth. However, the level of participation by the male youth in terms of number of agricultural activities they undertook was higher than that of the female youth and the difference was significant as indicated. The study thus rejects the null hypothesis and indicates that there is statistically significant difference between the male and female youth in their level of participation in agriculture in the study area. This could have been attributed to factors for instance, FAO (2013) revealed that challenges faced by young men in accessing land are multiplied for young women.

A report by Proctor and Lucchesi (2012) showed that women typically hold smaller plots of land than men and in many developing countries they do not inherit land but only obtain user rights

via a male relative. Several countries have reformed their formal law system so that women are granted equal property and inheritance rights, but the enforcement of these formal laws is challenging (White, 2012; FAO, 2013). Many times young women face difficulties to request enforcement of formal laws because of inadequacies in the required knowledge, financial resources and confidence to protest against social norms and traditions. Young rural women face additional difficulties in accessing markets since in many communities their freedom of movement is restricted because of social and cultural prescriptions (FAO, 2013).

This study found that 23.9% of the female youth faced limitation while accessing markets for their products. The study findings support findings by Dalla Valle (2012) which revealed that young rural women in developing countries face additional constraints in accessing financial services due to their higher rates of illiteracy, restricted liberty of action and lack of consent of family members, much of which can be traced to gender discrimination embedded in societal norms. Paisley **(**2012) and UNESCO (2012) observed that training programs for vocational courses mostly reaching young men do not cater to the needs of young women and that the root factors limiting young women's access to training include restricted mobility, young motherhood and limited schooling levels which agree with the study findings.

4.8 Youth Perceptions of Agriculture

Table 23

Reasons why Many Youth did not participate in Agriculture

Challenges	**Frequency**	**Percentage**
No role models in agriculture	72	18.1
Agriculture is not profitable	70	17.6
Lack of access to viable markets	63	15.8
Lack of access to enough land	60	15.1
Lack of enough finances	50	12.7
Agriculture is a low status career	42	10.6
Agriculture to be practiced by the old and illiterate	40	10.1
Total	**397**	**100.0**

Table 23 indicates that 18.1% youth felt that there were no role models in agriculture. This was followed by 17.6% who claimed that agriculture was not profitable, while 15.8% said that it was due to lack of access to good markets. Others 15.1% claimed that there was inadequate access to land, 12.7% cited inadequate finances for investing in agriculture, 10.6% said that agriculture was regarded as a low status career and 10.1% felt that agriculture should be practiced by the old and illiterate members of society. Over half, 56.4% of the youth revealed negative perceptions of agriculture as a reason why many did not participate in the sector. Hence, agrees with the findings by Leavy and Hossain (2014) who contends that poor perceptions of agriculture influences youth participation in agriculture. Farming is perceived to be a difficult life that offers no attraction to the youth. It also concurs with Noorani (2015) and Proctor and Lucchesi (2012) who found that agriculture is considered as a high risk venture as it depends on rainfall, has marginal returns and is commonly associated with low incomes, drudgery, low societal standing, all of which fail to meet the aspirations of the youth. Aspirations are not just about economic opportunities, status is important. Agriculture is assumed to be unappealing to young people because it does not bring status regardless of economic outcomes.

4.8.2 Correlation Measure for Youth Perception of Agriculture and their Participation

During data analysis, youth responses for each item forming the 6 variables on youth perception of agriculture were converted to scores with the most positive response "Strongly Agree" assigned a score of 5, "Agree" a score of 4, "Neutral" a score of 3, "Disagree" a score of 2 and the most negative response "Strongly Disagree" a score of 1. Total scores for each item were calculated and the mean, standard error (SE), standard deviation (SD) and range were determined as show in Table 24.

Table 24

Descriptive Indicator Statistics for Youth Perceptions of Agriculture (n=397)

Indicators	Mean	SE	SD	Range
A promising career	3.000	0.067	1.346	4
Agriculture is a low status career	2.226	0.062	1.236	4
Agriculture not profitable	3.123	0.084	1.680	4
Included in school curriculum	2.083	0.057	1.139	4
Not to be used a punishment	2.324	0.074	1.478	4
A career choice	3.904	0.071	1.428	4
Index of youth perceptions of agriculture	18.06	0.447	8.914	30

The scores for the six indicator variables created an index of youth perceptions towards agriculture that had a mean of 18.06 and varied between 5 and 30. The reliability of the index using Cronbach's alpha was found to be 0.861. The frequency distribution of the index is given in Table 25.

Table 25

Index of Youth Perceptions of Agriculture

Index	Frequency	Per cent
5 to 10	126	31.7
11 to 20	70	17.6
21 to 30	201	50.7
Total	**397**	**100.0**

Hypothesis five: - There is no statistically significant relationship between youth perceptions of agriculture and their participation in agriculture in Kajiado North Sub-County. Correlation analysis using the index of youth perceptions towards agriculture and their participation in agriculture was used to test the above hypothesis and the results are given in Table 26.

Table 26

Correlation for Youth Perceptions and their Participation in Agriculture

Variables	r	p	n
Youth participation in Agriculture	0.675	0.01	397
Youth perception on agriculture			

Correlation analysis between the youth perceptions of agriculture and youth participation in agriculture show a statistically significant positive relationship (r=0.675, p=0.01). We therefore reject the null hypothesis and indicate that there is a statistically significant relationship between youth perceptions of agriculture and their participation in agriculture since it dominantly influenced their participation in agriculture in the study area. These study finding agrees with those by Dalla Valle (2012) and Noorani (2015) who revealed that though there is recognition of the potential of the agriculture internationally and nationally, there is decline of youth interest and engagement in the sector. The study findings also agree with those of Brooks *et al.* (2012) who found that if youth's contribution is matched with the right skills and resources, the much needed youth potential in agricultural sector could be realized. But, as Njeru *et al.* (2015) and Noorani (2015) contends, lack of incentives and drudgery are some of the reasons why youth are disinterested in agriculture and that in most parts of the world, agriculture is seen as a less worthwhile subject or as a last resort for under-achievers.

These study findings are supported by Brooks *et al.* (2013) and Noorani (2015) that agriculture in Kenya is not the thing to do unless everything else fails and it is not perceived by many as an activity that provides a good standard of living (Leavy & Hossain, 2014). Evidence in East Africa also shows that the status of agriculture as "a poor man's job" is further reinforced in schools when students are sent to dig the school farm as a form of punishment for a mistake. Instead, salaried employment in the formal sector is promoted and portrayed as a prestigious occupation with high esteem (Njeru *et al.*, 2015).

According to MOA (2013), majority of the youth in the Kajiado North Sub-County lacked sufficient innovations in the sector, leading to reliance on traditional and labour-based production techniques, hence lacked the motivation to embrace farming as noble career. A report

by AGRA (2015) expressed the need to address the long held belief that agriculture and rural based activities are for those who cannot make a living anywhere else and that agriculture need to be rebranded as the new unexplored frontier for growth in business opportunities.

4.9 Interventions that could Enhance Youth Participation in Agriculture

The respondents gave their opinion on various intervention measures and strategies that could be adapted to enhance youth participation in agriculture. They also suggested several measures that need to be put in place to ensure youth's participation in policy issues in the agricultural sector in the Sub-County.

Table 27

Interventions by Elders or Parents

Intervention	Frequency	Percentage
Help by formation of societies	64	16.6
Help by training/educating the youth	132	34.3
Encouraging and giving moral support to the youth	4	1.1
Adapting modern methods of farming	17	4.4
Assist the youth with capital	12	3.2
Ensure timely land allocation to the youth	126	32.8
Involve the youth in decision making	8	2.1
Mentorship of the youth	21	5.5
Total	**384**	**100.0**

Over one third of the respondents, 34.3% reported that parents should support them through training, especially in agricultural related disciplines. This was followed by 32.8% who indicated that land should be allocated to the youth in good time. Others 16.6% stated that parents could help in formation of groups which the youth can join, 5.5% indicated that mentorship programs were crucial, 4.4% stated that adoption of modern farming methods was important. Few respondents 3.2%, 2.1% and 1.1% indicated that parents should assist the youth with the required capital, involve them in decision-making processes, encouraging and giving them moral support

as required. This is in accordance with the report by FAO (2014) which revealed that the youth often lack access to finance to buy land.

Cooperative farming in some countries for instance India has proved to be successful in overcoming this constraint, a phenomenon that Kenyan youth could borrow to improve their level of participation in agriculture. However, this requires support from the elders. The study findings are also in line with those of Proctor & Lucchesi (2012) that efforts aimed at fostering youth involvement in agricultural activities and decision-making processes are pertinent and that these efforts can seize on the youth's capacity and their propensity for taking higher entrepreneurial risks thus making them succeed in agriculture. Also Dalla Valle (2012) confirmed that organized self-help groups could provide the means of generating savings and improving the borrowing power of both individual youth members and the group thus will help mitigate the issue of financial constraints faced by the youth.

Table 28

Government and other Development Partners Interventions

Interventions	**Frequency**	**Percentage**
Funding youth in agriculture	100	25.4
Better land policies	132	33.5
Reduce interest rates by financial institutions	20	5.1
Improve the infrastructure	95	24.1
Ensure accessibility to markets	15	3.8
Training on use of ICTs in agriculture	20	5.1
Formation of youth organizations	12	3.0
Total	**394**	**100.0**

Over two thirds of the respondents, 33.5% wanted the government to come up with better land policies. This was followed by 25.4% who stated that funding youth in agriculture was of paramount importance. Others 24.1% reported that the government should improve the infrastructure while 5.1% said that they needed training on agriculture and ICTs skills and youth in agriculture could be assisted to access credits at reduced interest rates. Few respondents, 3.8%

and 3.0% indicated that markets accessibility should be enhanced and that support in formation of youth organizations was pertinent. These study findings agrees with those of Noorani (2015) who found that the government could ensure that arable government land is only used for agricultural purpose, fairly distributed among young male and female farmers and that mechanisms should be put in place to help the youth practice sustainable agriculture. FAO (2013) found that promotion of land reforms and creation of laws that ensure young people's access to production resources that ensure equal opportunities for young men and women should be adopted.

The study findings also concurs with those of Purvis (2014) that the government can adopt laws and public policies relevant to youth that facilitate access to credit for production according to the specific needs of the youth and that governments and farmer's organizations should work out financial support programs specifically directed to young farmers. Studies by AGRA and Njeru and Mwangi (2015) supports the study findings that agribusiness centers with storage and processing facilities should be created for youth to link them with traders and act as venues for training, sensitization and capacity building, particularly on markets and financing opportunities as well as agricultural technologies. FAO (2013) found that youth ought to be trained on financial sustainability and management of membership-based organizations in order to encourage the creation of strong and sustainable young farmer's organizations.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter gives a summary, conclusions and recommendations of the study as well as suggestions for further research.

5.2 Summary

This study sought to determine the influence of selected factors on youth participation in agriculture in Kajiado North Sub-County. The factors included youth access to land, finances, and markets for agricultural commodities and youth perceptions towards agriculture. The study also sought to determine whether there was a significant difference between males and females in their level of participation in agriculture. Participation was measured in terms of youth engagement in crop and livestock production, transporting and marketing agricultural products as well as value addition. The study further sought to determine whether there was a relationship between the selected factors and youth participation in agriculture and how this relationship influenced youth participation in agriculture. To get the required information on youth participation in agriculture and interventions used to attract the youth to agriculture, the researcher administered two questionnaires, one for youth and the other for agricultural and youth officers. The questionnaire's face and content validity were determined by a panel of experts from the Department of Agricultural Education and Extension of Egerton University, who evaluated the item's appropriateness and clarity. The questionnaires were pilot tested in Kajiado East Sub-County to determine their reliability and the results were used to improve them.

Three ninety seven youth, 15 agricultural officers and six youth officers participated in the study. The youth were sampled from the four Sub-County Wards. Data sources from the 397 youth studied indicated that 39.1% had received formal training at certificate, diploma and University level implying that youth in the study area had good education. They were engaged in 16 agriculture of which 10 were related to livestock keeping and five to crop growing. Poultry

keeping was the preferred livestock activity (preferred by 40.6% of the youth) while maize growing was the preferred crop activity (preferred by 45.3% of the youth).

About 11% did not access land, 50% youth accessed less than 1 acre, 25% accessed land between 1 to 5 acres, and 13% 5 to 10 acres while only 1% accessed10 acres or more. Most youth lacked access to land for agriculture as 45.4% used land owned by their parents or grandparents, 29.2% owned inherited land, 15.6% leased land and only 9.8% had purchased land. There was a statistically significant positive relationship ($r=0.345$, $p=0.01$) between youth access to land and their participation in agriculture implying access to land influenced their participation as those with better access to land participated more in agricultural activities than those who did not have such access.

About 53.4% youth used their savings from source other than salaries, 27.5% used finances from non-agricultural businesses, 12.1% borrowed finances from parents and other relatives, 3.5% were financed by microfinance institutions while 2.3% used money from their own salaries. There was a statistically significant positive relationship ($r=0.197$, $p=0.01$*)* between youth access to finances and their participation in agriculture implying access to finances influenced youth participation in agriculture in Kajiado Sub-County.

About 28.7% youth cited poor infrastructures and limited knowledge on market prices as major constraints when accessing markets for agricultural commodities. Yet, 20.2% cited limited skills in ICTs, 15.9% limited entrepreneurial skills, while others cited limited skills on value addition, gender issues and price fluctuation during marketing. There was a statistically significant positive relationship ($r=0.330$, $p=0.01$) between youth access to markets for agricultural products and their participation in agricultural activities implying that youth access to market significantly influenced their participation in agriculture. A t-test indicated that male youth had significantly higher levels of participation in agriculture than female youth ($t=3.42$, df 396, $p=0.001$).

Approximately 18.1% of the youth felt that there were no role models in agriculture, 17.6% felt that agriculture was unprofitable, 10.6% considered it a low status career and 10.1% felt that it was for old and illiterate society members. There was a statistically significant positive

relationship (r=0.675, p=0.01) between youth perception of agriculture and their participation in agriculture. This showed that perception of agriculture had a significant influence on their participation in agriculture as youth with positive perception had higher levels of participation than those with negative perception.

5.3 Conclusions

Based on the findings of the study, the researcher concluded that:-

i. Access to land influences youth participation in agriculture since youth with better access to agricultural land participated more in agriculture than those without. Half of the youth accessed farms of less than 1 acre, 11% had no access to land while only 1% had access to farms with sizes of over 10 acres. About 45.4% of the youth did not own land but relied on family land while only 9.8% of the youth owned land.
ii. Access to finances influences youth participation in agriculture since youth with better access to finances participated more in agriculture than those without. About 53.4% of the youth used their own savings other than salaries while 3.5% borrowed from microfinance institutions.
iii. Access to markets influences youth participation in agriculture since youth with better access to markets participated more in agriculture than those without. About 28.7% of the youth cited limited knowledge on market prices as a major constraint that was negatively affecting their participation in agriculture while 15.9% cited lack of entrepreneurial skills as a major constraint during marketing.
iv. Gender influences youth participation in agriculture since the activity-based level of participation was higher for male youth than for female youth. However, in terms of total numbers, there were more female than male youth participating in agriculture. About 23.9% of the female youth had challenges accessing markets while 15.1% had challenges associated with motherhood.
v. Youth perception of agriculture influences their participation in agriculture since youth with positive perceptions participated more in agriculture than negative perceptions. About 18.1% of the youth felt that there were no good role models in agriculture, 17.6% felt that agriculture was unprofitable, 10.6% felt that it was a low status career and 10.1% felt that it was for old and illiterate members of society.

5.4 Recommendations

Based on the study conclusions, the researcher made the following recommendations:-

i. In order to increase youth access to land, the elderly people who own land in Kajiado North Sub-County should consider transferring part of their land to younger family members.

ii. In order to enhance youth access to finances, policy makers and their development partners together with other stakeholders in the Sub-County should strategize on how to increase youth access to agricultural credit.

iii. In order to enhance youth access to market, leaders and other stakeholders in the Sub-County should strategize on how to improve market infrastructure, market information as well as knowledge on market requirements and negotiation skills.

iv. In order to address the issue of gender equity that has implication on youth participation in agriculture, leaders in Kajiado North Sub-County together with their development partners and other stakeholders should promote land reforms that ensure equal agricultural opportunities for both males and females.

v. In order to attract the youth to the agriculture sector and create positive agriculture perceptions among them, policy makers and their development partners should ensure that agriculture is included in primary and secondary school curricula so that youth can learn from an early age to appreciate its importance. The training should include practical sessions and models that portray agriculture as a lucrative career choice.

5.5 Recommendation for Further Research

More studies should be done in other areas to determine whether the situation is different. This would help to come up with a more comprehensive program for enhancing youth participation in agriculture in Kenya.

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APPENDIX A

Cover Letter for the Youth

Dear Respondent,

I am a student undertaking a PhD program in Agricultural Extension at Egerton University, Njoro Campus. My study is on influence of selected factors on youth participation in agriculture in Kajiado North Sub-County. I request you to participate in the research study. Your information will only be used for academic purpose.

Kindly respond to all the items in the questionnaire. Do not write your name in the questionnaire.

APPENDIX B

Youth's Questionnaire

Instructions

Indicate the answer directly on the spaces provided by making a tick **(√)** on the most appropriate answer and also writing down information where applicable. The information you provide will be kept confidential.

Section A: Demographic characteristics (Tick (√) one)

1. Gender: Male ( ) Female ( )
2. Age category in years; 18-20 ( ) 21-25 ( ) 26-30 ( ) 31-35 ( )
3. Marital status: Married ( ) Single ( ) Divorced ( )

Others

(specify)……

…….

4. Level of education: Primary ( ) Secondary ( ) College (diploma or certificate) ( ) University ( )
5. Size of land you are able to access/own in acres; less than one ( ) 1 to 5 ( ) 5 to 10 ( ) More than 10 ( )
6. Ways of land acquisition

   Inheritance ( ) Leasehold ( ) Bought ( ) Using family land ( )

Section B: Youth participation in Agriculture (Tick (√) all that applies)

7. a, Indicate the agricultural activities you are engaged in

   Growing of crops ( ) Keeping of Livestock ( ) Transporting ( ) Marketing ( )

   Processing raw materials into finished goods ( )

   Others (specify)

   ……

   ……

   ……..

   b, What type of livestock do you keep?

   Beef cattle ( ) Dairy cattle ( ) Rabbits ( ) Poultry ( ) goats ( ) sheep ( ) pigs ( )

   Others (specify)

   ……

   ……..

   c , What type of crop do you produce

   Maize ( ) Beans ( ) Sorghum ( ) Horticultural crops ( ) Sweet potatoes ( )

   Others (specify)

   ……..

8. How long have you been practicing agriculture?

   Less than a year ( ) 1-2 years ( ) 3-4 Years ( )

   5-6 year ( ) more than 6 years ( )

9. Majority of the youths in the Sub- County do not engage in agriculture, from your own opinion, why do you think they do not practice. (Tick all that apply)

   Agriculture is not profitable ( ) No role models in agriculture ( ) Lack of access to good markets for agricultural produce ( ) Lack of enough finances for investing in agriculture ( ) Lack of enough land ( ) Cultural practices ( )

   Others (specify)

   ……

   ……..

10. What is your level of participation in the following agricultural activities in terms of duration?

Activities	**Daily**	**Weekly**	**Fortnightly**	**Monthly**
Growing of crops Keeping of Livestock Transporting agricultural products Marketing agricultural products Processing raw materials into finished goods				

Others (specify)

.....

.....

.....

11. If you are involved in transportation of farm produce, kindly indicate how it is done

By use of own vehicle ( ) By use of hired vehicle ( ) By use of family vehicle ( )

By use of a cart ( ) By use of a Motor cycle ( )

Others specify……

Section C

12. Please indicate the extent to which you agree or disagree with the following statements on selected factors influencing youth participation in agriculture

Key: SA- Strongly Agree A- Agree U- Undecided D- Disagree SA- Strongly Disagree. Tick one **(√)**.

Access to land

`	Statement	SA	A	U	D	SD
1.	Female youth have equal access to land as male youth.					
2	Youth access to enough land for farming is difficult.					
3	Inheritance is the main method of youth access to land.					
4	Youth who cultivate family land get little income from their work					
5	land that is communally owned discourages youth from participating in agriculture					
6	Shortage of land for farming causes youth migration to urban centers in search of white collar jobs					

Access to finances

	Statement	SA	A	U	D	SD
1	Fear of loan repayment discourages youth from getting farm credit					
2	Youth with adequate finances are more likely to participate in agriculture than those without					
3	High interest rates make it more difficult for the youth to access credit facilities from money lending institutions					
4	Youth who lack collateral are less likely to access farm credit					
5	Financial institutions often have the perception that youth form a riskier client category than adults					
6	Most youth have difficulties in selling their business ideas to finance institutions due to lack of knowledge					

Access to market

	Statement	SA	A	U	D	SD
1	Market structures rarely favour young people.					
2	Youth often lack the required information on market prices.					

3	Youth need organizations that allow them gain the necessary bargaining power to interact on equal term with other market actors					
4	Lack of access to market for farm products discourage s youth from participating in agriculture					
5	Female youth face difficulties in accessing markets since their movement is restricted sometimes.					
6	Most youth rarely have enough information on market prices					

Youth perception on agriculture

	Statement	SA	A	U	D	D
1	Agriculture has profitable if done properly					
2	Agriculture is a very tiring career					
3	Agriculture is a potential career sector					
4	Agriculture should be included in school curriculum at all levels					
5	Agricultural activities should be used for punishing students					
6	Agriculture should be viewed as a last career choice					

13. How do you benefit from the existing opportunities in agriculture? (Tick all that apply)

Expanding markets ( ) Government policies targeting youth ( ) Livestock potential ( )

Opportunities for value addition ( ) Proximity to Nairobi city for marketing ( )

Others (specify)

……

……..……..

14. How do the gender issues influence youth participation in agriculture in Kajiado Sub-County? (Tick all that apply)

Female youth have no access to enough land ( ) Young motherhood ( ) limited collaterals for the female youth ( ) Limited schooling for the female ( )

Limited access to markets due to limited movement by women ( )

Any other

specify……

……..

……

……...……..

15. How can the government encourage you to participate in agriculture? (Tick all that apply)

Through funding ( ) Training Capacity building ( ) Offering extension services ( )

Land policies that ensure equal opportunities for young men and women ( )

Others (Specify)

……

……...…….

16. How do you spend the youth fund from the government? (Tick all that apply)

For agricultural projects ( ) For other businesses outside agriculture ( ) For paying fees for college education ( ) Buying land for farming ( )

Buying livestock ( ) Running boda-boda business ( ) I have never been funded ( )

Others (Specify)

……

……...…….

17. How do you gain access to finances that you use for agricultural activities?

Borrowing from micro-finance institutions ( ) Own savings ( ) Funded by parents ( ) From other business outside farming ( ) Salary earned from formal job ( )

Others (Specify)……

18. What are the main challenges faced while accessing markets for agricultural commodities

Poor infrastructures ( ) Limited of knowledge on market prices ( ) Price fluctuation ( ) limited Entrepreneurial skills ( ) Limited of skills on value addition ( )

Limited ICT knowledge ( ) Gender issues ( )

Any other specify……

19. What are the main factors that lead to lack of youth participation in agricuture?.....
.....
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.....
.....
.....
.....
.....
.....
.....

20. From your own opinion, what intervention should be undertaken by the following stakeholders to scale up youth participation in agriculture?.

Elders/parents……
……
……
……
……
……

Government……
……
……
……
……
……
……

THANKS FOR YOUR CO-OPERATION

APPENDIX C

Cover Letter for the Agricultural and Youth Officers

Dear Respondent,

I am a student undertaking a PhD programme in Agricultural Extension at Egerton University, Njoro Campus. My study is on influence of selected factors on youth participation in agriculture in Kajiado North Sub-County. I request you to participate in the research study. Your information will only be used for academic purpose. Kindly respond to all the items in the questionnaire. Do not write your name in the questionnaire.

APPENDIX D

Questionnaire for the Agricultural and Youth Officers

Instructions

Indicate the answers directly on the spaces provided by putting a tick **(√)** on the most appropriate answer and also writing down information where applicable.

Section A Demographic Characteristics

21. Age in years; Below 20 ( ) Between 21 – 30 ( ) Between 31 – 40 ( ) Between 41- 50 ( ) Above 50 ( )
22. Level of education; Certificate ( ) Diploma ( ) Bachelors ( ) Masters ( ) PhD ( )
23. Gender; Male ( ) Female ( )
24. Work experience; Less than 5 years ( ) Between 6 - 10 years ( ) Between 11- 15 years Between 16 - 20 years ( ) Above 20 years ( )

Section B

25. What are the major agricultural activities that youth undertake in the Sub-County?.....
    .....
    .....
26. What is the common type of land tenure systems for the farmers in the Sub-County?
    Inheritance ( ) lease hold ( ) Communal ( ) Co-operative
    Any other specify……..
27. Does access to land act as a hindrance to youth participation in agriculture in the Sub-County? (Tick one) Yes ( ) No ( )

28. If yes suggest ways in which access to land hinder the youth from participating in agriculture (Tick all that apply)

Inadequate of money to buy land ( ) Land sub-division into very small portions ( )

A lot of time taken before inheriting land ( ) Female youth do not inherit any land ( )

Any other specify

……

……

…….

29. Do the youth in the Sub-County gain access the youth fund? (Tick one)
Yes ( ) No ( )

30. If the answer to question 9 is yes suggest ways in which they use the funds (Tick all that apply)

Growing of horticultural crops ( ) Keeping layers ( ) Keeping rabbits ( )

Starting a boda-boda business ( ) starting a small micro-enterprise kiosk ( )

Any other specify ……

……

……...

31. How do the gender issues influence youth participation in agriculture in Kajiado Sub-County? (Tick all that apply)

Female youth have no access to enough land ( ) Young motherhood ( ) limited collaterals for the female youth ( ) Limited schooling for the female ( )

Lack of access to markets due to limited movement by women ( )

Any other specify……

……

32. How many times do these factors/reasons influence youth participation in agriculture in the Sub-County?

Reasons/factors	**Yearly**	**Monthly**	**fortnightly**	**Weekly**
Lack of access to land Lack of markets for agricultural produce Gender Lack of enough finances Poor perception on agriculture by the youth				

Others (specify)

.....

.....

33. What do you think are the challenges faced by the youth in participating in agriculture in the region?

……

……

……

34. How can the challenges be overcome?

.....

.....

.....

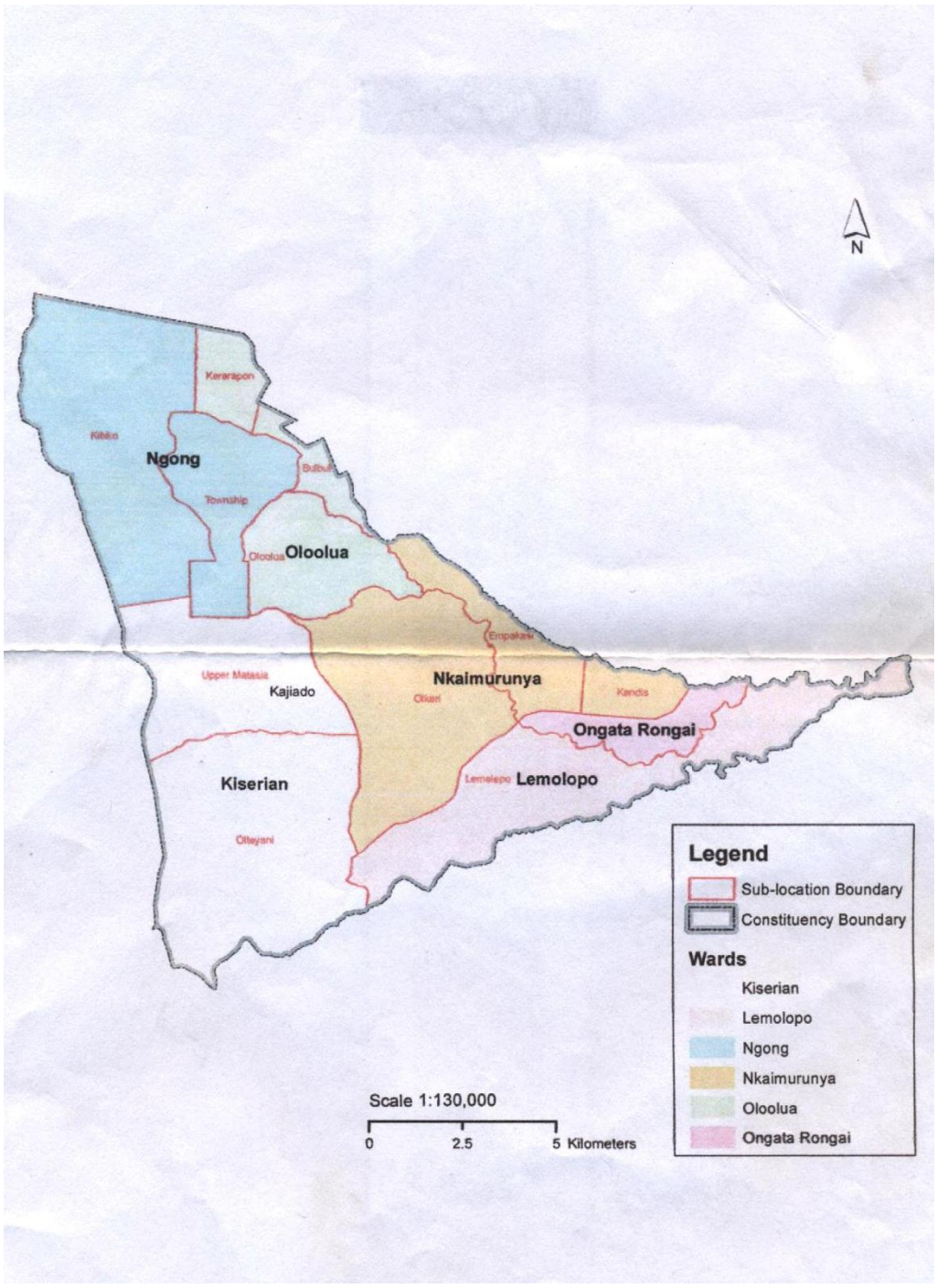
.....

.....

THANKS FOR YOUR CO-OPERATION

APPENDIX E

Map of Kajiado North Sub-County



APPENDIX F

Research Authorization from National Commission for Science, Technology and Innovation

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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Website: www.nacosti.go.ke
When replying please quote

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P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. NACOSTI/P/14/4894/2987

Date: 25th September, 2014

Njeru Lucy Karega
Egerton University
P.O. Box 536-20115
EGERTON.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Influence of selected factors on youth participation in agriculture in Kajiado North Sub-County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Kajiado County** for a period ending **8th June, 2015.**

You are advised to report to **the County Commissioner and the County Director of Education, Kajiado County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. S. K LANGAT, OGW
FOR: SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
Kajiado County.

APPENDIX G

Research Permit

THIS IS TO CERTIFY THAT:
MS. NJERU LUCY KAREGA
of EGERTON UNIVERSITY, 0-60100
embu,has been permitted to conduct
research in *Kajiado County*
on the topic: *INFLUENCE OF SELECTED FACTORS ON YOUTH PARTICIPATION IN AGRICULTURE IN KAJIADO NORTH SUB-COUNTY, KENYA*
for the period ending:
8th June,2015

Permit No : NACOSTI/P/14/4894/2987
Date Of Issue : 25th September,2014
Fee Recieved :Ksh 2,000

.....
Applicant's Signature

.....
Secretary
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 3330

CONDITIONS: see back page