FACTORS INFLUENCING YOUTH PARTICIPATION IN AGRICULTURAL VALUE CHAIN PROJECTS IN KENYA: A CASE OF KATHIANI SUB-COUNTY, MACHAKOS COUNTY, KENYA

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DECLARATION

This research project report is my original work and has never been submitted for any award in any other university.

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This research project report has been submitted for examination with my approval as the university supervisor.

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DEDICATION

This work is dedicated to my dear wife Peninah Kanini and son Mike Kising'u, as well as my mum Veronica Nthambi Kising'u, my brother Paul Wambua and sisters Mary Wanza and Jacinta Nthenya. They offered me spiritual, moral and financial support throughout the process of conducting this study. God bless you abundantly.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASDSP	Agriculture Sector Development Support Programme
CIGs	Common Interest Groups
CIDP	County Integrated Development Plan
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IFAD	International Fund for Agriculture Development
ILO	International Labour Organization
KAPAP	Kenya Agricultural Productivity and Agribusiness Project
KNBS	Kenya National Bureaus of Statistics
MIJARC	Mouvement international de la jeunesse agricole et rurale catholique
MDGs	Millennium Development Goals
MOA	Ministry of Agriculture
NALEP	National Agriculture and Livestock Extension Programme
TRA	Theory of Reasoned Action
UN	United Nations
UNDP	United Nation development Programme

ABSTRACT

This study sought to establish factors influencing youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County, Kenya. The study was necessitated by the fact that, despite the consensus by the Kenyan Government and her development partners, that, the reliance on agriculture for food production and food security, at domestic, regional and global level, depends on youth creative and productive force, and that youth participation in agriculture is an important source of employment to the youth - who form a large proportion of unemployed persons in Kenya - the agriculture sector; which remains the backbone of the Kenya's economy, remains unattractive to the youth. In Kathiani Sub-county, there is a large percentage of unemployed youth and hence the high rate of youth migration from rural to urban centres. This is because farming to them was expensive and meant for the older generation. The study was guided by the following objectives: To explore how youth awareness on agricultural value chain projects influences their participation in those projects; to establish how perceptions of the youth on agriculture, and access to social-capital networks, influences youth participation in agricultural projects, in addition, to assess how economic factors influence youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County. The study was based on the theory of reasoned action. This research employed a descriptive survey design, as it is focused on collecting data to explore, find out and explain the factors that influenced youth participation in the projects. The target population for this study was 1,740 members of registered youth groups in Kathiani Sub-county. The sample size of this study was 96 respondents. Stratified proportionate sampling was adopted to select the 24 participants from each of the four locations in the Sub-county. Primary data was collected by administering a semi-structured questionnaire. Descriptive and inferential statistics were used to analyse the quantitative data. Descriptive statistics was used to summarize the data. These included percentages and frequencies. Tables were appropriately used to present the data that was collected, for ease of understanding and analysis. Inferential statistics (Pearson's Correlation Analysis) was used to explore the relationship between the dependent variable (youth participation) and independent variables. The study found that economic factors such as inadequate land and lack of funds limited youth participation in agricultural value chain activities. Further, majority of the youth indicated that they participated in agricultural value chain activities because they were aware about existing projects and activities. Access to social-capital networks and youth perception on agriculture had minimal effects on youth participation in agricultural value chain activities in Kathiani Sub-county. The study recommends that the County government of Machakos and other County governments across the country should make adequate budgetary allocation to finance for modern technology, establish innovation hubs and provide machines and equipment to support agricultural activities for the youth. This will improve efficiency in farming and save huge costs that might in turn contribute to improved productivity. The study further recommends that the County governments should assist in creating ready markets and facilitating linkages to other markets, for agricultural produce, this will encourage the youth to participate in farming activities since they are assured of making sales and increasing their profits which will contribute to employment, improved income and household food security.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Agriculture remains fundamental to poverty reduction and economic growth in the 21st Century. An estimated 75% of the world's poor are from rural areas and most are involved in farming, an activity which requires sustenance especially by the youth who are the leaders of tomorrow (World Bank, 2008). The reliance on agriculture for food production and food security at domestic, regional and global level depends on youth productive force. This is the generation which is expected to rise in the coming years for food production and food security (Proctor and Lucchese, 2012).

Umeh and Odom (2011) argue that, the contribution of agriculture to farmers' income and rural development depends on the active participation of youth who are the potential labour force. They are characterized by innovative behaviour, minimal risk aversion, less fear of failure, less conservativeness, greater physical strength and greater knowledge acquisition propensity. Akwiwu and Nnadi (2005) assessed the level of youth participation in agricultural activities in Nigeria; the results found that most of the youth perceived agriculture as a part-time job and not as a profession.

African agriculture is beset by a host of challenges. Experts identify lack of market access, low productivity, and on-adoption of modern farming systems, as well as climate change, low fertilizer usage, inadequate storage and processing facilities as being the most crucial. However, daunting as these challenges may seem, they pale into insignificance when juxtaposed against these two intertwined issues: - Non-engagement of African youths in agriculture and the ageing population of African farmers (Afande *et al*., 2015). According to Muthee, (2010), youth are not largely

involved in agricultural activities due to the fact that agriculture as a career choice is burdened with misperceptions and a lack of information and awareness. This is mostly due to uncompetitive wages, the physical aspects associated with work in the sector and the lack of awareness of what careers in the agricultural sector have to offer.

In Nigeria as observed by Aphunu and Natoma (2010), the younger generation is not interested in farming even though youth have been identified as constituting the major resource base. Emergence of petroleum industry as the main foreign exchange, coupled with other social-economic constraints has resulted in youth not actively participating in agricultural development. Most of the young people in Nigeria would rather work in an oil company than in the farm which is considered as a dirty and non-rewarding job.

In Uganda, a study done by Gemma *et al*., (2013) showed that the youth withdraw from agriculture in higher rate than the older cohort. This shift is more prominent in the educated youth who migrate to the urban centers to look for jobs. The study further reveals that lower percentage of youth use improved input and this lead them into subsistence farming. Youth are not the owners or managers of critical assets of agricultural productions for example they use land with no exclusive rights. A relatively lower percentage of youth use improved inputs, with this poor rate of adoption of appropriate inputs, productivity is likely to remain low and constrain the youth to subsistence farming (Gemma *et al*., 2013).

Agriculture is the mainstay of Kenya's economy, currently contributing 27.3% of the GDP directly (KNBS, 2015). The Kenya Agricultural Sector Development Strategy programme document, revealed that the sector accounts for 65% of Kenya's total

exports; provides more than 18% of formal employment; 70% of informal employment in the rural areas and provides a livelihood for close to 80% of the Kenyan population (ASDSP, 2011). A study by Wouterse (2009) indicated that growth in agriculture and improved rural incomes has significant and direct impact in reducing overall poverty. The sector provides raw materials to the manufacturing sector and stimulates large indirect growth effects in non-farm income and employment (Meijerink and Roza, 2010). According to Njeru and Gichumu (2015), agriculture provides the single most important platform for expansion of employment, income generation and food security in Kenya.

Kenyan youth are all individuals in the Republic who are between 18 and 35 years (KNBS, 2010). It is estimated that 78.31% of Kenyans are below 35 years and that 64% of unemployed persons in Kenya are the youth. Only 1.5% of the unemployed youth have formal education beyond secondary school level and over 92% have no vocational or professional training with majorities in rural areas (KNBS, 2010). This clearly shows that youth constitute a key demographic domain of poverty. This implies that the youth are not fully engaged in productive economic activities, which puts a big burden to society and to their families in particular. This problem is compounded by their rural to urban migration in search of white collar jobs instead of seeking gainful self-employment through agricultural value chain activities to enhance household food security and poverty reduction. Therefore, efforts by Kenya to achieve international targets within the framework of MDGs as well as the national policy objectives contained in the medium development plans and the Vision 2030 need to rally the potential of the youth as a very significant demographic group (Njeru and Gichumu, 2015).

The 2009 population and housing census, 34% of the Kenyan population is aged between 15 and 34 years. This is a substantial workforce that could contribute significantly to economic growth. However, much of this labour force is unutilized. Valerie (2009) argues that youth are the major catalyst for change and a backbone of a nation hence mobilizing them for national development through participation in agriculture is paramount. This economic activity has not been embraced by the young generation who perceive it as an occupation for the old, illiterate, poor rural people (FAO, 2006). Valerie (2009) further argues that young farmers ought to replace the ageing producers otherwise the production of food is likely to be compromised. The youth have the potential to overcome some of the major constraints to expanding agriculture such as pest control and genetic improvement because they are often more open to new ideas and practices (Gitau, 2011). According to Njeru and Gichuru (2014), many young Kenyans struggle to find work, or only have low-paid jobs. This prolongs their dependency on their parents and fuels frustrations, which increases the likelihood of violence or conflict.

Mibey (2015) assessed the factors influencing youth involvement in agribusiness projects in Bomet Central sub-county, Kenya. The study used a descriptive research design to establish the factors that influenced youth involvement in agribusiness projects, the study found that although youth contributed significantly to socio-economic development - through agriculture - they continued to face constraints such as access to land, credit facility, and lack of skills on modern agricultural methods coupled by poor infrastructure.

A study conducted by Mutua (2014) on the factors influencing implementation of agricultural projects, funded by Microfinance institutions in Central Division,

Machakos County, Kenya, revealed that technological factors, socio economic factors, government policies, education factors impacted positively on the success of MFI funded agricultural projects in Central Division, Machakos County.

Afande *et al*., (2015) indicate that the Kenyan population is to a large extent comprised of a high and increasing cohort of young people, close to 78 percent of the population is below the age of thirty. Evidence reveals that youth engagement in agriculture is declining amidst rising youth unemployment yet the services and industrial sectors, despite growing at considerably faster rates have not created enough jobs for the burgeoning youthful labour force. This may have implications on food security, unemployment, and underemployment and may undermine the government efforts to drive economic growth through agriculture (Afande *et al*., 2015)). This study seeks to establish the factors influencing youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County.

1.2 Statement of the Problem

Agriculture which is basically a rural oriented sector, provides over 80% of employment opportunities in the country but remains unattractive to the youth (Njeru and Gichumu, 2015). Agriculture in the country is mostly done by the older with the average age of a Kenyan farmer being 60 years, this is because most Kenyan youths are moving from rural to urban areas in large numbers in search of office work. However the urban areas are not able to generate jobs as fast as the growth in population which has led to high levels of youth unemployment (UNDP, 2011).

Machakos County has a total of six Sub-Counties and among those, Kathiani Sub-county is the only other area - apart from Kangundo Sub-county - which has been blessed with good soils, adequate rainfall and medium sized flowing streams, used for

irrigation (Machakos County CIDP, 2013). Despite the substantial investment by the government, as well as development partners in providing funds and capacity building support to youth groups, young people in the Sub-county have not embraced the opportunities to engage in farming, for employment creation and food security.

Group registration records at the Kathiani Sub-county social services department, as at end of March 2016, showed that, the Sub-county had 116 registered youth groups, and engaged in different enterprises. Out of the 116 registered youth groups, only 41 are involved in agribusiness. The youth groups had an average of 15 members, thus about 615 youth participating in agriculture through registered groups. This number is considered low, and begs the question of why the youth prefer other forms of enterprises and not agribusiness, despite the substantial investment made in enticing the youth back to agriculture. In Kathiani Sub-county, there are cases where youth have not been able to utilize their land and to some, the land is sold in order to join other business. The worst case in the Sub-county is the high rate at which youth sell their small inherited land to join the infamous "*boda boda"* (motor cycle) business (Sub-county Social Services Department, 2016).

Despite worrying accounts about youth's lack of interest in agriculture, there has been relatively little research that has been done to try and capture the youth's views, voices and aspirations toward agribusiness. Therefore, there was no sufficient evidence on enhanced youth involvement in agriculture values chain projects in Kenya. Hence, this study aimed at filling the existing research gap by conducting study to investigate factors that influence youth participation in agricultural value chains projects; for employment creation and food security in Kathiani Sub-county, Machakos County, Kenya.

1.3 Purpose of the Study

The purpose of the study was to investigate factors influencing youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County, Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives:

i. To explore how youth awareness on agricultural value chain projects influences their participation in agricultural projects in Kathiani Sub-county, Machakos County
ii. To establish how perceptions of the youth on agriculture influence their participation in agricultural value chain projects in Kathiani Sub-county, Machakos County
iii. To establish how social-capital networks influences youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County
iv. To assess how economic factors influence youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County

1.5 Research Questions

The study sought to answer the following research questions

i. How does youth awareness on agricultural value chain activities influence their participation in agricultural value chain projects in Kathiani Sub-county, Machakos County?
ii. How do perceptions of the youth on agriculture influence their participation in agricultural value chain projects in Kathiani Sub-county, Machakos County?
iii. How do social-capital networks influence youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County?

iv. How do economic factors influence youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County?

1.6 Significance of the Study

The finding of this study hoped to be of great importance to the youth, as they reflect on the enablers and hindrances of their participation in agricultural value chain projects, for employment and income generation, as well as their own and their families' food security. The study was also hoped to be of great importance to the County and National government policy makers, as well as development partners and youth agribusiness financiers, to help enlighten them on the factors influencing the participation of youth in agricultural value chain projects in Kenya. This would inform them in the design of policies and programmes, as well as implementation of projects, aimed at enhancing youth participation in agricultural value chain projects, with the goal of employment creation and enhancing food security in Kenya. Some of these programmes and projects included: The Youth Enterprise Development Fund (YEDF), Uwezo fund and Ministry of Agriculture Youth in Agriculture programme. The findings of this study added to the body of knowledge on factors influencing youth participation in agricultural value chain projects. The study will provide basis and literature for future research.

1.7 Limitations of the Study

The critical limitation might be the poor or unwillingness response from the respondents, the study research team explained the purpose of the study and assured respondents of confidentiality of the information. Poor road networked inhibited data collection especially in the remote areas.

1.8 Assumptions of the Study

The sample used acted as a representative of the target population and the data collection instruments were valid and reliable and consistent in measuring the data. The participants that were selected for the study were found to be honest and objective. They gave out correct and accurate information about their participation, or lack of participation in agricultural value chain projects in Kathiani Sub-county, Machakos County.

1.9 Delimitations of the Study

This study was delimited to registered youth groups in Kathiani Sub-county. Selected representative youth participating projects in agriculture along different value chains were interviewed to share their experiences about participating on the on-going or completed initiatives. Young people who did not participate in non-agricultural projects were also interviewed to share their views and perceptions towards agriculture. All other factors that influenced youth participation in agricultural value chain projects were held constant apart from youth awareness on agricultural value chain activities, youth attitudes towards agriculture, access to social capital/networks, as well as economic factors that influenced youth participation in agricultural value chain projects in Kathiani Sub-county, will be studied.

1.10 Definitions of Significant Terms

Agricultural Value Chain - For the purpose of this study agricultural value chain means all economic activities which take place in crop and livestock production, bulking, transportation, processing and marketing of agricultural products.

Social Capital - This will refer to the norms and networks that enable people to act collectively. They are connections among individuals that characterize social networks where norms of reciprocity and trustworthiness arise.

Youth Awareness - This will refer to the level at which the youth know that the agricultural value chain projects exist and that their participation in those projects will offer gainful economic opportunities for them.

Youth Participation - In this study the youth participation refers to active involvement of young people aged between 18-35 years in production processing and marketing in the agricultural sector.

1.11 Organization of the Study

This study was organized in five chapters. Chapter one of this study covered the background of the study, the statement of the problem, purpose of the study, objectives of the study, research questions, and significance of the study, assumption of the study, limitation of the study, delimitations of the study, definition of terms and the organization of the study. Chapter two of this study covered the literature review alongside the study objectives. It also presented the theoretical framework of the study. Chapter three of this study covered the research methodology that was used by this study, the research design, the target population of the study, the sample size and sampling techniques, research instruments, data collection methods and data analysis methods. The final research project report had two more chapters. Chapter four of this study covered data analysis, presentation and interpretation. This section organized the data in an orderly manner in order to make useful analysis before the data is presented. By organizing the data the researcher identified errors, code and stored data in appropriate form. Chapter five covered provided a summary of findings, discussion, conclusions and recommendations. This section looked at the findings of the study and compared the findings with what was found out by other researchers. This was followed by references and appendices sections.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contained literature review on the parameters of the study variables. It also featured the theory upon which the study was anchored as well as the conceptual framework; knowledge gaps, and a summary of the literature review.

2.2 The Concept of Youth Participation in Agricultural Value Chain Projects

Youth is usually defined with reference to age brackets; there is little agreement as to either the upper and lower limits (Afande *et al*., (2015). For instance, in Ethiopia the Ministry of Youth, Sports and Culture (2004) puts the youth bracket at 15 – 29 years. In Ghana, the National Youth policy (2010) puts the youth bracket at 15-35. In Senegal, the Youth Development Sector Policy Letter (LPDSJ, 2004) puts the bracket at 15 – 35 years. Kenya's National youth policy (2002) has the bracket at 15 – 35 years, while the Kenya Youth Enterprise Development Fund (YEDF, 2011) puts the youth bracket at 18 – 35 years (Afande *et al*., 2015). For the purpose of this study, the age bracket of 18-35 years will be used.

Although agriculture has good employment promises, youth tend to shy away from this sector which is considered by many youth as dirty and rigorous. Potential of agriculture to offer employment for the youth is recognized nationally and internationally. Literature reveals that, there is decline of youth interest in farming even though they are most productive and are in the prime of their lives both mentally and physically. Despite the promise of agricultural sector, youth involvement in agriculture is declining in Africa; Kenya included (Mibey, 2015)

According to Afande *et al*., (2015), given the huge population of young people, their predominantly rural location and the fact that most are unemployed or under-employed, the imperative for sustainably engaging them in Agriculture becomes easy to comprehend. However, one must emphasize that the vision is not that young people return to the farming methods of their parents and grandparents; rather the new emphasis is on value chains, entrepreneurship and 'farming as a business'. This new emphasis has multi-dimensions which cover the whole plethora of agri-business value chain, from farm inputs to production and finally consumption. This has given rise to a new term "agropreneurship" which is a hybrid word coined from agriculture and entrepreneurship with full recognition of the innovation, creativity, resilience and market-orientation implicit in the concept of entrepreneurship (Afande *et al*., 2015).

2.3 Awareness and Participation of Youth in Agricultural Projects

Massive youthful population poses complex challenges in designing, implementing, monitoring and evaluation of youth empowerment strategies such as enterprise development. A number of challenges emerge during implementation of such youth empowerment programmes, preventing them from reaching their anticipated potential. Generally local community awareness, involvement has been low, inadequate allocations, poor processes of identification and implementation of projects, as well as weak monitoring and evaluation of projects and citizens have expressed concerns about accountability and transparency (Lagat *et al*., 2012).

There has also been criticism of the lack of youth awareness about these programmes, and it is argued that these programmes reach only a small percentage of the young people who are in need of support (Mbithi and Mutuku 2010). Moreover, it is unclear how coordinated or successful these programmes are, or indeed who receives these grants. There exists literature that has assessed the level of awareness of the existence

of programmes supporting agriculture by the youth. In one study, majority youth (56.6%) indicated that they were not aware of any agriculture oriented programmes in their areas (Njenga *et al*., (2012).

Although the Youth Development Fund and the Women Enterprise Fund are an attempt to provide structured support to increase awareness and youth participation, many groups have not had any significant support from these funds. Some have not even heard about the funds (Lagat *et al*., 2012). The general impression is that there is no coordinated approach to supporting youth groups in implementation of agricultural programmes. The lack of youth awareness on agricultural programmes is mainly brought about by the youth's insufficient access to information, knowledge and education. . It is widely documented that education is key to overcoming development challenges in rural areas. Not only is there a direct link between food security and education of rural children, but it has also been shown that basic numeracy and literacy skills help to improve farmers' livelihoods (Valerie, 2009). Youth's access to knowledge and information is crucial for addressing the main challenges they face in agriculture.

The national extension staff: farmer ratio stands at about 1:1,500 against the international recommended ratio of 1:400. This situation has resulted into lack awareness of improved agricultural practices and thus hindered most farmers from keeping pace with changing technological advances (Olubandwa, 2011). Modern ICTs such as mobile phones and the Internet are appealing to rural youth and have high potential for facilitating access to information to enhance productivity on the farm; enable agricultural innovation; and provide access to financial services and markets (Kangai and Mburu, 2012). The increased focus on modern ICT-based

methods of information provision comes from the realization that they can play a major role in several ways including: Communicating knowledge and information to rural farmers; delivering education and training modules to farmers at low cost; improving smallholder farmers' access to markets and agricultural credit; empowering farmers to negotiate better prices, and facilitating and strengthening networking among smallholder farmers. Despite the great enthusiasm by development agencies in promoting the application of ICT tools in transferring agricultural information to farmers, little is known about the use of these tools for agricultural transactions (Okello *et al*., 2012).

Studies have noted that many rural youth pick up new technologies related to farming more easily and that young farmers are keen on increasing their production through improved and modern technologies (Valerie, 2009). Various projects have been developed that integrate ICTs into the dissemination of agricultural information to youths. They include m-farm, mkulima-young and Farming Kenya. Many other mobile and ICT applications have been developed to offer information and services to farmers. Despite their potential, the participation and impact of these applications are varied. Further, though the mobile technology is generally widely diffused in rural areas, the Internet is not. High prices of computers and the Internet, combined with lack of electricity, limit access to the Internet in developing countries (Valerie, 2009).

2.4 Youth Perceptions and Participation of Youth in Agricultural Projects

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, most point out that the young people should be at the forefront of revitalizing agriculture since they tend to be more innovative. Indeed, if their

contribution is matched with the right skills and capital, the much needed youth dividend might be realized (Afande *et al*., 2015).

The current trend however is that so many youth are leaving agriculture even with the increased government support due to various reasons: Young people perceive agriculture as a profession of intense labour, not profitable and unable to support their livelihood compared to what white collar jobs offer (Youth in Farming 2011). Therefore, the decline in participation of the youth in agricultural production is linked to the rural-urban migration phenomenon. The decision to migrate involves both "push" and "pull" factors (Afande *et al*., 2015)

Poor perception towards agriculture by the youth could be attributed to several factors. Children from rural areas have less access to education than their urban peers. 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. Agriculture is seen as a less worthwhile subject or as a last resort for under-achievers hence influencing rural youth aspirations in a negative way; while urban students see agriculture as a 'dirty job' (Njeru *et al*., 2015)

The involvement of youth in agricultural activities has the potential of reducing the problems of the ageing farm population and increasing youth unemployment and this calls for securing the interest and participation of young people in agriculture in the form of deliberate shift in policy, training and promotion that specially targets the youth. This category of people are not only the productive backbone of every society, the major source of ideas and innovation, but also the main market for food consumption and very often the leaders and drivers of public opinion, public policy and action (Akpan, 2010).

2.5 Social-Capital Networks and Participation of Youth in Agricultural Projects

Social capital is the norms and networks that enable people to act collectively (Mwangi and Ouma, 2012). Putnam (1993) defines social capital as connections among individuals that characterize social networks where norms of reciprocity and trustworthiness arise. According to Mwangi and Ouma (2012), the networks comprise groups of people who interact directly, frequently, and in multi-faceted ways. This network remains a very important resource, especially in the rural areas. Social capital describes those intangible substances that count for most in the daily lives of people and include; goodwill, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit. Individual contact with neighbours, leads to an accumulation of social capital, which may immediately satisfy one's social needs leading to a social potentiality sufficient to the substantial improvement of living conditions in the whole community (Mwangi and Ouma, 2012).

Social capital enables people to attach greater value in their family, friends and associates that facilitate collective action. Social capital lowers uncertainty and reduces transaction costs thereby fostering economic activity, at the micro level, while at the same time providing a new analytical tool to explain some macro phenomena like rural development differentials. The level of attachment, social ties and integration is considered to be very high in the rural areas. This could be partly explained by the degree of homogeneity in the economic activities that people engage in, the family ties as well as the cultural practise. One of the major requirements towards credit access in rural areas is investment in social capital. Whereas microfinance institutions will try to extend credit to individuals, it attaches greater value to organised groups. Besides, due to information asymmetry between the

households and the financial service providers, rural households may be asked to get people who know them to act as guarantors when applying for funds. This depicts the importance of social capital in rural areas (Mwangi and Ouma, 2012)

The established social networks help in creating spontaneous mutual insurance mechanisms. Moser (1996) established that those communities endowed with a diverse stock of social networks and civic associations are in a stronger position to confront poverty and vulnerability as opposed to those without such networks. The same applies to economic establishments where certain parcels of land or housing units are sold only to members, a sign that social capital is an important asset. Holzmann and Jorgensen (1999) argue that the poor may have a close-knit and intensive stock of "bonding" social capital that they can leverage to "get by" thus gain access to the available social and economic facilities on offer.

2.6 Economic Factors and Participation of Youth in Agricultural Projects

The agricultural sector provides livelihood directly and indirectly to a significant portion of the population of Kenya. Agriculture is a major contributor to gross domestic product in Kenya, and youth could play a dominant role in this contribution, but their productivity and growth is hindered by many factors. The youth face several challenges in their endeavor to participate in development. Participation of youths in economic development is mainly constrained by the following key challenges: unemployment and underemployment; population pressure which fuels scarcity of resources such as land for agricultural production; rural to urban migration --in search of better life and employment which reduces rural population who would otherwise engage in agricultural production; marginalization of developmental programmes; inadequate capital; and limited access to information and communication technology (ICT) (Kangai and Mburu, 2012).

Limited access to land has been noted to be another socio-economic factor that affects the participation of youth in agricultural programmes (Divyakirti, 2015). Report by FAO (2010) revealed that inheritance is still the most common system to obtain land in most developing countries. Cotula (2011) observed that life expectancy is increasing in all regions. As a consequence, rural youth often have to wait many years before inheriting their share of the family land. In Kenya many youth cultivate the family land and many times they get no or little income from this work. (Njeru and Gichumu, 2015)

Access to land is extremely important for youth trying to earn a livelihood in agriculture and rural areas. Land access is not only the number one requirement for starting farming, but it can also contribute to household food security and is a means for employment creation and income generation. Although access to land is fundamental to starting a farm, it can often be difficult for young people to attain (Njenga *et al*., 2012). Inheritance laws and customs in developing countries often make the transfer of land to young women problematic, and so are in need of amendment. In Countries like Kenya, access to land is through inheritance. In most instances, land transfer often happens at a later age and youths have to wait many years before inheriting their share of the family land. While waiting for their inheritance, many youth just enjoy secondary land rights and work on the family land for little or no remuneration. The land access challenge is worse with women youths given the gender dimensions of land ownership. In the past, women in Kenya did not inherit land and only obtained user rights via a male relative. Though the current Kenyan Constitution grants equal property and inheritance rights, but the enforcement of these formal laws is still very challenging, due to parallel customary law systems (IFAD/FAO, 2012).

The challenge of access to land by youth still poses as a constraint to youth participation in agricultural activities. Though there is an option of some youths acquiring land by purchasing, this might not be feasible given the low youth savings, high rates of youth unemployment, and low wages for most rural youth and high land prices (FAO, 2011a).

Market access for farmers means the ability to acquire farm inputs and farm services, and the capability to deliver agricultural produce to buyers (IFAD, 2010a). 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 *et al*., 2012). Sustainable access to markets is required to guarantee smallholders an increase in income and to lift them out of poverty.

Market access is a critical determinant of farmers' production habits. A study by Onoja *et al*., (2012) found out that farmers who lived close to better roads and had more frequent and direct contacts with the market appeared more willing to produce more systematically for the market, while those with poor market access had little incentive to produce crops other than those required for domestic consumption. In other words, improved market access is a prerequisite to increased farmer incomes (Onoja *et al*., 2012)

Some other empirical studies attempt to determine the factors influencing market participation and intensities among agricultural enterprises. For instance, in Kenya, Omiti *et al*., (2009 – cited in Onoja *et al*., (2012), found that farmers in peri-urban areas sold higher proportions of their output than those in rural areas. They found that distance from farm to point of sale was a major constraint to the intensity of market

participation while better output price and market information were key incentives for increased sales. They therefore concluded that there was urgent need for Kenyan authorities to strengthen market information delivery systems, upgrade roads in both rural and peri-urban areas, encourage market integration initiatives, and establish more retail outlets with improved market facilities in the remote rural villages in order to promote production and trade in high value commodities by rural farmers (Onoja *et al*., 2012).

Since rural youth are the future of the agricultural sector, their access to markets is vital for boosting productivity, increasing incomes and reducing poverty and hunger for the years to come. Nevertheless, young people face a number of challenges while trying to access markets, even beyond the constraints faced by smallholder farmers in general, in particular in developing countries. 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 (MIJARC/IFAD/FAO, 2012). Access to information and education is poorer in rural than in urban areas. ICT literacy is also lower, in particular among poor young women (Valerie, 2009).

2.7 Theoretical Framework

Many studies have shown that there are various models and theories that could be followed to get the youth involved in activities that could lead to change (Mibey, 2015). This study was based on the Theory of Reasoned Action (TRA). This theory was postulated by Fishbein and Ajzen (1967). The theory focuses on identifying the factors underlying the formation and change of behavioral intent (Kimaro et al., 2015). According to the TRA, most behaviors of social relevance are under volitional control and, thus, behavioral intention is the single most important predictor of

behavior (Fishbein & Ajzen, 1975). Behavioral intention refers to whether a person plans to perform a particular behavior. The greater a person's behavioral intention to perform a specific behavior, the greater the likelihood the person actually will perform that behavior. According to the TRA, behavioral intention is determined by an individual's attitude toward the behavior and by the subjective norm an individual perceives to exist in association with that behavior.

It assumes that a person's behavior is determined by his/her intention to perform the behavior and this intention is in turn a function of his/her attitude toward the behavior and his/her subjective norm. The theory was based on the assumption that a human being usually behaves in a sensible manner, that humans take available information into account and implicitly or explicitly consider their action. A person's intention to perform or not perform behavior is the immediate determinant of that action, barring unforeseen events people are expected to act in accordance with their intentions (Fishbein & Ajzen, 1975).

The TRA theory enabled the researcher to determine the gap between the behaviors of rural youth and their actual attitudes on agricultural activities. Also it helped in determining the relationship between the behavior, actions and attitudes of rural youth's attitudes on agricultural activities.

2.8 Conceptual Framework

Conceptual framework is a scheme of concept (variables) which the researcher operationalized in order to achieve the set objectives (Mugenda & Mugenda, 2003). This is illustrated in figure 1, showing the two types of the variables. The independent variables in this study were demographic characteristics, social and economic factors

and youth awareness, while the dependent variable was youth participation in agricultural value chain projects.

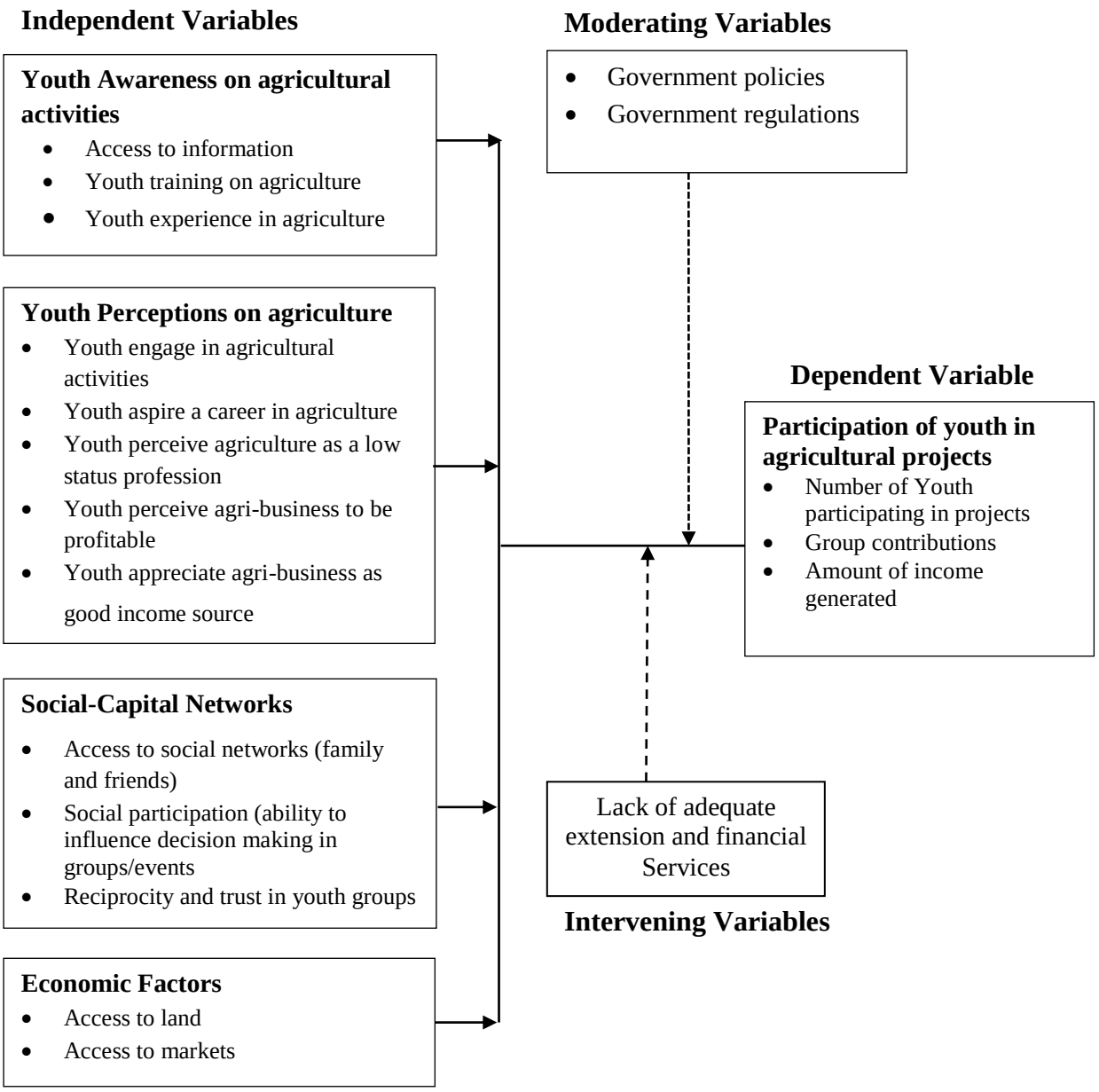

Figure 2 1: Conceptual Framework

2.9 Knowledge Gaps

The reviewed literature covered a lot about youth agricultural value chain projects in Kenya and elsewhere, highlighting the reasons why youth participation in agricultural value chain projects was limited. However, there still exists a knowledge gap, because little is known in relation to the factors that influence youth participation in

agricultural value chain projects, specifically in Kathiani Sub-county of Machakos County, Kenya.

Table 2. 1: Summary of the Literature Review and Knowledge Gaps

Author(s)	Research Focus	Major Findings	Knowledge Gaps
Adekunle, Adefalu & Oladipo, (2009)	Constraints to youths' involvement in agricultural production in Kwara State, Nigeria	The study found that there are inherent causes that affect youth participation in agriculture empowerment as indicated in the psychology of the youth, environment, and government induced factor, and other youth empowerment programs.	The study did not factor in the factors that influence youth participation in agriculture.
Abdullah & Norhlilmatun, (2013)	Factors that influence the interest of youths in agricultural entrepreneurship	The study found that attitude and acceptances are the factors which significantly influenced the youth interest in agriculture entrepreneurship. The findings further revealed that knowledge factor is not significant in influencing interest of youth to become entrepreneurs.	The study was done in a global set-up which is different from the local setting. The study also limited itself to agricultural entrepreneurship.
Mutua (2014)	Factors influencing implementation of agricultural projects funded by microfinance institutions in Central Division, Machakos County, Kenya, *Unpublished MA project*, University of Nairobi	It was found that technological factors, socio economic factors, government policies, education factors impacted positively on the success of MFI funded agricultural projects in Central Division, Machakos County.	The study limited itself on the factors influencing implementation of agricultural projects

Muhoma (2014)	Factors influencing youth employment through involvement in the milk value chain: a case of Rongai/Nakuru sub-counties, in Nakuru county Kenya.	The study explored how demographic characteristics, marketing and economic factors, as well as youth awareness. The study , found that majority of the youth involved in the milk value chain were married and had at least secondary school level of education, they had a low access to low interest funds limiting their capacity to invest. Land ownership was through inheritance and land sizes were small, thus limiting outputs	The study limited itself to the milk value chain projects in Nakuru County.
Bezu and Holden, (2014)	Are rural youth in Ethiopia abandoning agriculture?	It was found that a sharp increase in youth outmigration in the past six years because of lack of access to land which forced the youth away from an agricultural livelihood.	The stud did not investigate the factors influencing youth participation in agricultural value chain projects.
Sunday (2015)	Determinants of decision and participation of rural youth in agricultural production: a case study of youth in Southern region of Nigeria	The study found that, the factors that hindered youth from rural areas from participating in agriculture were; insufficient initial capital, insufficient credit facility, poor storage facility, poor access to tractors and inadequate farm land among others.	The study limited itself on the challenges that hindered youth from participating agricultural activities.

2.10 Summary of Literature Review

The literature shows that when the youth are aware and informed about agriculture this influences their decision to participate in agricultural activities. Youth can get informed about agriculture through access to information, training and development activities and their own experiences in agriculture. Youth perceptions on agriculture determine their participation in agriculture. Perception is developed through engaging in agricultural activities and aspiring a career in agriculture. Youth have different perceptions about agriculture, some perceive it as profitable while other perceive agriculture as a low status profession.

Social-capital networks play an important role in increasing access to social networks, it encourages social participation and reciprocity and trust in youth groups. This gives the youth confidence to participate in agricultural activities, since they have guarantors who can support them if they are in need of funds as start-up capital to participate in agriculture. Economic factors such as access to land and markets have been depicted as key factors that influence the youth to participate in agriculture. Majority of the youth who lack access to economic factors, are limited from participating in agriculture.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section chapter contains the research methodology that was used in carrying out the study. It comprised of research design, target population, sample size and sampling procedure, data collection method, pilot testing, validity and reliability, data analysis, ethical considerations and operational definition of variables.

3.2 Research Design

Research design as defined by Gupta and Gupta (2011) is a process that allows the researcher to have an understanding about the significance of the research and the steps that are involved. This study used descriptive survey design. Mugenda and Mugenda (1999) explain that a descriptive survey design is utilized to obtain information regarding the current situation about a phenomenon to describe what exists, with respect to variables or conditions in a situation. This design depicted the relationship and practices that exist, beliefs and processes that are on-going, effects that are felt and trends which are developed. The study adopted the design to provide an analysis and explanation of views and comment about youth participation in agricultural value chain projects in Kathiani Sub-county. This design was considered appropriate since it enabled the researcher to collection data with less manipulation of variables.

3.3 Target Population

The study was done in Kathiani Sub-county. The target population was selected to be included in the study (Levy & Lerneshow 2013). The target population of the study was the registered youth groups in Kathiani Sub-county. Kathiani Sub-county had 116 registered youth groups, involved in different types of agricultural and non-

agricultural projects. In each youth group there were 15 members. Thus the target population for this study was 1,740 youths (GoK, 2016).

3.4 Sample Size and Sampling Design

This section provides the sample size that was used in the study. In addition, it also gives the sampling procedure that was followed in drawing up the sample to be used in the study. A sampling frame is a complete list of all the members of the population that we wish to study (Kothari, 2004). The sampling frame for this study was the list of registered youth groups in Kathiani Sub-county that are involved in different types of projects. The youth group was the unit of analysis.

3.4.1 Sample Size

The study used a mathematical formula to establish the sample size. Taro Yamane, (1967) has suggested the following mathematical formula for determining sample size.

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

Where, N is the total population size, and e is the error or confidence level. The conventional confidence level of 95% was used to ensure a more accurate result from the sample. Based on this, the error term would equal to 0.1. Using the total population of 1,740 and error margin of 0.1, the sample size was calculated as follows:

$$\mathbf{n} = \frac{1,740}{1+1,740(0.1)^2}$$

$$\mathbf{n} = \frac{1,740}{18.4}$$

n = 96

Out of the total population of 1,740 youths in Kathiani Sub-county, that are registered in youth groups involved in different types of projects, a sample size of 96 was taken.

3.4.2 Sampling Design

Proportionate stratified random sampling was adopted to select a total of 96 respondents drawn from youth groups in Kathiani Sub-county. This was achieved by first stratifying the youth groups into four (4) strata according to their locations. Simple random sampling was applied within each stratum (location), to select 24 respondents; which were an equal proportion (number) of respondents per strata, totalling to 96 respondents in Kathiani Sub-county. The 24 respondents per location were randomly selected from a list of youth group participants that was provided by the location's community social development assistants.

3.5 Data Collection Instruments

Data collection is the process of acquiring subjects and gathering information needed for a study; methods of collection vary depending on the study design, (Kothari, 2004). Primary data was collected for this study. Primary data was collected by administering a semi-structured questionnaire. This type of questionnaire used both closed and open-ended questions. Closed questions had predetermined answers and usually collect quantitative data while open-ended questions give the respondents free will to answer and usually collect qualitative data. The interview guides was used to seek opinion from agriculture officials and older farmers. The researcher used questionnaires to ensure collection of data from many respondents within a short time and respondents are free to give relevant information because they are assured of their anonymity (Mugenda and Mugenda, 2003). Secondary data on the other hand was collected through review of both empirical and theoretical data from books, journals, dissertations, magazines and the internet.

3.5.1 Pilot Testing

There was a pilot study before the actual research, to pre-test and validate the questionnaire. A pre-test sample of a tenth of the total sample with homogenous characteristics was considered appropriate for carrying out a pilot study (Mugenda and Mugenda, 2003). The study selected a pilot group of 10 respondents to test the validity and reliability of the research instrument. This was achieved by first stratifying the individuals according to their locations. The selected sample was given the questionnaires already prepared.

The pilot study enabled the researcher to be familiar with the research instrument, and in identifying items that required modification. Pretesting of the instrument also helped to estimate the time needed to administer the instrument. The clarity of the instrument items to the respondents was established so as to enhance the instrument's validity and reliability. Any questions that were found to be interpreted differently during the pre-testing were rephrased to give the same meaning to all respondents. The pilot study respondents were not included in the actual research.

3.5.2 Validity of Research Instruments

Validity is the accuracy and meaningfulness of inferences which are based on the research results, Mugenda and Mugenda, (1999). Validity can also be explained as the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. Borg and Gall, (1989) defines validity as the degree to which a test measures what it is supposed to measure. Face validity refers to the likelihood that a question was misunderstood or misinterpreted and therefore would help to remove the ambiguity thus increasing face validity.

Content validity refers to whether an instrument provides adequate coverage of a topic (Borg and Gall, (1989). Validity will be ensured by having objective questions included in the questionnaire. The researcher sought the opinion from experts and supervisor of the study. This is in line with Borg and Gall, (1989), who indicate that content validity of an instrument is improved through expert judgments. Opinions from the supervisor was sought so as to ascertain if all themes in objectives were captured in order to assess the content validity. The pilot study ensured validity since it was conducted with ten respondents with similar background, using the same instrument which was used in the actual study. This helped to establish if the instrument was able to measure what is intended to measure.

3.5.3 Reliability of Research Instruments

Reliability is the consistency of measurement over time, whether it provides the same results on repeated trials. It is a measure of the degree to which a research instrument yields consistent results after repeated trials (Mugenda and Mugenda 2003). An instrument is reliable if it can measure a variable accurately and consistently and obtain the same results under the same condition over time. The split-half technique was used to determine the reliability of the instruments. The same questionnaire was administered to the sample of 10 respondents, by randomly dividing the sample into two halves. The study found the alpha coefficient for the five items (factors) is .765, suggesting that the factors influencing youth participation in agricultural value chain projects had a high internal consistency.

3.6 Procedures for Data Collection

Before starting to collect data, the researcher sought permission from relevant authorities to carry out the study in Kathiani Sub-county. The research team was comprised of the researcher and two research assistant, who before the beginning of

interview will brief the respondents concerning the study objectives and assure them of utmost confidentiality. The researcher coordinated the data collecting exercise of filling the questionnaires in Kathiani Sub-county. The valid questionnaires were administered by the research assistants to avoid misinterpretation of questions, to youths who are members of the selected youth projects in Kathiani Sub-county.

3.7 Methods of Data Analysis

Analysing of data means categorizing, ordering, manipulating and summarizing of data that answers the research questions (Mugenda and Mugenda, 2003). The filled questionnaires were checked for consistency and completeness. The data collected was gathered, sorted and coded to ensure that the responses are grouped as per the research objectives. The study used qualitative content analysis for text data. This data was obtained through word of mouth, narrative responses, interviews, observations, open-ended survey questions among others. This study used open-ended survey questions to gather text data. Quantitative data was analysed using descriptive statistics in form of percentages, frequencies standard deviations and weighted means. This will involve detailed description of the items that comprise a sample. Tabulating data and presenting them on the table will also be used to give a visual display of findings, the trends and for easy reference. The second level of the data analysis involved inferential statistics, where Pearson Correlation Coefficient was used to establish the associations of the study variables. Using Statistical Package for Social Sciences (SPSS), the values of correlation coefficients will be obtained.

3.8 Ethical Considerations

According to Cooper and Schindler (2006), ethics is defined as fundamental principles and morals that guide human conduct. Ethical principles define an acceptable and unacceptable behaviour of how a researcher is supposed to conduct himself. The researcher will uphold ethical principles and standards in ensuring that the collected data is treated with utmost confidentiality and is used for academic purposes only. This was achieved by getting a letter of introduction from the University of Nairobi to accompany the questionnaire to be administered to respondents.

Before distributing the questionnaires the researcher sought permission from the relevant authorities including authorities at the Kathiani Sub-county Youth Affairs Department. The researcher explained to the respondents the purpose of the research and guaranteed them confidentiality of the data collected. The researcher observed transparency in data collection methods and procedures, reporting of data and the results obtained. The researcher ensured objectivity during the interview to avoid bias in data analysis and interpretation. Respect for intellectual property was observed and respected, work from other scholars and researchers will be cited and referenced (Frankfort-Nachmias *et al*., 2008).

3.9 Operational Definition of Variables

Table 3.1 below shows the independent and the dependent variables, it captures the study objective, the type of variables, the indicators, measures used, measuring scale and the type of analysis.

Table 3. 1: Operational Definition of Variables

OBJECTIVE	TYPE OF VARIABLE	INDICATORS	MEASURE	MEASURING SCALE	TYPE OF ANALYSIS
To explore how youth awareness on agricultural value chain projects influences their participation in those projects in Kathiani Sub-county in Machakos County	**Independent Variable** **Youth Awareness**	• Youth training on agricultural projects • Information access • Youth experience in agricultural value chain activities	• Number of trainings youth have attended • Types of training • Sources of information available on youth-targeted agricultural projects. • Types of information. • Number of years	Ratio, Nominal	Descriptive Analysis Pearson's Correlation Analysis
To establish how perceptions of the youth on agriculture influences their participation in agricultural value chain projects in Kathiani Sub-county in Machakos County	**Independent Variable** **Youth Perceptions**	• Youth engage in agricultural activities • Youth aspire a career in agriculture • Youth perceive agriculture to be a low status profession • Youth perceive agri-business as a profitable venture • Youth perceive agri-business as a good income source	• Number of youth engaging in agricultural activities • Number of youth who aspire for a career in agriculture • Number of youth who perceive agriculture as a low status profession • Number of youth who perceive agri-business as a profitable venture • Number of youth who perceive agri-business as a good income source	Nominal	Descriptive Analysis Pearson's Correlation Analysis
To establish how social capital influences youth participation in agricultural value chain projects in Kathiani Sub-county in Machakos County	**Independent Variable** **Social Capital/Networks**	• Social networks and social support • Social participation • Reciprocity and trust	• Type of groups youth have joined • Perceptions on whether the groups offer adequate social support • Number of social groups belonged to • Perception of shared values and trust among group members	Nominal, Ratio	Descriptive Analysis Pearson's Correlation Analysis
To establish how Economic factors influence youth participation in agricultural value chain projects in Kathiani Sub-county in Machakos County	**Independent Variable** **Economic Factors**	• Access to land • Access to markets	• Land size • Land prices • Land tenure system • Distance to markets • Condition of rural road network	Ratio, Ordinal, Nominal	Descriptive Analysis Pearson's Correlation Analysis
Participation of youth in agricultural value chain projects in Kathiani Sub-county in Machakos County	**Dependent variable** **Youth Participation**	• Number of Youth participating in projects • Amount of Group contributions • Amount of income generated	• Number participating • Amount contributed per member • Amount of income • Perception on whether the income meets youth needs • Number of meetings • Perception on involvement in decision making	Ratio, Nominal	Descriptive Analysis Pearson's Correlation Analysis

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter provides a discussion of the study findings in line with the objectives of the study. The study adopted quantitative approach of data analysis which included descriptive statistics that was used to analyse quantitative data. Frequencies distribution tables were used to summarize and present the data.

4.2 Questionnaires Return Rate

Out of 96 questionnaires distributed for the study; 76 (79%) successfully filled and retuned the questionnaires. This represents a response rate of 79%. Frankfort-Nachmias *et al*., (2008) indicate that any response of 50% and above is considered adequate for analysis, and thus, 79% return rate, was considered to be very good.

4.3 Demographic Traits of the Respondents and Agricultural Value Chain Projects

The demographic traits of the respondents are discussed in this section of the study. They include social characterises that potentially influence the agricultural value chain projects. They include occupation, nature of engagement, level in the agricultural value chain, age, gender, marital status and formal education.

4.3.1 Occupation of the Respondents

The respondents were requested to indicate their main occupation. The results are shown in Table 4.1.

Table 4. 1 Occupation of the Respondents

Occupation	Frequency	Percentage
Agribusiness	20	26
Farmer in own farm	14	18
Other businesses	10	13
Off-farm waged	07	9
Unemployed	06	8
Salaried Employed	05	7
Student	05	7
On parent's farm unpaid	05	7
On-farm waged	04	5
Total	**76**	**100.0**

Of the participants who responded, 20(26%) did agribusiness, 14(18%) were farmers, 10 (13%) were involved in other business, 7(9%) were off-farm but waged, 6(8%) were unemployed. There was a tie of 5(7%) each, of the respondents who were employed with a salary, students while others worked in the farm but unpaid. Only 4(5%) of the respondents got farm wages. This shows that a total of 43(57%) of the respondents engaged in agriculture in different ways; either in different types/levels of agribusinesses, or as a farmer (farm level production and farm gate sales) in their own farms, on-farm waged casual labour and on-farm unpaid labour, in the parents or guardian's farm.

4.3.2 Nature of Engagement in Agriculture Activity

The respondents were requested to indicate the nature of engagement in agriculture activities. The results are presented in Table 4.2.

Table 4. 2 Nature of Engagement in Agriculture Activity

Nature of Agriculture Activity	Frequency	Percentage
Part-time	54	71
Full-time	20	26
None	02	3
Total	**76**	**100.0**

From Table 4.2 shows that, 54(71%) of the respondents participated in agricultural value chain projects as part-timers, 20(26%) of the respondents participated in agricultural value chain projects as full-timers while only 2(2%) of the respondents failed to participate in agricultural value chain projects on either part-time or full-time basis. The nature of work of the agricultural value chain projects could have influenced most of the respondents to participate as part-timers since they were not involving. This shows majority of the respondents 54(71%) did not consider agriculture as a full-time occupation. This points to the likelihood that, majority of the youth are engaged in other livelihood and income generating activities, and only consider agriculture, as a secondary livelihood or income generating activity.

4.3.3 The Level in which the Respondents were Mostly involved in Agriculture Value Chain Projects

The respondents were requested to indicate the level in which they were mostly involved in agriculture value chain projects. The results are shown in Table 4.3.

Table 4. 3 The Level of Involvement in the Agriculture Value Chain

Level of Involvement in Agriculture Value Chain	Frequency	Percentage
Farm-level	59	77
Sales Distribution	09	12
Selling	08	11
Total	**76**	**100.0**

Table 4.3 shows that, 59(77%) of the respondents were involved in Agricultural value chain at the farm-level, 9(12%) of the respondents were involved at sales and distribution level while only 8(11%) of the respondents were involved at selling level. This implied that majority of the respondents were involved in the agriculture value chain at the farm-level, which is the basic level of the value chain.

4.3.4 The Main Challenges Affecting Youth Participation in Agricultural Value Chain Projects

The study sought to establish the main challenges that affected the youth participation in agricultural value chain projects, 65(85%) of the respondents agreed that lack of capital, lack of adequate resources (water, land, fertilizers, seedlings, water pumps, transport and manure), lack of ready market, poor roads, outbreak of diseases and inadequate knowledge and skills in agriculture were the main challenges that hindered the youth to participate in agriculture value chain projects. Only 11(15%) of the respondents pointed out that time was a challenge that hindered their participation in agricultural value chain projects.

4.3.5 Age of the Respondents

The respondents were asked to indicate their age bracket. The results are shown in Table 4.4

Table 4. 4 Age bracket of the Respondents

Occupation	Frequency	Percentage
18 to 19 years	02	03
20 to 24 years	16	21
25 to 29 years	28	37
30 to 35 years	30	39
Total	**76**	**100.0**

From the above findings, majority of the respondents 58(76%) were aged between 25 to 35years, 21(21%) were aged between 20 to 24 years, and 2(3%) of the youth were aged between 18 to 19 years. This was an indication that majority of the youth who participated in agriculture value chain projects were above 25 years of age; which is a time in their life, when they are very active and searching for jobs, and would most likely choose agriculture as a business, for their employment and income generation.

4.3.6 Gender of the Respondents

The study sought to establish the gender of the respondents. The results are shown in Table 4.5

Table 4. 5 Gender of the Respondents

Gender	Frequency	Percentage
Male	51	67
Female	25	33
Total	**76**	**100.0**

From Table 4.5, majority of the respondents 51(67%) were male while the rest 25(33%) were female. This was an indication that majority of the youth who participated in agriculture value chain projects were male.

4.3.7 Marital Status

The respondents were asked to indicate their marital status. The results are shown in Table 4.6

Table 4. 6 Marital Status

Occupation	Frequency	Percentage
Single	30	38
Married	44	58
Separated	01	02
Windowed	01	02
Total	**76**	**100.0**

From the above findings, 44(58%) of the respondents were married, 30(38%) of the respondents were single, and there was a tie of 1(2%), for each of the respondents who were separated and windowed. This implied that majority of the youth 44(58%) who participated in agriculture value chain projects were married.

4.3.8 Level of Formal Education

The respondents were asked to indicate their level of formal education. The results are shown in Table 4.7.

Table 4. 7 Level of Formal Education

Occupation	Frequency	Percentage
Primary KCPE	29	38
Secondary KCSE	25	33
Certificate	16	21
Diploma	03	04
Degree	03	04
Total	**76**	**100.0**

From Table 4.7, the results show that 29(38%) of the respondents attained primary school education, 25(33%) were four form graduates, 16(21%) had certificates, and a tie 3(4%) had diplomas and degrees. This was an indication that majority of the youth 54(71%) who took part in agriculture value chain projects were graduates from primary and secondary schools.

4.3.9 Youth's Parents' Size of the Household

The study sought to determine the parent's size of the household of the respondents. The results are shown in Table 4.8.

Table 4. 8 Respondent's Parent Size of the Household

Parent's Size of the Household	Frequency	Percentage
1	02	02
2	03	04
3	16	21
4	14	18
5	10	13
6	11	15
7	07	09
8	09	11
9	01	02
Above 10	03	04
Total	**76**	**100.0**

From the above Table 4.8, 16(21%) of the respondents indicated that they had 3 household members', 14(18%) of the respondents had 4 household members', 11(15%) of the respondents had 6 household members', 10 (13%) of the respondents had 5 household members', 9 (11%) of the respondents had 8 household members', 7(9%) of the respondents had 7 household members', there was a tie of 3(4%) of the respondents which had above 10 and 2 household members', there was another tie of 2% of the respondents had 9 and 1 household members. This is an indication that majority 41(67%) of the respondents had more than five household members which was an indication of limitation to access of resources such as land, capital, water and other resources to support agriculture value chain projects by the youth.

4.3.10 Youth's Parents' Involvement in Farming

The respondents were asked to indicate whether their parents were involved in farming. The results are shown in Table 4.9.

Table 4. 9 Respondent's Parent Involvement in Farming

Gender	**Frequency**	**Percentage**
Yes	74	98
No	2	02
Total	**76**	**100.0**

From the above Table 4.9, 74(98%) of the respondents indicated that their parents were involved in farming, only 2 (2%) of the respondents indicated that they were not involved. This implied majority of the youth might have gotten inspiration to participate in agriculture value chain projects from their parents, who were also involved in farming. Parent's influence is considered as an important source of social capital.

4.3.11 Nature of Farming Involved by the Youth's Parent

The respondents were asked to indicate the nature of farming that was involved by their parents. The results are shown in Table 4.10.

Table 4. 10 Nature of Farming Involved by the Youth's Parent

Gender	Frequency	Percentage
Part-time	64	85
Full-time	12	15
Total	**76**	**100.0**

The results above showed that 64(85%) of the respondents agreed that their parents were involved in farming on a part-time basis while only, 12(15%) of the respondents agreed that their parents were involved in farming on a full-time basis. Majority of the respondent's parents were involved in farming on a part-time basis. This is an indication that their parents mostly likely engage in other livelihood diversification or income generating activities in addition to agriculture.

4.3.12 Siblings Involved in Farming Activities

The study sought to find out from the respondents whether there were any of their siblings who were involved in farming activities. The results are shown in Table 4.10.

Table 4. 11 Siblings Involved in Farming Activities

Gender	Frequency	Percentage
Yes	50	65
No	26	35
Total	**76**	**100.0**

From the above findings, 50(65%) of the respondents indicated that their siblings were involved in farming activities while only 26(35%) of the respondents indicated

that their siblings were not involved in farming activities. This was an indication that majority of the respondents' siblings participated in farming activities. Sibling's influence – just as that of parents - is also considered as a good source of social capital.

4.4 Factors Influencing Youth Participation in Agriculture Value Chain Projects

The study sought to establish the factors that influenced youth participation in agriculture value chain projects.

4.4.1 Youth Awareness on Agricultural Value Chain Projects

The study sought to determine the level of youth awareness on agricultural value chain projects and how this influenced their participation in those projects in Kathiani Sub-County, Machakos County.

4.4.1.1 Youth Training on Agriculture Projects

The respondents were requested to indicate the organisations that offered youth training on agriculture projects. The results are shown on Table 4.12.

Table 4. 12 Youth Training on Agriculture Projects

Occupation	Frequency	Percentage
NGO	21	27
GOK	20	26
Private sector	21	27
None	14	20
Total	**76**	**100.0**

From the above findings, 21(27%) of the respondents indicated that both the private sector and non-governmental organisations provided training programmes to the youth on agriculture projects. 20(26%) of the respondents indicated that the government of Kenya provided training to the youth, on agriculture projects and 14(20%) of the youth indicated that they were not aware, about any organisation

providing training to the youth on agriculture value chain projects. This implied that most training programmes on agriculture projects were organised by the private sector, non-governmental organisations and the government.

4.4.1.2 Youth Trainings Attended

The respondents were asked to indicate the number of agricultural training that they had attended. The results are shown in Table 4.13.

Table 4. 13 Youth Trainings Attended

Occupation	Frequency	Percentage
1 - 5	48	63
5 - 10	05	07
More than 10	08	11
None	15	20
Total	**76**	**100.0**

The results in Table 4.13 showed that 48(63%) of the respondents attended training between 1-5 times, 15(20%) of the respondents did not attend any training, 08(11%) of the respondents attended training for more than 10 times while 5(7%) of the respondents attended training between 5-10 times. Majority of the youth attended agricultural training at least for five times.

4.4.1.3 Length of Service in Agriculture Activities

The respondents were asked to indicate the duration that they were involved in agriculture activities. The results are shown in Table 4.14.

Table 4. 14 Length of Service in Agriculture Activities

Occupation	Frequency	Percentage
Less than 1 year	05	9
1 – 5 years	20	26
6 – 10 years	14	18
11 – 15 years	16	19
Above 15 years	21	27
Total	**76**	**100.0**

From the above findings in Table 4.14; 21(27%) of the respondents had served for over 15 years, 20(26%) of the respondents served between 1-5 years, 16(19%) of the respondents served between 11-15 years, 14(18%) of the respondents served between 6-10 years while 5(9%) of the respondents served for less than 1 year. Majority 71(90%) of the youth had been involved in agriculture activities for more than five years hence they were more experienced in this field.

4.4.1.4 Level of Youth Awareness

The study sought to determine the level of youth awareness on agricultural value chain projects in Kathiani Sub-county, Machakos County. The results are shown in Table 4.15

Table 4. 15 Level of Youth Awareness

	N	Mean	Standard Deviation
Local agricultural department frequently organize training for the youth.	76	3.64	.895
The types of training and topics covered adequately meets the needs of youthful agribusiness community	76	3.19	1.28
Youth always attend extension training sessions	76	3.23	1.20
Youth have a various sources and types of information to guide on successful agricultural project implementation	76	3.29	1.21
There is extremely low local community awareness and involvement in youth oriented programs	76	3.52	.923
Totals	**76**		

Majority (mean of 3.64) of the youth strongly agreed that local agricultural department frequently organized training. This was followed by those who agreed that

there was low community awareness and involvement in youth programs which score a mean of 3.52. The youth agreed that various sources and types of information guided successful agricultural project implementation; this scored a mean of 3.29. The youth also agreed that they attended extension training and the topics covered adequately met their needs; the mean scores were as follows (3.23 and 3.19). Further, 80% of the youth agreed that awareness was one of the key factors that influenced their participation in agricultural value chain projects in Kathiani sub-county. Only, 20% of the youth indicated that they participated in agricultural value chain projects because of unemployment.

4.4.2 Perceptions of the Youth on Agriculture

The study sought to establish the influence of youth perceptions on agriculture, on their participation in agricultural value chain projects in Kathiani Sub-county, Machakos County. The results are shown in Table 4.16.

Table 4. 16 Perceptions of the Youth on Agriculture

	N	**Mean**	**Standard Deviation**
Youth engage in agricultural activities in Kathiani Sub-county	76	3.51	.792
Youth aspire for a career in agriculture	76	3.06	1.03
Youth see agriculture as low status profession	76	3.72	.685
Youth perceived agriculture to be profitable business	76	2.42	1.12
Youth in Kathiani Sub-county appreciate agriculture as source of income	76	2.48	.958
Totals	**76**		

Most youth strongly agreed that they saw agriculture as a low status profession, this attained a mean score of 3.72, they agreed that they took part in agricultural activities; this attained a mean score of 3.51. The youth agreed that they aspired for a career in agriculture; this scored a mean of 3.06. Further, they agreed that they appreciated agriculture as a source of income; this attained a mean score of 2.48, they moderately agreed that they perceived agriculture to be a profitable business. This attained a mean score of 2.42.

The findings further revealed that majority (60%) of the youth, indicated that, their perceptions towards agriculture, influenced their participation in agricultural activities. Most youth ended up in agriculture because they lacked something better something else to do to earn a living. At least, 40% of the youth participated in agriculture because they were inspired by their parents.

4.4.3 Access to Social-Capital Networks

The study sought to establish whether the youth had access to social capital. The researcher asked the respondents a few questions to establish this and the responses are provided below:

4.4.3.1 Registered Members of Youth Group

The respondents were requested whether they were members of a youth group that participated in agricultural activities. The results are shown in Table 4.17.

Table 4. 17 Registered Members of Youth Group

Registered	Frequency	Percentage
Yes	54	70
No	22	30
Total	**76**	**100.0**

The results in Table 4.17 found that 54(70%) of the youth were registered members of youth groups that participated in agricultural activities and only, 22(30%) of the youth

failed to belong to any of the registered youth groups that participated in agricultural activities. Majority of the youth belonged to registered youth groups that participated in agricultural activities. By being members of a group, the youth are likely to access social capital (friendships, trust building, ideas sharing and networking).

4.4.3.2 Number of Youth Groups Registered

The respondents were requested to indicate the number of youth groups, in which they were registered as members. The results are show in Table 4.18.

Table 4. 18 Number of Youth Groups Registered

Groups Registered	Frequency	Percentage
0	20	27
1	33	43
2	20	26
3	3	03
Total	**76**	**100.0**

The findings in Table 4.18 show that 33(43%) of the youth were registered with 1 youth group, 20(27%) were not registered with any youth group, and 20(26%) were registered with 2 youth groups, while 3(3%) were registered with 3 youth groups. Majority 53(69%) of the youth were registered with at least 2 youth groups. Registration in more youth groups, will likely enhance youth access to social capital/networks.

4.4.3.3 Type of Association of the Group

The respondents were asked to comment on the type of association of the group which they belonged to. The results are show in Table 4.19.

Table 4. 19 Type of Association of the Group

Type of Association	Frequency	Percentage
Self-help group	51	67
Community based organization	21	27
Cooperative Society	04	06
Total	**76**	**100.0**

From the findings in Table 4.19, 51(67%) of the youth were associated to self-help group, 21(27%) were associated to community based organisations while 04(6%) were associated to cooperative society. Majority of the youth were associated to self-help groups.

4.4.3.4 Youth Views on Influence of Access to Social Capital on Their Participation in Agricultural Projects

The study sought to determine the influence of Youth Access to Social Capital on their participation in agricultural value chain projects in Kathiani Sub-county, Machakos County. The results are show in Table 4.20.

Table 4. 20 Youth Access to Social Capital

	N	Mean	Standard Deviation
Youth are registered as members in groups engaged in agricultural activities	76	4.10	.675
Youth regularly network with members of other agricultural groups	76	3.92	.787
The groups that the youth have joined offer adequate social support e.g. access to credit, friendship bonds/ties	76	3.52	.881
The youth feel that there are shared/common values among the group members	76	3.86	.794
There is trust among youth group members	76	3.75	.963
Totals	76		

From the findings in Table 4.20, the youth strongly agreed (4.10) that they were registered as members in groups that were engaged in agricultural activities. The youth strongly agreed (3.92) that they networked with members of other agricultural groups, they felt that they shared common values among the group (3.86), and that there was trust among the group members (3.75). Also, they agreed (3.52) that the groups offered them adequate social support for instance access to credit and friendship between them.

4.4.4 Economic Factors

The study sought to establish the economic factors that influenced youth participation in agriculture value chain projects.

4.4.4.1 Size of Land Available for Agricultural Activities

The respondents were asked to indicate the size of land available to carry out agricultural activities at home. The results are shown in Table 4.21.

Table 4. 21 Size of Land Available for Agricultural Activities

Size of Land	Frequency	Percentage
Less than an acre	25	33
Between 1 to 3 acres	45	60
Between 3 to 5 acres	03	04
More than 5 acres	03	03
Total	**76**	**100.0**

From the above findings, 45(60%) of the respondents had between 1 to 3 acres, 25 (33%) had less than an acre, 3(4%) had between 3 to 5 acres and 3(3%) had more than 5 acres. Most of the youth had utmost 1 acres size of land available for agricultural activities. This size of land was considered limited for carrying out agricultural activities, having in mind that majority of the youth's households, had more than five members, and that the farm land is likely shared among other family members.

4.4.4.2 Distance to the Nearest Market for Agricultural produce

The respondents were requested to indicate the distance to the nearest market for agricultural produce. The results are shown in Table 4.22.

Table 4. 22 Distance to the nearest Market for Agricultural produce

Distance	Frequency	Percentage
Less than 1 km	11	14
1 – 2 km	21	27
2 – 3 km	10	13
3 – 5 km	15	21
Above 5 km	19	25
Total	**76**	**100.0**

The results in 4.22 above shows that 21(27%) of the youth travelled between 1 to 2 kilometres to the nearest market for agricultural produce, 19(25%) travelled for more than 5 kilometres, 15(21%) travelled between 3 to 5 kilometres, 11(14%) travelled for less than 1 kilometre and 10(13%) travelled between 2-3 kilometres. Most youth travelled for at least 2 kilometres to the nearest market for agricultural produce. The considerably shorter distances to the nearest market, is an indication of ease of access to markets, for sale of farm produce and other agricultural value chain transactions.

4.4.4.3 The Status of the Road Network

The respondents were requested to indicate the status of the road network from the farm to the markets in the past three years. The results are shown in Table 4.23.

Table 4. 23 The Status of the Road Network

Road Status	Frequency	Percentage
Deteriorated greatly	11	14
Deteriorated a little	16	23
Has not changed	08	10
Improved a little	34	45
Improved greatly	07	08
Total	**76**	**100.0**

The results in Table 4.23 above shows that 34(45%) of the youth indicated that the status of the road had improved a little, 16(23%) indicated that the road had deteriorated a little, 11(14%) indicated that the road had deteriorated greatly, 8(10%) indicated that the road had not changed and 7(8%) pointed out that the road network had improved greatly. Majority of the youth indicated that the roads were maintained from the farm to the markets in the past three years; indicating improved physical access to markets- especially the transportation function of the value chain.

4.4.4.4 Access to Credit

The respondents were asked to indicate the extent to which access to credit influenced youth participation in agricultural value chain projects in Kathiani Sub-county. The results are shown in Table 4.24.

Table 4. 24 Access to Credit

Access to Credit	Frequency	Percentage
Very great extent	03	06
Great extent	07	09
Moderate extent	33	43
Small extent	22	28
Not at all	11	14
Total	**76**	**100.0**

From the above results in Table 4.24, 33(43%) of the respondents indicated that to a moderate extent access to credit influenced participation of agricultural activities, 28% indicated to a small extent, 11(14%) not at all, 7(9%) to a great extent and 3(6%) to a very great extent. Majority 55(68%) of the youth indicated that access to credit influenced their participation in agricultural activities.

4.4.4.5 Youth Views on Influence of Economic Factors on their Participation in Agricultural Projects

The study sought to determine the level of agreement that related to the influence of economic factors on youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County. The results are show in Table 4.25.

Table 4. 25 Youth Views on Influence of Economic Factors on their participation

	N	Mean	Standard Deviation
Land prices are high	76	3.96	1.01
Parents allow youth to farm in their existing land.	76	4.01	.976
Parents inherit their farm land to the youth	76	3.85	.876
Youth utilize the available land for agriculture	76	3.88	.678
Youth have access to markets for their produce	76	2.51	.865
Totals	**76**		

From the above results in Table 4.25, the youth strongly agreed (4.01) that the parents allowed them to farm on the existing land, land prices were high (3.96), youth utilized the available land for agriculture (3.88) and parents inherited their farm land to them, (3.85). The youth agreed to a moderate extent (2.51) that they had access to markets for their produce. Further, youth unanimously agreed (3.642) that economic factors influenced their participation in agriculture value chain projects in Kathiani Sub-county. Land, Capital, water and farm inputs were considered the most critical economic factors that influenced youth participation in agriculture value chain projects.

4.5 Youth Participation

The study sought to establish the extent to which youth participated in agriculture value chain projects on the following parameters: youth contribution to their groups' kitty; income generated from agricultural activities; the motivation youth got from the

monthly income; youth group meetings attended per month and whether equal opportunities to make decisions for their groups, were provided to the youth.

4.5.1 Youth Contributions to Group Kitty

The respondents were asked to indicate the amounts that they contributed to the agricultural youth group kitty per month. The results are shown in Table 4.26

Table 4. 26 Youth Contribution

Road Status	Frequency	Percentage
I do not contribute	17	23
Below Ksh. 100	12	15
Ksh. 100 - 500	36	48
Ksh. 600 - 1000	09	12
Above Ksh. 1000	02	02
Total	**76**	**100.0**

From the above results in Table 4.26, 36(48%) of the respondents indicated that they contributed between KES 100-500, 17(23%) did not contribute, 12(15%) contributed below KES.100, 9 (12%) contributed between 600-1000 and 2(2%) contributed above KES. 1000. This shows that majority 47(62%) of the youth contributed more than KES.100 to the agricultural youth group kitty per month.

4.5.2 Income Generated from Agricultural Activities per Month

The respondents were requested to indicate the amount of income that was generated from agricultural activities per month. The results are shown in Table 4.27.

Table 4. 27 Income Generated from Agricultural Activities per Month

	Frequency	Percentage
Below Ksh. 1000	17	23
Ksh. 1000 - 3000	24	32
Ksh. 3001 - 5000	12	16
Ksh. 5001 - 7000	07	08
Ksh. 7001 - 9000	11	15
Above 9000	05	06
Totals	**76**	**100.0**

From the above findings, 24(32%) of the respondents got between KES 1000 to 3000, 17 (23%) below KES 1000, 16% between KES 3001 to 5000, 11(15%) between KES 7001 to 9000, 7(8%) between 5001 to 7000 and 5(6%) above 9000. This shows that majority of the youth 35(45%) generated an income of at least KES. 3000 from agricultural activities per month.

4.5.3 Motivation from Monthly Income from Agricultural Activities

The respondents were requested to indicate the extent to which monthly income got from agricultural activities motivated the youth to continue participating in agricultural value chain projects in Kathiani Sub-county. The results are shown in Table 4.28.

Table 4. 28 Motivation from Monthly Income from Agricultural Activities

Distance	Frequency	Percentage
Very great extent	04	05
Great extent	17	22
Moderate extent	36	48
Less extent	14	18
Not at all	05	07
Total	**76**	**100.0**

From the above results in Table 4.28, 36(48%) of the respondents indicated that the monthly income that they got motivated them to continuously participate in agricultural activities to a moderate extent, 17(22%) were motivated to a great extent, 18% were motivated to a less extent, and 5(7%) were not motivated at all. 4(5%) were motivated to a very great extent. This shows that majority of the youth 57(75%) were motivated from the monthly income that they received from agricultural activities.

4.5.4 Youth Group Meetings Attended in the last one Month

The respondents were asked to indicate the number of youth group meetings that they had attended in the last one month. The results are shown in Table 4.29.

Table 4. 29 Youth Group Meetings Attended in the last one Month

Youth meetings	Frequency	Percentage
None	17	23
1 - 2	31	40
3 - 4	20	26
Above 4	08	11
Total	**76**	**100.0**

From the above results in Table 4.29, 31(40%) of the respondents indicated that they attended youth group meetings between 1-2 times in the last one month, 20(26%) indicated that the attended between 3-4 times, 17(23%) did not attend any meeting and 8 (11%) attended more than 4 times. This shows that majority 28(36%) of the respondents attended youth group meetings at least thrice in the last one month.

4.5.5 Equal Opportunities to Youth in Decision Making in Agricultural Projects

The respondents were requested to indicate the extent to which equal opportunities were accorded to youth in decision making in agricultural value chain projects in Kathiani Sub-county. The results are shown in Table 4.30 below.

Table 4. 30 Equal Opportunities to Youth in Decision Making

Access to Credit	Frequency	Percentage
Very great extent	04	06
Great extent	07	09
Moderate extent	33	43
Small extent	21	28
Not at all	11	14
Total	**76**	**100.0**

From the above results in Table 4.30, 33(43%) of the respondents indicated that to a moderate extent equal opportunities to youth in decision making influenced their participation in agricultural activities, 21(28%) to a small extent, 11(14%) not at all, 7

(9%) to a great extent and 4(6%) to a very great extent. Majority of the youth 44(58%) indicated that they were accorded equal opportunities in decision making in agricultural value chain projects in Kathiani Sub-county.

4.6 Pearson Product Moment Correlation Coefficient

A correlation is number that is between -1 and +1 which measures the degree of association between two variables. A positive value for correlation means a positive association. A negative value for the correlation means a negative of inverse association.

Table 4. 31 Pearson Product Moment Correlation Coefficient

		Youth Participation	Youth Awareness	Youth Perceptions	Social Capital	Economic Factors
Youth Participation	Pearson Correlation	1				
	Sig. (2 tailed)	.000				
Youth Awareness	Pearson Correlation	.731**	1			
	Sig. (2 tailed)	.000	.000			
Youth Perception	Pearson Correlation	.542**	.806**	1		
	Sig. (2 tailed)	.003	.000			
Social Capital	Pearson Correlation	.656**	.550**	.555**	1	
	Sig. (2 tailed)	.000	.000	.000		
Economic Factors	Pearson Correlation	.856**	.087	.141	.094	1
	Sig. (2 tailed)	.011	.516	.292	.480	,392

The analysis of correlation results between the youth participation in agricultural value chain activities and youth awareness on those activities, depict a positive

coefficient of 0.731, with a p-value of .000. This is an indication that the result is significant at α= 5% and that, as the level of youth awareness increases, it will have a positive impact on youth participation in agricultural value chain activities. The correlation results between perceptions of the youth on agriculture and youth participation, also shows a positive correlation coefficient of .542 and a p-value of .021 which is significant at α= 5%. Further, the results show a positive association between access to social capital and youth participation, where the correlation coefficient is .656 with a p-value of .000. Economic factors also show a positive correlation coefficient of .856 with a p-value of .011.

This was an indication that economic factors had the greatest influence on youth participation in agricultural value chain activities, followed by youth awareness, then access to social capital, while youth perception on agriculture, had the least effect on youth participation in agricultural value chain activities in Kathiani Sub-county.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, discussion, conclusions drawn from the analysis of data and the recommendations made. The main objective of this study was to investigate factors influencing youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County, Kenya.

5.2 Summary of Findings

The study was based on the factors influencing youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County, Kenya. The study sought to find out whether awareness, perceptions of the youth on agriculture, access to social capital and economic factors influence youth participation agricultural value chain projects.

5.2.1 Youth Awareness

The study found that majority (80%) of the youth were aware of agricultural value chain projects in Kathiani sub-county. Most of the youth who participated in agriculture projects were inspired by their parents. Further, it was found that youth awareness highly influenced their participation in agricultural value chain projects.

Local agriculture department frequently organised training, this scored a mean score of 3.64. The youth were guided by specific types of information to achieve successful agricultural project implementation; this scored a mean of 3.29. On whether the youth attended extension training sessions, it was found that the youth attended extension training sessions to a moderate extent this scored a mean of 3.23. Further, it was

further revealed that there was low community awareness and involvement in youth programmes. This scored a mean of 3.52.

5.2.2 Perceptions of the Youth on Agriculture

Majority (60%) of the youth indicated that their perceptions influenced their participation in agriculture. The youth strongly agreed that they perceived agriculture as a low status profession; this had a mean score of 3.72.

The youth indicated to a moderate extent that they took part in agricultural activities; this had a mean score of 3.51. The youth agreed that they aspired for a career in agriculture; this scored a mean of 3.06. Further, the respondents indicated to a small extent, that they appreciated agriculture as a source of income and that agriculture was a profitable business. These statements attained mean scores of 2.48 and 2.56.

5.2.3 Access to Social-Capital Networks

Concerning the number of youth registered as members in youth groups, it was found that majority (70%) of the youth belonged to registered youth groups that participated in agricultural activities. Further, 67% of the youth were associated to self-help groups.

The youth agreed to a large extent that they; networked with members of other agricultural groups, shared common values and that they had trust among the group members. This had mean score of 3.92, 3.86 and 3.75. The findings further indicated that the youth agreed to a moderate extent that the groups offered them adequate social support, for example access to credit and friendship between them.

5.2.4 Economic Factors

With regard to the size of land available for agricultural activities, the study found that at least 50% of the youth, had utmost 1 acre size of land available for agricultural activities. Concerning the distance to the nearest market for agricultural produce, it was found that majority (54%) of the youth travelled for at least 2 kilometres to the nearest market for agricultural produce. About the status of the road in Kathiani sub-county, 60% of the youth indicated that the roads were maintained from the maintained from the farm to the markets in the past three years.

Although parents inherited their farm land to their children for farming purposes this land was not sufficient for them to engage in a profitable farming business. The findings showed that to a large extent parents allowed the youth to farm in their existing land, land prices were high, youth utilized the available land for agriculture and parents inherited their farm land to their children. These statements attained the following mean scores 4.01, 3.96 3.88 and 3.85. To a moderate extent, the results found that the youth had access to markets for their produce; this had a mean score of 2.51.

5.3 Discussions of Findings

The results found that majority (80%) of the youth were aware about youth value chain projects. This is consistent to a study by McCarthy *et al*., (2009), who asserted that youth awareness of agricultural activities highly contributed towards their participation. He further indicated that parents' played a big role in shaping career of their children.

With regard to the influence of youth perceptions on agricultural value chain projects, majority of the youth (60%) agreed that perceptions influenced their participation in agricultural value chain projects. These results are consistent to Smith and Dasher

(2009), who found that, the youth who had a positive attitude towards farming, participated in it and achieved a good productivity, unlike those who thought it was unproductive and a last resort. The youth strongly agreed that they perceived agriculture as a low status profession; this had a mean score of 3.72. These findings are consistent to Akwiwu and Nnadi, (2005) who indicate that many youth perceive agriculture as a part time job and not as a fulltime profession. They perceive agriculture as a profession for the old and the retired who have made their money in other professions.

Majority (70%) of the youth were registered members of youth groups that participated in agricultural value chain projects. This is coincides to a UN (2012) report which indicated that registered youth groups provided a platform for the youth to share ideas, trust, common values and social support, that effectively contributed to their participation in agricultural activities.

Majority (54%) of the youth were found to be living and/or operating from a close proximity to markets for agricultural produces. Further, majority (58%) of the youth indicated that access to credit influenced their participation in agricultural activities. This is in line with an earlier study by McCarthy *et al*., (2007), that showed that credit was a key economic resource, which influenced youth participation in agricultural activities, however, most of the youth lacked access to credit which inhibited their participation in agricultural activities.

The findings revealed that land was inadequate to most youths to participate in agricultural value chain activities. 50% of the youth had utmost 1 acre size of land available for agricultural activities. This size of land was considered inadequate to most youths to engage in agricultural activities; considering that majority of the youth

had more than five household members, and even though, youth strongly agreed (mean of 4.01) that the parents allowed them to farm on the existing land, the existing land was most likely sub-divided amongst other household members and parents still remained with the biggest portion of land. These findings conform to the observations of Gilbert (2011) who indicated that majority of the youth had limited to access of land for farming because parents held the ownership of the land.

5.4 Conclusion

The study established four main factors that influence youth participation in agricultural value chain projects; youth awareness on agricultural value chain project activities, perceptions of the youth on agriculture, access to social capital and economic factors.

Even though most of the youth participated in agricultural value chain projects, they did so because they were inspired by their parents who were already practicing agriculture. Youth awareness was found to influence youth participation in agricultural value chain projects, this could have been as a result of the numerous training and development programs that were launched by the county government to enhance their knowledge and skills on agriculture.

The youth perceived agriculture as a low status profession; they perceive agriculture as a profession for the old people and the retired, who have made their money in other professions. This has a negative impact on the youth participation in agricultural value chain projects.

Registered youth groups provided adequate social support such sharing of ideas, trust, common values and social support, which enhanced youth participation in agricultural value chain activities. The youth agreed to a large extent that they; networked with

members of other agricultural groups, shared common values and that they had trust among the group members.

The available land was inadequate for the youth to participate in profitable agricultural activities, most of the youth households were too many members and the size of the land was limited. This had a negative effect on youth participation in agricultural activities. Majority (54%) of the youth were found to be living and/or operating from a close proximity to markets for agricultural produces. Further, majority (58%) of the youth indicated that access to credit influenced their participation in agricultural activities.

In light of the study findings, if the limiting factors currently being experienced by the youth are not dealt with, they might create a 'stumbling block' for the youth who look up to farming as a profession. On the other hand, if these issues are addressed, then this might create a platform for the youth to engage in farming as a source of income to improve their livelihoods, as well as improve the food security of their households, the County of Machakos, and Kenya at large.

5.5 Recommendations

There is a great need for the parents to support their children who intend to undertake farming as a profession; this will assist in enabling them to change their attitude and perception about farming and to pursue it as a career. Land is a major factor of production and access of this resource to the youth will enable them to engage in profitable agricultural activities.

The youth who have a passion in farming should consider registering youth groups with their fellow members who share in the same goals and objectives. From these groups, they can start small and pool funds, which can form part of their investment to

buy or lease land, purchase farming materials or tools and equipment, based on the amount of money that they will have collected and saved.

5.5.1 Recommendations for Policy

The study recommends that Machakos County and other Counties across the country should increase youth awareness about agriculture and agricultural activities. This will enable them to have a deeper understanding of the benefits that are derived from agriculture and the challenges involved if they decide to take agriculture as a profession.

The study further recommends that Machakos County should establish a training and development programme to educate the youth and develop a positive perception about agriculture. This will assist in changing their attitude about agriculture and take this activity as a full time job.

The County governments should assist in creating ready markets and facilitating linkages to other markets for agricultural produce, this will encourage the youth to participate in farming activities since they are assured of making sales and increasing their profits which will contribute to improved income.

The County government of Machakos and other County governments across the country should make adequate budgetary allocation to finance for modern technology, establish innovation hubs and provide machines and equipment to support agricultural activities for the youth. This will improve efficiency in farming and save huge costs that might in turn contribute to improved productivity.

The Government of Kenya through Central Bank of Kenya should continue and enhance the process of formulating policies that can enable the youth to access credit facilities from Microfinance banks, to specifically finance farming activities by the youth.

5.6 Recommendations for Further Research

1. To determine the effect of youth involvement in agriculture on productivity.
2. To establish the influence of youth change of perception on participation in agricultural activities.
3. To assess the influence of youth training and capacity development programmes on participation in agricultural value chain activities.

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APPENDICES

APPENDIX I: Letter of Transmittal of Data Collection Instruments

Letter of transmittal of data collection instruments

JULIUS M. KISING'U
P.O BOX 722
MACHAKOS
TEL: 0720-972422

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: FACTORS INFLUENCING YOUTH PARTICIPATION IN AGRICULTURAL VALUE CHAIN PROJECTS; CASE OF KATHIANI SUB-COUNTY, MACHAKOS COUNTY, KENYA

I am a postgraduate student in the University of Nairobi, pursuing a Master's degree in Project Planning and Management. Am conducting a research on factors influencing youth participation in agricultural value chain projects; case of Kathiani Sub-county in Machakos County, Kenya. You have been selected to help in this study and I am humbly requesting you to allow me to interview you. The information being sought is meant for research purposes only and will not be used against you in anyway. The researcher will ensure that the feedback reaches all those who will participate in the research study. The findings will greatly inform all stakeholders in the youth agricultural value chain projects and will tremendously contribute to enticing the youth back to agriculture in the country. Your responses will be treated with confidentiality. No names of individuals or farms will be needed.

Thank you in advance.

Yours sincerely,

JULIUS MUATHE KISING'U
L50/83454/2012

APPENDIX II: Questionnaire

This questionnaire is designed to collect data to establish factors influencing youth participation in agricultural value chain projects in Kathiani Sub-county in Machakos County, Kenya. The data shall be used for academic purpose only and it will be treated with the confidentiality it deserves. The respondents are highly encouraged and persuaded to respond to the statements in this questionnaire in the most truthful and objective way possible. Your participation in facilitating this study will be highly appreciated.

Kindly ticks in the space provided [ ] the correct answer or supply the required information where, required, please specify and elaborate.

SECTION A: BACKGROUND INFORMATION

1. What is your main occupation? (circle appropriately)

   I am a student [1]
   I am engaged in On-farm unpaid employment in my parents'/guardians' farm [2]
   I am engaged in On-farm paid wage employment in my parents/guardian farm [3]
   I am a farmer - engaged in On-farm employment in my own farm [4]
   I am engaged in Off-farm wage employment [5]
   I am engaged in Agri-business [6]
   I am engaged in other forms of Business (not agriculture related) [7]
   I am engaged in salaried employment [8]
   I am unemployed [9]

2. If you are engaged in any agricultural related activity, what is the nature of your engagement? (Circle appropriately)
   Full-time basis [1]
   Part-time basis [2]

3. If you are engaged in any agriculture related business – at what specific level in the agricultural value chain are you **mostly** involved at? (Circle appropriately)
   Sale/distribution of farm inputs [1]
   Farm level production [2]

Agricultural produce Bulking (collection/aggregation) [3]

Agricultural produce transportation [4]

Agricultural produce processing [5]

Agricultural produce trading (selling) [6]

4. What are the **three** main challenges affecting youth participation in agricultural value chain projects?

……

……

Demographic Factors ***Please Indicate Your Scores in the Comments Column (tick or circle appropriately)***

No	Questions and filters	Coding Categories	Code	Comments
5	Please indicate your age bracket	15 to 19 years	1	[ ]
		20 to 24 years	2	[ ]
		25 to 29 years	3	[ ]
		30 to 35 years	4	[ ]
		36 to 45 years	5	[ ]
		46 to 55 years	6	[ ]
		55 years and above	7	[ ]
6	Please indicate your gender	Male	1	[ ]
		Female	2	[ ]
7	Please indicate your marital status	Single	1	[ ]
		Married	2	[ ]
		Separated	3	[ ]
		Windowed	4	[ ]
		Divorced	5	[ ]
8	What is your highest level of formal education	No education	1	[ ]
		Primary KCPE	2	[ ]
		Secondary KCSE	3	[ ]
		Certificate	4	[ ]
		Diploma	5	[ ]
		Degree	6	[ ]
		Masters	7	[ ]
		PhD	8	[ ]
9	What is the size of your parent's/Guardian's household (HH)?	Fill in exact HH size number [ ]		
10	Is your parent/guardian involved in	Yes	1	[ ]

	farming?	No	2	[ ]
11	If your parent/guardian is involved in farming, what is the nature of involvement?	Full-time basis	1	[ ]
		Part-time basis	2	[ ]
12	Do you have siblings who are involved in any form of agricultural activities?	Yes	1	[ ]
		No	2	[ ]

SECTION B: FACTORS INFLUENCING YOUTH PARTICIPATION IN AGRICULTURAL VALUE CHAIN PROJECTS

Youth Awareness - ***Please Indicate Your Scores in the Comments Column (tick or circle appropriately)***

No	**Questions and filters**	**Coding Categories**	**Code**	**Comments**
13	Who offers training to the youth in this region on agriculture projects?	NGO	1	[ ]
		GOK	2	[ ]
		Private sector	3	[ ]
		None	4	[ ]
14	How many trainings organized by any of the actors as stated in question 27, have you attended?	1 - 5	1	[ ]
		5 - 10	2	[ ]
		More then 10	3	[ ]
15	For how long have you been involved in any type of agricultural activities?	Less than 1 year	1	[ ]
		1 – 5 years	2	[ ]
		6 – 10 years	3	[ ]
		11 – 15 years	4	[ ]
		Above 15 years	5	[ ]

16	Indicate your level of agreement with the following statements that relate to influence of **Youth Awareness** on agricultural value chain projects on their participation in those projects in Kathiani Sub-county, Machakos County					
SN	**Statement**	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
i	Local agricultural department frequently organize training for the youth.					
ii	The types of training and topics covered adequately meets the needs of youthful agribusiness community					
iii	Youth always attend extension training sessions					
iv	Youth have a various sources and types of information to					

	guide on successful agricultural project implementation					
v	There is extremely low local community awareness and involvement in youth oriented programs					
17	In what other way – apart from the ones indicated above – does youth awareness influence their participation in agricultural value chain projects in Kathiani Sub-county?	…… …… …… …… …… ……				

Perceptions of the Youth on Agriculture ***Please Indicate Your Scores in the Comments Column (tick or circle appropriately)***

No	**Questions and filters**		**Coding Categories**		**Code**	**Comments**
18	Indicate your level of agreement with the following statements that relate to the influence of on **Youth Perceptions agriculture** on their participation in agricultural value chain projects in Kathiani Sub-county, Machakos County					
SN	**Statement**	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
i	Youth engage in agricultural activities in Kathiani Sub-county					
ii	Youth aspire for a career in agriculture					
iii	Youth see agriculture as low status profession					
iv	Youth perceive agriculture to be profitable business					
v	Youth in Kathiani Sub-county appreciate agriculture as source of income					
19	In what other way – apart from the ones indicated above - do youth perceptions on agriculture influence their participation in agricultural value chain projects in Kathiani Sub-county?	…… …… …… …… …… ……				

Youth Access to Social Capital ***Please Indicate Your Scores in the Comments Column (tick or circle appropriately)***

No	Questions and filters	Coding Categories	Code	Comments
20	Are you a registered member of any youth group that engages in agricultural activities?	Yes	1	[ ]
		No	2	[ ]
21	If yes to question 20, in how many groups have you registered as a member?	Fill in exact number of groups [ ]		
22	What type of association is your group (s) registered under? (*You can choose more than one option)*	Self-help group	1	[ ]
		Community based organization	**2**	[ ]
		Cooperative Society	**3**	[ ]
		Others (Specify)	**4**	[ ]
23	Indicate your level of agreement with the following statements that relate to influence of **Youth Access to Social Capital** on their participation in agricultural value chain projects in Kathiani Sub-county, Machakos County.			

SN	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i	Youth are registered as members in groups engaged in agricultural activities					
ii	Youth regularly network with members of other agricultural groups					
iii	The groups that the youth have joined offer adequate social support e.g. access to credit, friendship bonds/ties					
iv	The youth feel that there are shared/common values among the group members					
v	There is trust among youth group members					
24	In what other way – apart from the ones indicated above – does access to social capital influence youth participation in agricultural value chain projects in Kathiani Sub-county?	…… …… …… …… …… ……				

Economic Factors ***Please Indicate Your Scores in the Comments Column (tick or circle appropriately)***

No	Questions and filters	Coding Categories	Code	Comments
25	What is the size of the land available for you to carry out agricultural activities at your home?	Less than an acre	1	[ ]
		Between 1 to 3 acres	2	[ ]
		Between 3 to 5 acres	3	[ ]
		More than 5 acres	4	[ ]
26	What is the distance to the nearest market for your agricultural produce?	Less than 1 km	1	[ ]
		1 – 2 km	2	[ ]
		2 – 3 km	3	[ ]
		3 – 5 km	4	[ ]
		Above 5 km	5	[ ]
27	In your opinion what do you think of the status of the road network from the farms to the markets in the past three years?	Deteriorated greatly	1	[ ]
		Deteriorated a little	2	[ ]
		Has not changed	3	[ ]
		Improved a little	4	[ ]
		Improved greatly	5	[ ]
28	To what extent does Access to credit influence youth participation in agricultural value chain projects in Kathiani Sub-county?	Very great extent	1	[ ]
		Great extent	2	[ ]
		Moderate extent	3	[ ]
		Small extent	4	[ ]
		Not at all	5	[ ]

29	Indicate your level of agreement with the following statements that relate to influence of **Economic Factors (**access to land and markets**)** on youth participation in agricultural value chain projects in Kathiani Sub-county, Machakos County					
SN	**Statement**	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
i	Land prices are high					
ii	Parents allow youth to farm in their existing land.					
iii	Parents inherit their farm land to the youth					
iv	Youth utilize the available land for agriculture					
v	Youth have access to markets for their produce					
30	In what other way – apart from the ones indicated above - do Economic factors influence youth participation in agricultural value chain projects in Kathiani Sub-county?	…… …… …… …… …… ……				

Youth Participation - ***Please Indicate Your Scores in the Comments Column (tick or circle appropriately)***

No	Questions and filters	Coding Categories	Code	Comments
31	How much do you contribute to your agricultural youth group kitty per month?	I do not contribute	1	[ ]
		Below Ksh. 100	2	[ ]
		Ksh. 100 - 500	3	[ ]
		Ksh. 600 - 1000	4	[ ]
		Above Ksh. 1000	5	[ ]
32	How much income do you generate from your involvement in agricultural activities per month?	Below Ksh. 1000	1	[ ]
		Ksh. 1000 - 3000	2	[ ]
		Ksh. 3001 - 5000	3	[ ]
		Ksh. 5001 - 7000	4	[ ]
		Ksh. 7001 - 9000	5	[ ]
		Above 9000	6	[ ]
33	To what extent would you say that the monthly income that the youth get from agricultural activities motivates them to continue participating in agricultural value chain projects in Kathiani Sub-county	Very great extent	1	[ ]
		Great extent	2	[ ]
		Moderate extent	3	[ ]
		Less extent	4	[ ]
		Not at all	5	[ ]
34	How many agriculture youth group meetings have you attended in the last one month	None	1	[ ]
		1 - 2	2	[ ]
		3 - 4	3	[ ]
		Above 4	4	[ ]
35	To what extent would you say equal opportunities are accorded to youth in decision making in agricultural value chain projects in Kathiani Sub-county	Very great extent	1	[ ]
		Great extent	2	[ ]
		Moderate extent	3	[ ]
		Less extent	4	[ ]
		Not at all	5	[ ]

END

Thank you for participating in this interview.