



**DETERMINANTS OF YOUTH PARTICIPATION IN POULTRY FARMING PROJECTS IN ONGATA RONGAI, KAJIADO COUNTY**

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## DETERMINANTS OF YOUTH PARTICIPATION IN POULTRY FARMING PROJECTS IN ONGATA RONGAI, KAJIADO COUNTY

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### ABSTRACT

*The main aim of this study was to establish the determinants of youth participation in poultry farming projects in Ongata Rongai ward, Kajiado North County. The study adopted the Sustainable Livelihood Approach (SLA) and the diffusion of innovation theory. The study used the cross-sectional research design and the target population was youth poultry farmers and the study used 180 registered youth poultry farmers in Ongata Rongai ward, comprising of Ole-kasasi and Ongata Rongai sub-locations. Quantitative and qualitative primary data were collected using semi-structured questionnaires. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS). The study also used analysis of variance (ANOVA) to test the hypotheses. The results of the study were; demographic factors were significant to youth participation in poultry farming projects in Ongata Rongai, the  $p$ -value of 0.0001 was less than 0.05. Access to credit was not a significant factor in youth participation in poultry farming projects in Ongata Rongai, Kajiado County. The  $H_0$  was rejected because the Anova  $F$  static was 32.983 and the  $p$  value was 0.001 less than 0.05. Information Communication technology was not a significant factor to youth participation in poultry farming projects in Ongata Rongai, Kajiado County. The  $H_0$  was rejected because after Anova  $F$  static was 16.314 and the  $p$  value was 0.001 less than 0.05 meaning information communication technology was significant to youth participation. The study concluded that demographic factors, access to credit and information communication technology affect youth participation in poultry farming projects in Ongata Rongai, Kajiado North County. The study recommended that other factors should be considered for further studies such youth perceptions and attitudes in regards to poultry farming projects, access to land, increasing innovative financing and interest free loans to encourage entrepreneurship.*

**Key Words:** Demographics, Personal Characteristics, Youth Participation, Access to Credit, ICT, Poultry Farming

## INTRODUCTION

Youth represent an important resource for society. They account for over 18 per cent of the world's population as well as more than 15 per cent of the world's labor force (World Employment and Social Outlook, ILO 2016). According to the Global youth development index & report (2016), youth population was approximated at 1.8 billion, 90 percent of these live in developing countries. Globally youth population has been drastically increasing in the last decades. There were 1.2 billion youths in 2015 which accounted for one out of every six people worldwide. By 2030, the number of youth is projected to grow by 7 per cent, to nearly 1.3 billion (United Nations, 2015). In Africa, the number of youth is growing rapidly; youths constitute more than 60% of the population. In 2015, 226 million youths lived in Africa, accounting for 19 per cent of the global youth population. By 2030, this figure is projected to have increased by 42 per cent by 2055 (POPFACETS, No. 2015/1).

Kenyan youth are all individuals in the Republic who are between 18 and 35 years (KNBS, 2010). According to Awiti and Scott (2016), Kenya is a very youthful country. The median age is estimated at 19 years, and about 80 percent of Kenya's population is below 35 years. 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 majority of these in rural areas (KNBS, 2010). This clearly shows that youth constitute a key demographic domain of poverty.

Youth unemployment is the major global challenge of the twenty first century. According to statistics available, the global youth unemployment rate was at 13.1 per cent in 2016 (up from 12.9 per cent in 2015). As a result, the global number of unemployed youth was set to reach 71 million in 2017. Further, the increasing number of young people living in extreme or moderate poverty in emerging and developing

countries is of great concern (Common Wealth, 2016).

In Kenya the, the rate of youth unemployment is rated at 17.3 per cent compared to six per cent for both Uganda and Tanzania. This rate is among the highest in the world (Hall, 2017). Despite the increase in the Gross Domestic Product (GDP) by 5.6% in 2015, the rate of unemployment is still quite high. Nearly one in every five Kenyan youths of working age has no job compared to Uganda and Tanzania where about one in every 20 young people is jobless (Hall, 2017). Due to these high rates of unemployment, Kenya's youth remain marginalized and unable to contribute to their full potential in national development (Mibey, 2015). The affected youths are also faced with a myriad of challenges whereby majority live below \$1.25 per day (Natama, 2014).

Perhaps peri-urban farming, particularly poultry farming can be part of the solution to the youth unemployment challenge in Kenya. This is because peri-urban poultry farming can play a crucial role towards improved livelihoods of the urban poor. Peri-urban poultry farming contributes to improved human nutrition and food security by being a leading source of high-quality protein in the form of eggs and meat. It acts as a key supplement to revenue from crops and other livestock enterprises, thus avoiding over dependency on traditional commodities with inconsistent prices. It has a high potential to generate foreign exchange earnings through export of poultry products to neighbouring countries (National Agricultural Advisory Services, 2011)

So far, youth participation has had varying degrees of success. Studies carried out show that, there are a limited number of youths with sufficient innovations in the agricultural sector, leading to reliance on traditional and arduous production techniques (AGRA, 2015). In a study conducted by Fletcher and Kenney (2011) they argued that access to youth funding to finance youth start-ups is a critical barrier to attracting young people into agriculture. Young agri-entrepreneurs, are usually seen as high-risk

clients by financial institutions, and normally lack sufficient collateral against which credit can be mobilized. In another study conducted by Munyua (2007) he pointed out the underutilization of ICT for production and market information. Therefore, it is in this regard that this study on the determinants of youth participation in poultry farming projects in Ongata Rongai, Kajiado North is envisaged.

### **Statement of the Problem**

Kenyan labour force is composed of youth between 16-35 years who are openly unemployed (ILO, 2015). According to Waweru (2012) Unemployment and poverty are serious problems facing the youths in Ongata Rongai. Youths are unemployed in Ongata Rongai because the formal employment sector has no capacity to directly absorb all of them, resulting in the need for alternative sources of income for them to support themselves (Waweru, 2012). Poultry farming is one of the alternative avenues, if properly exploited it can be a viable source of job creation, income generation and livelihood sustenance for the unemployed youths in Ongata Rongai. According to Munyaka (2015), it has been established that poultry farming plays a major role in the economy of Kenya, where it represents 30% of the agricultural contribution to GDP. Thus, due to population growth in Ongata Rongai, the demand for poultry products has increased enormously but the supply is still low. However, Mibey (2015) argues that despite the obvious potential poultry farming has towards improving the livelihoods of the youths in Ongata Rongai, several bottlenecks exist that prevent the youth from tapping into the potential of this economic venture. Studies conducted in other parts of Kenya, reveal that these bottlenecks include; access to start-up capital, access to information and underutilization of ICTs. Finance is an essential component for any business venture to succeed, access to credit by youth farmers is still a major challenge despite the fact that Kenya has a relatively well-developed banking system (Mibey, 2015).

Limited access to credit affects the sustainability of agricultural startups, thus 60% of the farms do not survive a period longer than 2 years (Njenga et al 2012).

Technologies such as ICT bridge the gap between people and information, and could be effectively tapped to fill the gap in terms of access to information on poultry farming by the youth. The youth are already a key demographic in usage of ICT products, and can therefore utilize digital technologies to penetrate the poultry market, and disease management. Thus, adoption of ICT in agriculture can greatly improve the sector bringing different aspects including precision agriculture, improving knowledge transfer and enhancing market access making agriculture attractive. It is in this regard that this research was initiated to examine the determinants of youth participation in poultry farming projects in Ongata Rongai, Kajiado North County.

### **Study Objectives**

The aim of this study was to assess the determinants of youth participation in poultry farming projects in Ongata Rongai ward, Kajiado North County. The specific objectives were:-

- To assess how demographic characteristics affect youth participation in poultry farming projects in Ongata Rongai ward, Kajiado North County.
- To determine how access to credit affects youth participation in poultry farming projects in Ongata Rongai ward, Kajiado North County.
- To examine how the use of information communication technology (ICT) affects youth participation in poultry farming projects in Ongata Rongai ward, Kajiado North County.

### **Null Hypotheses**

- $H_0^1$  demographic characteristics are not significant determinants of youth participation in

poultry farming projects in Ongata Rongai ward, Kajiado County.

- $H_0^2$  Access to credit is not a significant factor in youth participation in poultry farming projects in Ongata Rongai ward, Kajiado County.
- $H_0^3$  Information Communication technology is not a significant factor to youth participation in poultry farming projects in Ongata Rongai ward, Kajiado County.

## LITERATURE REVIEW

### Theoretical Review

This study is anchored on theories that reflect the variables of the study under investigation. According to (Kombo, 2009) a theoretical framework is a collection of interrelated ideas based on theories. It is a reasoned set of prepositions, which are derived from and supported by data or evidence (Kombo, 2009). A theoretical framework therefore accounts for or explains a phenomenon, it attempts to explain why things are the way they are based on theories. Thus, a good research should be grounded on theory (Mentzer *et al.*, 2008). This study is anchored on the sustainable livelihood approach (SLA) and the diffusion of innovation theory

### Sustainable Livelihood Approach

A livelihood comprises of capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (DFID, 2000). The sustainable livelihood approach is a bottom-up and a participatory approach, it is mainly driven by the need to develop more effective poverty alleviation policies that emphasises on poor people's lives and their daily needs. (Chambers, 2013). The concept of Sustainable Livelihood (SLA) attempts to go beyond the conventional definitions and approaches to poverty eradication. This concept

offers a more coherent and integrated approach to poverty alleviation (Krantz, 2001).

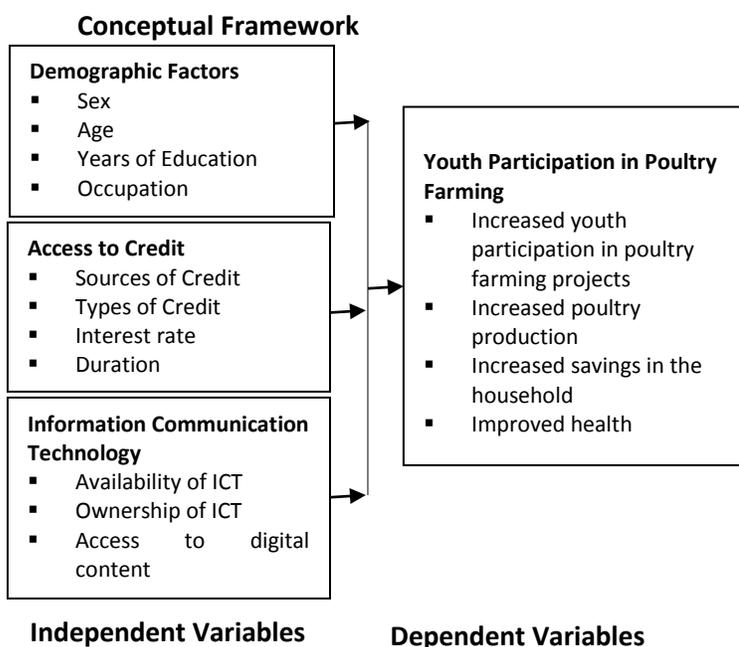
A sustainable livelihoods approach empowers the poor by seeing them not as victims, but as decision-makers with their own set of priorities. Its transcendence of a sector-by-sector view of development accommodates the variety of economic activities an individual may rely on to subsist. To this end, the livelihoods approach takes a more holistic view of poverty, considering multiple resources beyond income levels and productivity. SLA has two major components; the framework of understanding the poor people, livelihood complexities and a set of principles that guide in addressing and overcoming poverty. The framework places people in a web of inter-related influences that affect how they create livelihoods for their households. Resources and livelihood assets are put close to the people. These resources can be natural resources, technological skills, knowledge and capacity, health, education, sources of credit, their social networks and social support. Accessibility to these resources is influenced by the vulnerability context of economics, politics, technology, social, political, institutional and political environments, which affect how people combine and use their assets (IFAD, 2015).

### Diffusion of Innovation Theory

Diffusion is the process by which an innovation is communicated through certain channels over time among members of a social system. It is a special type of communication, in that the messages are concerned with new ideas (Rodgers, 2003). Diffusion concepts can be operationalized in projects to effect the rate of adoption of innovations by slowing spread or, more commonly, by accelerating it (Dearing, 2004). For Rogers, adoption is a decision of "full use of an innovation as the best course of action available" and rejection is a decision "not to adopt an innovation" (Rodgers, 2003).

According to (Les Robinson 2009), diffusion of Innovations offers three valuable insights into the

process of social change, the qualities that make an innovation spread successfully; the importance of peer, peer conversations and peer networks and understanding the needs of different user segments. The theory has four elements in this order: Innovation, communication channels, time and social system. This theory defines five adopter categories: innovators, early adopters, early majority, late majority and laggards. Based on the definition by Rogers (2003), the theory of diffusion of innovations is best suitable to support this study on poultry farming projects in Ongata Rongai, Kajiado County.



**Figure 1: Conceptual Framework**  
**Source: Author (2018)**

**Empirical Review**

**Demographic Characteristics**

There were 1.2 billion youth aged 15-24 years globally in 2015, accounting for one out of every six people worldwide. In 2030 the number of youth globally is projected to have grown by 7 per cent, to nearly 1.3 billion. This youth bulge represents both a challenge and an opportunity for global development. Youth can be a positive force for development when

provided with the knowledge and opportunities they need to thrive. Thus, in Africa, the number of youth is growing rapidly. In Kenya the youth population is among the highest globally, presenting the economy with a vibrant manpower if put to productive use. Kenya’s ratio of youth (aged 15-24) to the population stands at 20.3 per cent, above the world’s average of 15.8 per cent and 19.2 per cent for Africa (POPFACTS, No. 2015/1).

In Sub-Saharan Africa gender inequality has been widely noted as a major obstacle towards meeting development targets (UNDP, 2009). In studies reviewed on women and youth agricultural enterprises, it was discovered that young women face additional barriers to access credit even though it is proven that they are more reliable clients than men (IFAD, 2009). This is attributed to lower literacy levels than man, often lack collateral like land and in some cultures, their mobility is restricted (Mcnulty and Nagarajan, 2005). Legal policies and traditional rules often restrict women’s access to and control over assets that can be accepted as collateral for agricultural credit. A study conducted by Fletcher and Kenney (2011) found out that female youth are much less likely to have land titled under their name and are less likely than male youth to have control over land, even when they formally own it.

It is widely documented that education is key to overcoming development challenges. Not only is there is a relationship between food security and education, but it has also been shown that basic numeracy and literacy skills help to improve farmers’ livelihoods (FAO, 2007). A number of studies reviewed highlight that; youth’s access to knowledge and information is crucial for addressing the main challenges they face in poultry farming (FAO, 2007). Youth participation is the involvement of young peoples in matters that affect them and an attempt to include them in the planning designing and decision making (FAO 2012). Youth participation is a commonly used approach and concept within development. Through active participation, young

people are empowered to play a vital role in their own development as well as in that of their communities. United Nations has long recognized that young people are a major human resource for development and key agents for social change, economic growth and technological innovation therefore, youth participation is a necessity for many development interventions (Beyuo et al 2013).

### **Access to Credit**

Despite the liberalization of the financial sector, high interest rates are still an issue of concern in a number of African countries, including Kenya. Access to bank credit especially by young farmers is still a major challenge despite the fact that Kenya has a relatively well-developed banking system (IFAD, 2009). Proctor and Lucchesi (2012) in their study argue that in Kenya poultry farming projects are not viable to most youths because they are capital intensive in nature. Kangai et al (2011) also argue that agriculture is considered risky by financiers due to its high vulnerability to external shocks including extreme weather events, pest, and diseases and nature of seasonality. Insurance in agriculture is also not well developed, yet insurance and credit usually goes hand-in-hand to reduce possible lending risks for financial institutions (MALF, 2017).

In Kenya, commercial banks are profit oriented; their interest rates are too high for youth start-ups, pegged at 12% by CBK (Herbel *et al.*, 2010). These institutions are not flexible to provide financial support to youth agribusiness ventures (Wanjohi and Mugure, 2008). Hence young people view agribusiness, poultry farming projects as a last resort (Proctor, 2012). Nonetheless, availability of credit increases the ability to invest and improve access to productive inputs and critical agricultural assets important for improving farm productivity and returns (Gemma, 2013). According to (Abdulla 2013), most young people cannot invest in poultry start-ups because they do not have access to loans for agricultural purposes. Majority of them do not have bank accounts which

denies them access to bank loans to finance their poultry start-ups (Proctor, 2012). Banks consider agribusiness start-ups and youths as high risk hence require youths to possess collateral such as land or savings to obtain credit from financial institutions (Fletcher and Kenney 2011). Risks associated with agribusiness coupled with complicated land laws and tenure systems that limit the use of land as collateral make financing of agriculture unattractive to the formal banking industry in Kenya (MoA, 2009).

Over the years and as the need to build inclusive financial sectors became apparent, microfinance came to be accepted as a poverty alleviation tool. (Robinson, 2001). Microfinance is a term used to describe financial services, such as loans, savings, insurance and fund transfers to entrepreneurs, small businesses and individuals who lack access to traditional banking services. MFI, soft borrowing is the one of the alternatives for the promotion of youth participation in agribusiness/ poultry farming start-ups (Hishigsuren, 2006). The rationale turning to these schemes among a good number of entrepreneurs is mainly to seek alternatives and soft credit with low interest rates while making profits.

Poultry farming start-ups like any other entrepreneurial entity require capital which is a fundamental element without which a project cannot be implemented. Without start-up funding young farmers are not able to sufficiently invest in agriculture (Mibey, 2013). Viable agricultural projects require capital investment and insurance as a necessity. However, due to high levels of unemployment in developing countries, personal funding is not a feasible means for youth start-ups. Furthermore, in developing countries, most young people do not have gainful employment that would create room for savings instead majority of the young generation live below the poverty line which makes it difficult for them to self-finance their start-ups. Furthermore, financial service providers encourage a culture of borrowing rather than promoting a culture of savings to young people in formal employment

(Nagajaran, 2005). Less than half of microfinance providers in most of the developing countries offer savings products (McNulty and Nagarajan, 2005).

In the context of Kenya, lack of affordable credit schemes for women and youths led to the establishment of the Uwezo fund by the government of Kenya in 2013. This innovative financing is a youth empowerment project under the youth development fund (YEDF) and a flagship program for Kenya's vision 2030. The major aim of the fund is to spur the nation's economic growth and development by providing affordable, available and accessible credit for women and youth start-ups (Kiberenge, 2013). In a study conducted by Lucy (2013), approximately KES 1.3 billion in credit has been disbursed to the youth groups from the Uwezo fund. The loans taken are for various business ventures to ease youth unemployment and create gainful self-employment. The loans taken for farming purposes were used to invest in technology, such as greenhouses, artificial fish ponds, poultry, sheep, and vegetable farming (Wachira, 2013).

### **Information Communication Technology**

Globally, information communication technology has become extremely integrated with projects operations. Entrepreneurs are finding it essential to utilize technology to conduct market analysis, test their products and services, and even conduct sales (Youth Business International, 2010). Youth cherish technology, efficiency and innovations and accommodate entrepreneurial risk. An innovative application of ICT is a key element of the strategy to attract youth into the agricultural sector. ICT has great youth appeal but also has excellent potential to improve agricultural and agribusiness efficiency, such as: real-time market information and price transmission; provision of up-to-date technical knowledge; networking (including use of social media) and creation of new marketing channels; and design of attractive packaging and labelling (FAO 2014).

Thus, ICT is defined as a range of technology that are applied in the process of collecting, storing, editing, retrieving and transfer of information in various forms (UNESCO, 2008). Spense and Smith (2009) argue that ICT enables communication, builds human capabilities, freedoms and offer youth poultry farmer access to information and as a result they develop problem-solving skills. While farmers and their machinery are still key for the agricultural industry, technology is starting to play a more significant role in uplifting communities. This goes beyond basic computer training to using ICT to improve sustainability, efficiency and profitability of small scale farming. ICT can facilitate relationship building with trusted suppliers of seeds and fertilizer; purchasing aggregation where multiple buyers can result in lower pricing; access to cultivation information and best practices; and an overall reduction in labor costs and wastage and thus entice youth to participate in poultry farming (K. R. G. Irungu, D. Mbugua & J. Muia, 2015).

Access to information is a prerequisite for successful commerce and market operations for youths. Information plays a key role in improving the livelihoods of farm households and small-scale entrepreneurs and acceleration of development. There is extensive literature on the value of information to improved decision making. Youth farmers require timely information on the value chain involved in their start-up venture. The strategic importance of access to knowledge and information is emphasized human in the development report (UNDP, 2001)

Despite rising awareness on prospect of agribusiness, many young people struggle to access information on agriculture (Gemma 2013). Massive emphasis need to be invested in making information easily accessible in schools, libraries and at different levels of the community There is also equal demand for the information to be in languages and grammar the youth understand. Thus, information communication technologies are central

to the process of knowledge building and information sharing (FAO, 1998). Innovative application of ICT is a key element of the strategy to attract youth into the agricultural sector. Studies reviewed suggest that; it is essential to digitize agricultural production and marketing information into web-based resources. This will ensure wider coverage since the few available extension officers do not effectively reach the majority of the farmers at different locations. ICT has great youth appeal but also has excellent potential to improve agricultural and agribusiness efficiency, such as: real-time market information and price transmission; provision of up-to-date technical knowledge; networking (including use of social media) and creation of new marketing channels; and design of attractive packaging and labelling (FAO 2014).

#### METHODOLOGY

This study employed a cross sectional research design, and used the survey approach. Which involved the use of questionnaires to collect data from the respondents and interview guide for the key

informants (county livestock officer, Ken-chic field officer for Kajiado North). A cross-sectional survey collects data to make inferences about a population of interest (youth poultry farmers) at one point in time. The cross-sectional survey was appropriate for this study because it allowed the researcher to collect data on some different variables to see how differences in sex, age, level of education, income and ICT correlate with the critical variable of youth participation in poultry farming projects. According to Zikmund (2010), study population is a complete group of entities sharing common features. In Kajiado County Livestock office and in the County website there was no official data for youths involved in poultry farming projects in Ongata Rongai. However, the researcher adopted the Ken-chic data for Kajiado, North County particularly for Ongata Rongai. Ken-chic had 180 registered youth poultry farmers in Ongata Rongai' Kajiado North County. Thus, these registered youth poultry farmers in Ongata Rongai, were adopted as the study population. Ongata Rongai is a ward in Kajiado North comprising of Rongai and Ole-kasasi sub-locations as depicted in table 1 below:

**Table 1: Population of the Youth Poultry Farmers**

Population Category	Rongai Sub-locations	Frequency	Percentage
Youth Poultry Farmers	Ongata 'Rongai	106	59
Youth Poultry Farmers	Ole' kasasi	74	41
<b>Total</b>		<b>180</b>	<b>100</b>

Source: Ken-chic (2017)

Multiple Regression analysis was used to show the relationship between the demographic characteristic, access to credit and information communication technology (x) and youth participation in poultry farming projects (y). As illustrated in the equations shown below;

$$\text{Multiple Regression } Y = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 \dots (2)$$

Where:  $b_0$  = Constant

$b_1, b_2, b_3, b_4, b_5, b_6$  = Coefficients

$x_1, x_2, x_3, x_4, x_5, x_6$  = Sex, Age, level of education, Occupation, access to credit and ICT

X = Independent Variables

Y = Dependent Variable (Youth Participation in Poultry Farming)

## RESULTS

**Table 2: Youth Participation in Poultry farming Projects**

	Frequency	Percent
Yes	110	74.8
No	37	25.2
<b>Total</b>	<b>147</b>	<b>100.0</b>

Table 2 above, showed youth participation in poultry farming projects in Ongata Rongai ward. 74.8% of the respondents were involved in poultry farming projects While 25.2% of the respondents were not involved in poultry farming projects in Ongata Rongai ward. The findings indicated majority of the respondents were involved in poultry farming projects. However, the respondents that were not involved in poultry farming projects in Ongata Rongai ward cited bottlenecks as a major reason for their non-participation. Gemma (2013) argued that the agricultural sector in Africa was dominated by the old cohort because youths found it easier to exit the sector due to challenges ranging from financing, access to information and markets.

On motivation for youth participation in poultry farming projects, majority of the respondents 29.4% indicated unemployment as their motivation. 11.8% indicated level of education, 20.6% indicated inadequate funding, while 5.3% indicated income diversification. 26.4% indicated income generation and lastly 6.5% indicated it was the only option. The youths who did not participate in poultry farming projects in Ongata Rongai cited the following for their lack of motivation; lack of capital, limited access to

credit, little knowledge and skills on poultry farming projects. According to Kirui (2010), youths can be motivated to participate in agriculture if the GoK transforms agriculture from subsistence to commercial farming. Increasing productivity means commercialization and competitiveness thus attracting youths into the venture.

The study sought to find out whether youths in Ongata Rongai are interested in poultry farming projects. The results were as follows; Majority of the respondents 63.5% indicated yes which means that they are interested in poultry farming projects. 25.2 % indicated no and the minority 17% indicated not sure. This means that youths generally youths are interested in agriculture and can fully engage in poultry farming if the environment is made conducive and the bottlenecks are addressed by all the stakeholders (FAO, 2014).

### **Demographic Information (Independent Variable)**

The demographic information presented in this section includes the following; sub variables; sex of the respondents, age of the respondents, level of education and occupation of the respondents.

**Table 3: Sex of the respondents**

	Youth Poultry Farmers	Non-Poultry Farmers	Total
Male	56.4	18.9	46.9
Female	43.6	81.1	53.1
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>

On the sex of the respondents, of all the respondents, 110 were involved in poultry farming projects and 37 of the respondents were not involved in poultry farming projects in Ongata Rongai. Out of 110 respondents who were involved in poultry farming, 56.4% were male and 43.6 were female. For non-poultry farmers, 18.9% were male and 81.1% were female. Generally, out of the 147 total number of the respondents 46.9% were male whereas 53.1% were female. This finding was supported by the CIDP (2017), statistics for Kajiado North County that estimate the proportion of females at 52.7% compared to males at 47.3%.

On age of the respondents, findings indicated that 5.5% of the respondents were aged 16-20 years, while 18.2% were aged 21-25 years. 28.2% were aged between 26-30 years whereas 48.1% were aged 31-35 years old. The findings of the non-poultry farmer (Control group) indicated that 2.7% were aged 16-20 years, while majority 35.1% were aged between 21-25 years. 29.7% were aged between 26-30 years lastly 32.4% were aged 31-35 yrs. Generally, out of the 147 total number of the respondents 4.8% were aged 16-20 years, 22.4% were aged 21-25 years while 28.6% were aged 26-30 and majority 44.2% were aged 31-35 years in Ongata 'Rongai, Kajiado County.

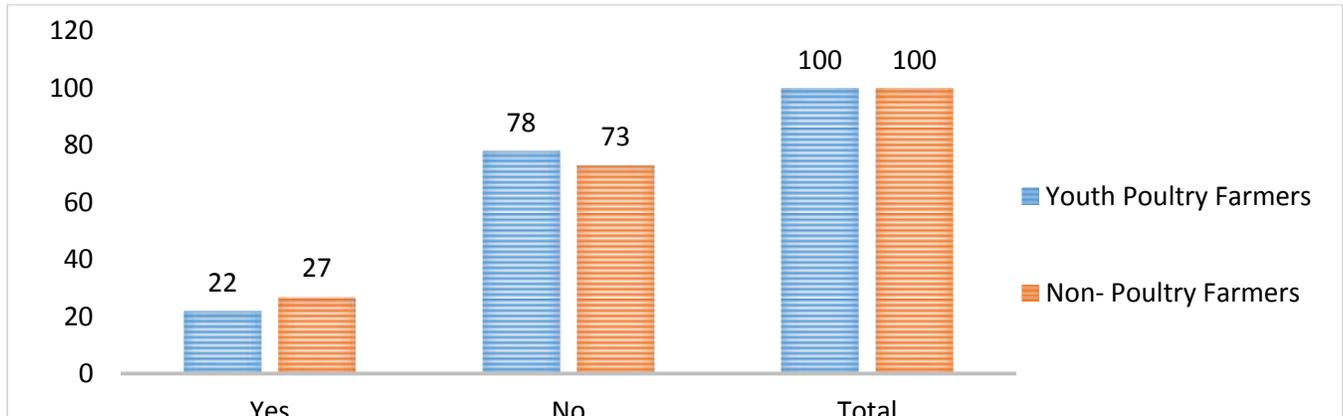
The respondents were requested to indicate their level of education and the results were as follows; 56.6% of the respondents had attained primary education, while 14.2% of the respondents had secondary education. 16.6% of the respondents had attained certificates/ diploma. 9.8% of the respondents had bachelor's degrees and 2.8 % had post graduate degree. For the non-poultry farmers, the results were as follows; 60.3% of the respondents had attained primary education while 20.9% of the respondents had attained certificates/ diploma and 18.8 % of the respondents had attained Bachelor's

degree. These findings concur with NCPD (2017) results which show that Kajiado North, inclusive of Ongata Rongai ward has primary school enrolment of 85% and secondary school enrolment of 15%. The implication is there is low transition to higher education that's why majority of the respondents had completed primary education.

The study sought to find out the occupation of the respondents. The findings for the poultry farmers were as follows; 59.9% indicated that they were unemployed, while 40.1% of the respondents indicated that they were employed. From the results of those who did not participate in poultry farming, 71.1% indicated that they were employed whereas 28.9% indicated that they were not employed. The general results from both the poultry farmers and the non-poultry farmers indicated that majority of the respondents 64.6 were unemployed and 35.4% of the respondents were employed in Ongata Rongai' Kajiado County. Findings therefore, revealed that majority of the respondents in this study did not have formal employment. These findings concur with the study by Macharia, (2012) which unearthed high levels of youth unemployment and poverty in Ongata Rongai. Njeru and Gichuru also cited that many young Kenyans are either unemployed or have low-paid jobs. This prolongs their dependency on their parents and fuels frustrations, which increases the likelihood of violence or conflict.

## Access to Credit

### Youth Poultry farmers Access to Credit



**Figure 2: Access to credit**

Figure 2 above consisted of youths involved in poultry farming projects and those not involved in poultry farming (Control group) in Ongata Rongai ward. Among the youths involved in poultry farming projects 22% of the respondents indicated that they had access to credit whereas 78% of the respondents indicated that they did not have access to credit. For those not involved in poultry farming projects, majority of the respondents 78% indicated that they had access to credit and minority 19% indicated they had no access to credit. These findings were supported by Waweru (2012), that majority of the youths had limited access to credit mainly from financial institutions as well as Youth Enterprise Development Fund. Macharia (2012), also supports these findings that financial access remains a major determinant of Micro and small enterprises (MSEs) investment growth in Ongata Rongai ward.

On Sources of Credit, 12% of the respondents indicated microfinance institutions as their source of credit, 9% of the respondents indicated banks. The respondents were requested to indicate the types of credit they preferred. For youths involved in poultry farming projects, minority of the respondents 18.5% indicated loans valid for a period of 3months. 33.3% indicated 6months and 48.2% indicated 1year. For those not involved in poultry farming projects

indicated 24.3% preferred 3 months while 32.5% indicated 6 months and majority indicated 43.2% indicated 1 year. Majority prefer long term loans because of flexible repayment plan.

On interests rates for loans, interest's rates there were various service providers for loans (Banks, MFIs, Government financing). From the youths involved in poultry farming 9.9% indicated 5% interest rates. Whereas 30% of the youths involved in poultry farming indicated 10% interests rates. Majority of the youth poultry farmers 40% indicated 15% interest rates and 20.1% of the youth poultry farmers indicated 16% and above interest rate. As for the youths not involved in poultry farming projects, majority 40.5% indicated 5% interest rates, while 27% indicated 10% interest rates. 16.2% of the respondents indicated 15 and above. The findings from this study showed that the interest's rates were very high and youths could not afford such for start-up and sustainability of their projects. IFAD (2009) reveals that access to bank credit by youth farmers is coupled with high interest's rates and short repayment period which makes it difficult for the youths who are not financially established.

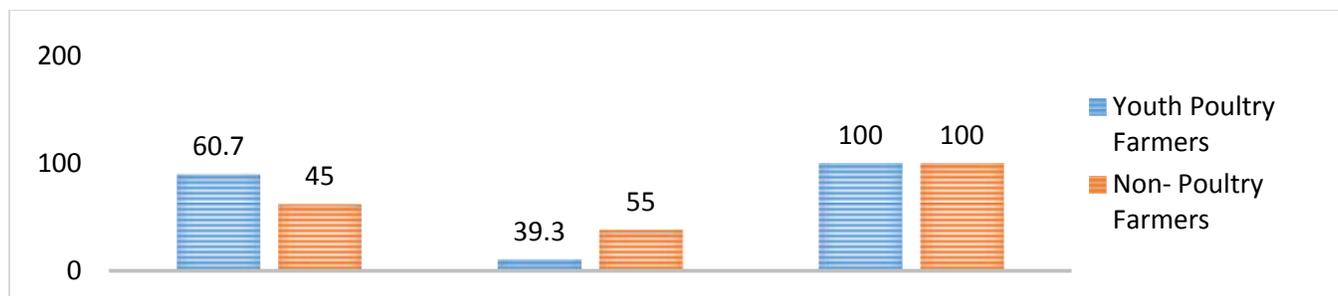
On requirements for Collateral/ Security, the respondents were asked to indicate whether financial institutions in Ongata Rongai that provide

credit/loans to youth poultry farmers require collateral. The response was as follows; Majority of the youth's poultry farmers in Ongata Rongai 44.5% indicated yes, whereas 40% indicated No while 15.5% indicated that they did not know about collateral/security. For those not involved in poultry farming projects, 73% of the respondents indicated yes while 27% indicated no.

The respondents were asked if they were insurance service providers underwriting policies to cushion their poultry farming projects from risks associated with poultry farming in Ongata Rongai their responses were as follows; for the youths involved in poultry farming projects 2.1% indicated yes they were aware of the insurance underwriters providing insurance policies for poultry farmers in Ongata

### Information Communication Technology

Rongai, whereas 55.2% of the respondents indicated no, they were not aware of insurance service providers and 42.7% indicated that they don't know anything about insurance for agriculture. As for non-poultry farmers 7% indicated that they were aware of the insurance underwriters providing policies for poultry farmers in Ongata Rongai. 52.5% said no and 40.5% indicated they did not know about insurance service providers. These findings show that majority of the respondents are not aware of agricultural insurance that can cushion them from risks that come with poultry farming. IFAD (2010) supports these findings, in developing countries there is poor agriculture insurance uptake which can make it easier for farmers to access credit as some financial service providers can provide financing if the farm is insured.



**Figure 3: Information Communication Technology**

Figure 3 above, depicted access to information from the youths involved in poultry farming projects and those not involved in poultry farming (Control group) in Ongata Rongai, Kajiado County. Among the poultry farmers 60.7% of the respondents had access to information communication technology (cell phones, internet, sms) while 39.3% did not have access to ICT (cell phones, internet, sms). Among the control group 45% of the respondents had access to ICT (cell phones, internet, and messages) whereas 55% of the respondents had no access to ICT (cell phones, internet, and sms). These findings show that majority of the respondents have access to ICT since Ongata Rongai is a peri-urban town. According to a study by

Wamuthenya (2010), ICT is important for agricultural development, it has the potential to increase the productivity of other sectors, which may in turn be responsible for further growth of agriculture (Khanna et al, 2016).

On sources of information in Poultry Projects the respondents were asked to indicate their sources of information and their responses were as follows; for the youths involved in poultry projects, 11.8% of the respondents acquired information on poultry farming from school, 6.3% acquired the information from extension officers, while 10.9% of the respondents acquired the information on poultry farming online (internet). 37.3% acquired information of poultry

farming from mass media (print, television/ radio) finally 33.7% of the respondents acquired it from mobile platforms (Agrivijana/ Kilimo biashara SMS platforms, WhatsApp groups). Among those not involved in poultry farming projects, 13.4% indicated that they acquired information on poultry farming from school while 5.4% acquired it from extension officers. Whereas 9.9% acquired it from internet, while 31.2% acquired it from mass media (print, TV/ radio) finally 40.1% of the respondents indicated mobile platforms (Agrivijana/ Kilimo biashara SMS platforms, WhatsApp groups). The findings showed that majority of the respondents had access to different ICTs. This was because Rongai is a peri urban town with developed ICT infrastructure (CIDP, 2013). The respondents to the question on the frequency of accessing information on poultry farming showed that 10% of the respondents indicated daily, 15.5% indicated weekly while majority of the poultry farmers indicated 31% followed by 27.2% who indicated quarterly and 16.3% who indicated yearly. From those not involved in poultry farming 13.5% of the respondents indicated daily, 5.5% of the respondents indicated weekly while 8.1% of the respondents indicated monthly. 32.4% indicated quarterly and majority of the respondents indicated 40.5%.

In terms of digital poultry capacity building programs, 16.4% of the respondents indicated that they were aware of the existing digital poultry capacity building programs. 32.7% of the youths involved in poultry farming projects indicated no, which meant they were not aware of the digital capacity building programs and 50.9% indicated that they did not know anything related to the digital capacity building programs. From the control group, 13.5% of the respondents were aware of the poultry capacity building programs whereas majority of the respondents 59.5% indicated no which meant that they were not aware of the digital capacity programs. While, 27% of the respondents indicated that they did

not know about the poultry capacity building programs.

On youth access to digital extension services. Among the youths involved in poultry farming 12%, minority of the respondents had access to digital extension services while 66.4% did not have access and 21.6% of the respondents were not aware. Among the control group, 20.9% had access to digital extension services while 33% of the respondents did not have access, 46.1% of the respondents were not aware.

In terms of access to online markets, among the youth poultry farmers 17.9% of the respondents indicated they had access to online markets (sell produce on social media, Facebook, OLX), while majority of the respondents 51.8% indicated they did not have access to online markets and 30.3% of the respondents indicated that they were not sure meaning they were not aware of online markets. Among those who did not participate in poultry farming, 27% of the respondents indicated that they had access to online markets whereas majority 54% of the respondents had no access to online marketing and 19% of the respondents were not sure about online marketing.

On sources of Market, data generated from both the youths involved in poultry farming and those not involved, majority of the respondents 41% indicated open markets as a platform they use to sell their produce. 22% of the respondents indicated neighbours as a source of market, while 10% of the respondents indicated online marketing platform as the source of marketing their produce. 14% of the respondents indicated mobile marketing platforms as their source of selling their produce. While 13% of the respondents indicated mass media (Radio/TV and print) as their marketing platform. The findings indicate that the traditional marketing platforms are highly used by the youths in Ongata Rongai. ICTs are thus important for the growth and development of the sector and their adoption is critical in poultry farming (Mibey, 2013)

### Inferential Statistics

The analysis of variance (ANOVA) was used to test the hypothesis. The ANOVA results showed that the F statistic was 7.831 and was significant ( $p \leq 0.001$ ) as shown in Table 4 below. Since the p value was less than 0.05,  $H_0$  was rejected. This implied that the

relationship between demographic factors and youth participation in poultry farming projects was significant. In other words, it showed that youth participation in poultry farming projects was dependent on demographic factors of sex, age, level of education and occupation in the study area.

**Table 4: ANOVA**

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.004	4	1.251	7.831	<.0001 <sup>b</sup>
	Residual	22.683	142	.160		
	Total	27.687	146			

a. Dependent Variable: Youth Participation

- a. Predictors: (Constant), Occupation of the Respondents, Age of the respondents, Sex of the respondents, Level of Education of the Respondents

### ANOVA Access to Credit

The analysis of variance (ANOVA) was used to test the null hypothesis for the study "Access to credit is not a significant factor to youth participation in poultry farming projects in Ongata Rongai, Kajiado County". The ANOVA results showed that the F statistic was 32.983 and was significant ( $p \leq 0.001$ ). Since the p

value was less than 0.05,  $H_0$  was rejected. This implied that the relationship between access to credit and youth participation in poultry farming projects was significant. In other words, it showed that access to credit influences youth participation in poultry farming projects.

**Table 5: ANOVA<sup>a</sup>**

	Model	Sum of Squares	df	Mean Square	F	Sig.
2	Regression	5.131	1	5.131	32.983	.0001* <sup>b</sup>
	Residual	22.556	145	.156		
	<b>Total</b>	<b>27.687</b>	<b>146</b>			

a. Dependent Variable: Youth Participation

- b. Predictors: (Constant), Access to Credit

### ANOVA Information Communication Technology

The analysis of variance (ANOVA) was used to test the hypothesis, Information Communication technology is not a significant factor to youth participation in poultry farming projects in Ongata Rongai ward, Kajiado County". The ANOVA results show that the F

statistic was 16.314 and was significant ( $p \leq 0.001$ ). Since the p value was less than 0.05,  $H_0$  was rejected. This implied that the relationship between access to ICT and youth participation in poultry farming projects was significant. In other words, access to ICT affected youth participation in poultry farming projects.

**Table 6: ANOVA<sup>a</sup>**

	Model	Sum of Squares	df	Mean Square	F	Sig.
3	Regression	2.800	1	2.800	16.314	.0001 <sup>b</sup>
	Residual	24.887	145	.172		
	<b>Total</b>	<b>27.687</b>	<b>146</b>			

a. Dependent Variable: Youth Participation

b. Predictors: (Constant), Access to Information on Poultry farming

### Summary of Hypotheses Results

**Table 7: Summary of the Hypotheses**

Hypotheses	Test	Results
H <sub>0</sub> 1: demographic factors are not a significant determinants of youth participation in poultry farming projects in Ongata Rongai ward, Kajiado County.	The P-value of the F statistic for this variable is 7.831. The p-value .0001 and is below 0.05 and the alternative hypotheses is accepted H <sub>1</sub> .	H <sub>0</sub> 1=Rejected H <sub>1</sub> = Accepted
H <sub>0</sub> 2: Access to credit is not a significant factor in youth participation in poultry farming projects in Ongata Rongai ward, Kajiado County.	The P-value of the F statistic for this variable is 32.983 Since the p-value .0001 and is below 0.05 and the alternative hypotheses is accepted H <sub>2</sub>	H <sub>0</sub> 2=Rejected H <sub>2</sub> = Accepted
H <sub>0</sub> 3: Information communication technology is not a significant factor to youth participation in poultry farming projects in Ongata Rongai ward Kajiado County.	The P-value of the F statistic for this variable is 16.314 and the p-value .0001 is below 0.05 we accept the alternative hypotheses H <sub>3</sub> .	H <sub>0</sub> 3=Rejected H <sub>3</sub> = Accepted

### Multiple Regression Analysis

Multiple regression analysis was used to determine the relationship between the dependent variable and the independent variable. The dependent variable was youth participation in poultry farming projects and the independent variable is demographic factors, Access to credit and Information Communication

Technology as shown in the Table 8 below. The regression analysis equation is given as;

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3$$

Where: b<sub>0</sub> is the regression intercept, b<sub>1</sub>- b<sub>3</sub> is the regression coefficients; Y is the dependent variable (youth participation in poultry farming projects), X<sub>1</sub> is demographic factors, X<sub>2</sub> is access to credit, X<sub>3</sub> is information communication technology

**Table: 8: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.361	.191		7.136	.0001*
	Sex of the respondents	.026	.067	.056	3.777	.501
	Age of the respondents	.032	.072	.063	3.982	.523
	Level of Education of the Respondents	-.082	.035	-.199	-2.371	.019*
	Occupation of the Respondents	.042	.045	.069	4.596	.022

	<b>(Constant)</b>	1.838	.107		17.159	.000
<b>2</b>	Access to Credit	-.376	.066	-.430	-5.743	.0001*
<b>3</b>	<b>(Constant)</b>	.826	.111		7.458	.000
	Access to Information on Poultry Farming	.277	.069	.318	4.039	.0001*

c. Dependent Variable: Youth Participation

\*Significant at 0.05 level

The results above, showed that there was a positive relationship (.026; the coefficient) between sex and youth participation in poultry farming projects. This means an increase in the independent variable (sex) will have a positive effect on the dependant variable (youth participation), the more the males the higher the participation and vice versa, the more the females the higher the participation in poultry farming. The implication is an increase in (independent variable) causes an increase (dependent variable), they move in the same direction.

Age of the respondents (.032; the coefficient) also had a positive correlation. The age of the respondents was significant to youth participation in poultry farming. This means that an increase in the age of the respondents has a positive effect and causes an increase in youth participation. According to the findings of this study, depicts that 48.1% of the respondents are youths aged between 31-35yrs and they are the majority. This means that, the older the youths the higher the participation. This implies that, the older youths are more established, experienced and have resources.

Showed that there was a negative correlation between level of education (-.082; the coefficient) and youth participation in poultry farming projects. This means that, the youths with higher academic qualifications participate less compared to those who have basic education (primary education). The findings of this study on the level of education of the respondents depicted that majority of the respondents had attained primary education 56.6%. According to CIDP (2013), there is

low transition from primary to secondary education in Kajiado County. Thus, as the findings indicate youths with only basic education have a high participation rate as compared to those who have attained higher education. This implied that an increase in the level of education decreases youth participation in poultry farming projects in Ongata Rongai.

The results showed there was a positive correlation between occupation (0.42) and youth participation in poultry farming projects in Ongata Rongai. This means that the higher the rates of unemployment the higher the rates of youth participation in poultry farming projects. The implication was an increase in the independent variable causes an increase in the independent variable, they move in the same direction. However, in the demographic factors; sex, age and occupation of the respondents were not significant as they had a p-values greater than 0.05. Level of education was significant since it had the p-value less than 0.05. demographic as a whole was significant since it had a p-value of 0.0001 less than 0.05

The regression analysis on access to credit shows that, there was a negative relationship between access to credit (-.376; the coefficient) and youth participation. This implies that most youth who participated in poultry farming in the study area had no access to credit. The reason the respondents highlighted were high interest rates, collateral requirements, short repayment period. At 0.05 level of significance, access to credit was significant since it recorded a p-value of 0.0001 which is lesser than 0.05.

The regression analysis on information communication technology shows that, there was a positive relationship between access to ICT (.277; the coefficient) and youth participation in poultry farming projects. This implies that as access to ICT increases, youth participation in poultry farming projects also increases and vice versa. The relationship was also significant at 0.05 level of significance because of the p-value of 0.0001 is lesser than 0.05.

## CONCLUSION

The findings of this study on demographic factors depict that level of education has an effect on youth participation in poultry farming projects in Ongata Rongai. Youths with higher level of education participate less in poultry farming projects and those with basic education participate more in poultry farming projects. These youths who are more educated are not interested in poultry farming because they focus more on white collar jobs and they can easily get employed as compared to those with basic education. Proctor and Lucchesi (2012) in their study observed that in Kenya agriculture is not the thing to do for most of the young people. It is seen as a trade for the illiterate and the poor. Many youths perceive that agriculture is not a profitable venture and this has led the industry to be dominated by the older generation (Justine Feighery et al., 2011). The study also draws from the findings that the older youths participate more in poultry farming because they have more access to credit and view poultry farming as a profitable venture. Occupation of the respondents has a significant effect on youth participation in poultry farming projects. Youths who are not employed participate more because they take poultry farming as their only source of income. Access to credit also had a significant effect on youth participation in poultry farming projects in the area of study. Youths with access to credit tend to participate more in poultry farming projects, they tend to cushion themselves from risks associated with agriculture and are able to sustain their project.

Credit availability increases the ability to invest and improve access to productive inputs and critical agricultural assets important for improving farm productivity and returns (AVRDC, 2007).

With regards to information communication technology the findings indicate that ICT has a positive effect on youth participation in poultry farming projects, ICTs have improved market access, they have accorded youths a wide coverage in terms of market access and information flow. ICTs have changed the traditional extension services to digital solutions whereby an extension officer does not have to physically visit the farm, diagnosis can be done online or on a mobile platform. Therefore, this study concludes that demographic factors, access to credit and information communication technology are all significant to youth participation in poultry farming projects in Ongata Rongai ward, Kajiado County Kenya.

## RECOMMENDATIONS

This study concluded that poultry farming was an important venture particularly for the youths who are unemployed, who are the majority in Ongata Rongai. Therefore, this study recommended the following:

- With regards to financing/ access to credit this study recommends that Government financing should be easily accessible to the youth. This is because the study finding reveal government funding is not easily accessible to majority of youths because of bottlenecks. This is making it difficult for youths to access cheap and affordable credit. Therefore, GoK and County government of Kajiado should develop a mechanism whereby youths can easily access these funds digital and without having to go through hectic processes
- Access to credit is the most significant factor thus government and other key stakeholders should develop a framework for interest free loans and tax relief for youth start-ups in order to encourage entrepreneurship and innovation

- GoK and other stakeholders should develop mentorship programs and skills development programs since the education system is theory oriented.
- ICTs are fundamental to agricultural development and are key in attracting young people thus, this study recommends that the cost of ICTs should be lowered so as to promote high adoption by the youths this will make it easier for the youths to integrate agribusiness and ICTs. This will also ensure that information is easily accessible to all youths whether customers or suppliers. ICTs will

ensure linkages between different stakeholders within poultry farming projects

#### **Recommendation for further Research**

This study investigated the determinants of youth participation in poultry farming projects in Ongata Rongai. This study was limited to demographics factors, access to credit and information communication technology. This study focused on Ongata Rongai ward, Kajiado North County, therefore, there is need for further research in other parts of Kajiado and an extension of the scope, focus on how the cultural elements and attitudes affect youth participation in poultry farming projects.

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