

**DETERMINANTS OF INVESTMENT ON FINANCIALLY INCLUDED YOUTH IN
KENYA**

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**DETERMINANTS OF INVESTMENT ON FINANCIALLY INCLUDED YOUTH IN
KENYA**

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DECLARATION

This thesis is my original work and has not been presented for award of a degree in any other University.

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APPROVAL

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DEDICATION

This work is dedicated to my wife Juliet, my son Steve Ryan and my daughter Talia Jasmine. Further dedication is to my parents Stephen Kiai and Grace Kiai for their sacrifice in educating me and for teaching me the discipline and value of hard work when I least knew the world. May the Lord grant them peace, good health and long life.

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ABBREVIATION AND ACRONYMS

AFI	-	Alliance of Financial Inclusion
ASCAS	-	Accumulating Savings and Credit Associations
ATM	-	Automated Teller Machines
CBK	-	Central Bank of Kenya
CFI	-	Centre for Financial Inclusion
CGAP	-	Consultative Group to Assist the Poor
CGAP	-	Consultative Group to Assist the Poor
CSO	-	Civil Society Organizations
CYFI	-	Child and Youth Finance International
DFID	-	Department for International Development
FSD	-	Financial Sector Deepening
GPMI	-	Global Partnership for Financial Inclusion
HIV	-	Human Immunodeficiency Virus
ICT	-	Information Communication Technology
IMF	-	International Monetary Fund
KMO	-	Kaiser-Meyer-Olkin
KNBS	-	Kenya National Bureau of Statistics
Kshs	-	Kenya Shillings
KYC	-	Know Your Customer
MFI	-	Micro- Finance Institution
M-Pesa	-	Mobile-based money transfer service
NACADA	-	National Authority for the Campaign against Alcohol and Drug Abuse
OECD	-	Organization for Economic Co-operation and Development

RoK	-	Republic of Kenya
ROSCA	-	Rotating Savings and Credit Association
SACCO	-	Savings and Credit Cooperative Society
SDGs	-	Sustainable Development Goals
SME	-	Small and Medium Enterprises
UAE	-	United Arab Emirates
UNCTAD	-	United Nations Conference on Trade and Development
UNDP	-	United Nations Development Programme
UNTCAD	-	United Nations Conference on Trade and Development

ABSTRACT

Financial inclusion has been found to play a critical role in poverty and unemployment reduction through household investments. This has seen countries put concerted efforts towards enhancing financial inclusion with the main objective of reducing poverty and unemployment. Kenya has achieved notable levels of financial inclusion. Populations that previously had no access to financial services now can access them and use a growing range of financial products delivered through increased branch network, agency banking or through their mobile phones. Despite the high level of financial inclusion, unemployment and poverty are still high in Kenya and more pronounced among the youth. This is against the backdrop of the theories and empirical studies that have confirmed that increase in financial inclusion has a positive effect on investment, which leads employment creation and poverty reduction. It is not clear why the youth are not undertaking investment despite high levels of financial inclusion. The overall objective of the study was to fill this gap by establishing the determinants of investment among financially included youth in Kenya. Specifically, the study was to establish whether the level of financial capability, level of social capital, level of ICT capability and business environment affects investment among financially included youths in Kenya. In addition, the study looked at the moderating role of demographic characteristics on investment among financial included youths in Kenya. To achieve the objectives, this research was guided by finance and inequality theory, financial liberalization theory and financial intermediation theory. This research adopted positivism philosophy and it used a descriptive survey research design. The study population was Kenyan youth aged between 18 to 35 years from Kirinyaga and Nyeri Counties. Sample size was 463 respondents, which was determined by use of Bartlett, Kotrlik, & Higgins table. Stratified probabilistic sampling design was used to identify the respondents and the data collection tool was a questionnaire. To enhance the reliability of the questionnaire, content validity was established by use of content experts and supervisors. Frequency and descriptive statistics have been used to summarize and profile the respondents' perception on determinants of investment. A logistic regression analysis was conducted to predict the effect of predictor variables on the dependent variable. The overall goodness of fit of the model was tested using Hosmer and Lemeshow (H-L) test and the model was fitting. Nagelkerke's R^2 was used to test the strength of the association between the predictor variable and the dependent variable. Nagelkerke R Square was 8.1%, 20.2%, 6.9% and 7.5% for objectives one to four respectively. Wald statistic was used to test the significance of individual independent variables. This study found that financial capability was the strongest determinant of investment, followed by ICT capability, social capital and finally business environment and they were all statistically significant. Demographic characteristics were found to have enhancing moderating effects on investment. This study recommends enhancement of financial capability, social capital, and ICT capability among the youth. The government and other stakeholders should put mechanisms in place that will improve business environment. With the implementation of the recommendations, youth will be able to undertake or expand investments, create employment and move out of poverty.

CHAPTER ONE

1.0 INTRODUCTION

The focus of this study was the determinants of investment among the financially included youth in Kenya. This from the fact that, financial inclusion in Kenya has improved over the last ten years. As per the proponents of financial inclusion, it would be expected that, increase in financial inclusion would have led to increase in employment and decrease in poverty levels in the country. However, this is not the case as the poverty levels and unemployment are still high. A study was thus done to find what are the determinants of investment of financially included youth in Kenya. This chapter discusses the background of the study, the problem statement, the objectives of the study and the hypothesis to be tested. The chapter further discusses the scope of the study, limitations of the study and finally gives the operational definition of terms.

1.1 Background

Financial inclusion is widely recognized as critical tool in poverty reduction and achieving inclusive growth through household investments (Demirguc-Kunt, Klapper, Singer & Oudheusden, 2015). This has seen world economies taking financial inclusion as a global agenda due to the expected effects of poverty and unemployment reduction. Most countries have been advocating for increasing financial inclusion among its citizens due to this (Centre for Financial Inclusion [CFI], 2014). Organizations both international and local have set aside resources towards improving financial inclusion in the various countries across the world (FinAccess, 2009). Soursourian and Dashi (2015) noted that

the funding towards financial inclusion has been increasing over time and it was estimated that as at 2014, the funding for financial inclusion was 31 billion dollars.

Due to the importance of financial inclusion, nations combined efforts to set the Centre for Financial Inclusion (CFI) purely dedicated to following the success of financial inclusion across economies (CFI, 2014). The Center works for the microfinance industry, serving as a way of leveraging private sector interest in microfinance. This has seen great achievement in improving the services of microfinance and thus broadening the access of financial services through this avenue. World Bank has also put a lot of advocacy and set aside huge amounts of funds in trying to help economies improve financial inclusion (World Bank, 2014).

Apart from funding, World Bank has also been undertaking a lot of research on the various facets of financial inclusion. Another organization that has put much efforts of financial inclusion is Bill and Melinda Gates foundation (Voorhies, Lamb & Oxman, 2013). This is a global institution and it plays a catalytic role in expanding the outreach of digital payment system focusing on poor and rural areas. Organization has funded a number of projects towards financial inclusion especially on digital field which includes research on fighting poverty profitably, funding of FinAccess studies and studies on digital development.

Further efforts towards financial inclusion are by Alliance for Financial Inclusion (AFI), which is an alliance of more than 100 economies that plays a key role in enhancing access to financial services (Alliance for Financial Inclusion [AFI], 2014). AFI brings

together the member economies to chart a common path towards financial inclusion. Towards this, in 2011, AFI passed a declaration popularly known as Maya Declaration that was a global commitment by the countries who are members of the Alliance to put in place measurable targets to increase financial inclusion in the countries.

Since 2011, countries have made quite significant progress towards financial inclusion. Further, international organizations including G-20 have put strategies to promote financial inclusion (Demirguc-Kunt et al, 2015). Last but not the least, International Monetary Fund (IMF) also spends a lot of resources in conducting surveys on the level of financial inclusion across the globe. Truly, this is a global agenda.

From the efforts towards financial inclusion, it has been noted that, over the 143 economies, 67 percent have set clear mandates to promote financial inclusion. This has ensured that these countries are able to evaluate the progress of financial inclusion in their countries. Due to much effort towards financial inclusion, there has been a lot of innovation and changes to regulations to accommodate the needs of those who have been financially excluded.

The regulations and innovations has seen changes in financial system. Delivery channels like mobile phone money transfer services, microfinance banks and agent banking have been developed aimed at enhancing financial inclusion. These access channels are cheaper and easier to use and attractive to the poor segment of the society. Financial service providers have also reviewed the Know-Your-Customer requirements that discriminated population alongside demographic characteristics (Aduda & Kalunda

2012). This has seen increase in financial inclusion globally and over time, the global financial inclusion has changed from 51% in 2011 to 62% in 2014 (Demirguc-Kunt et al., 2015).

The vital role played by financial inclusion in poverty reduction was recognized and well articulated in the development of Sustainable Development Goals (SDGs). Under Goal, ending poverty, the target indicates the poor and the vulnerable should have equal rights in accessing financial service. Under goal two, on ending hunger and achieving food security and improving d nutrition, the goal indicates that this will be achieved by having equal access to resources including financial services. To promote sustainable economic growth, there will be need for access to financial services. Another target indicates that for sustainable job creation, there is need to strengthen financial institutions to encourage access to financial services by all (Klapper, El-Zoghbi & Hess, 2016; UNTCAD, 2015). Though the SDGs did not explicitly target financial inclusion, greater access to financial services has been indicated will be a key enabler for many of them (Klapper, El-Zoghbi & Hess, 2016).

The focus of financial inclusion in Africa has been taken with similar importance. Studies indicated that of the total population, about 90 per cent was financially excluded from formal financial system about 10 years ago (United Nations [UN], 2006). Other studies indicated that over 80 percent of the population in Sub-Saharan Africa was excluded from financial system over the last six years (Aduda & Kalunda, 2012). Big segments of society have had very low access to financial system, either formal or semi-formal (Allen, Demirguc-Kunt, Klapper & Peria, 2012; Aduda & Kaluda, 2012; Beck,

Demirguc-Kunt & Peria, 2006; Ellis, Lemma & Rud, 2010; FinAccess, 2009). There was thus need to put efforts to change this situation in Africa.

African countries especially those who are members of Alliance of Financial Inclusion have made significant strides towards achieving the targets of Maya declaration by reviewing financial regulations and undertaking a number of innovations. Specifically, this includes review regulatory frameworks, policies on mobile financial services, agent banking, consumer protection, financial literacy and financial integrity (AFI, 2014). The major driver for financial inclusion in Africa has been the use of mobile technology. It has been noted that the willingness of Africans to pay for mobile technology is higher than of the higher income countries (Grace, Kenny & Qiang, 2003; Waverman, Meschi & Fuss, 2005). Actually, the use of mobile money in Africa is far much ahead the global levels where only 2% of the adults use mobile money in the world economies while in Africa 12% use mobile money (Demirguc-Kunt et al., 2015).

These efforts by Africa countries have borne fruits. The scenario of financial exclusion has changed with time and Africa has made significant achievement towards enhancing financial inclusion (Demirguc-Kunt et al., 2015). In contrast with about 10 years ago where over 90 percent were financially excluded, the average financial inclusion for Africa as per the Global Findex Database 2014 stood at 34% from 24% in 2012 (Demirguc-Kunt et al., 2015; Demirguc-Kunt & Klapper, 2012).

Kenya has equally carried this global agenda with zeal. The Central Bank of Kenya has been leading in efforts towards financial inclusion (Central Bank of Kenya [CBK], 2014).

In fact, most of the reforms in the banking sector since 2007 have been largely geared towards enhancing financial inclusion. These reforms have changed the financial landscape especially with the introduction of mobile and agency banking.

Central Bank, in collaboration with other organizations like FSDK, IMF has spent huge amount of resources towards this worthy course (CBK, 2014). This has been in capacity building especially on financial literacy, research and guidance in policy formulation (FinAccess, 2006; Kimani, 2013). The government of Kenya recognizes the role financial services can play in assisting the country to achieve a two digit economic growth. As a result of this, a strong financial system is one of the agendas in the Vision 2030 economic pillar. This again is well articulated in the Second Medium Term Plan and funds were set aside to ensure the target is met (Ministry of Devolution and Planning [MDP], 2013b).

Kenyan government does not only advocate for financial inclusion at policy level; it has also set funds for vulnerable groups; people with disability, women and youth. Women fund and youth fund which have been running for over five years were the first funds to be set to enhance financial inclusion (Gachugia, Mulu-Mutuku. & Odero-Wanga, 2014; Kaane, 2014; Kimando, Njogu, & Kihoro, 2012; Lagat, Maru, Chepkwony & Kotut, 2012). By use of the funds, the government is able to enhance capacity on social capital and financial capability. This clearly indicates that, the government of Kenya has given emphasis of affording financial services particularly to the youth.

Kenya, as other African countries has achieved great levels of financial inclusion from 26.4 in 2006 to 75.3 in 2016. With the regulatory reforms, financial institutions are able

to use advances in technology including mobile telephones, handheld devices, and point-of-sale devices, low-cost ATMs, kiosks (Kalunda, 2014). The use of technology has grown and revolutionized overtime with the first mobile money being introduced in Kenya in 2007 by Safaricom Kenya, a telecom company. By the end of 2014, there were five mobile money service providers (Kaffenberger, 2014).

The mobile money service providers have continued to improve on the products. For example, Safaricom has more value-added mobile money offerings which include M-Shwari, a savings and loan product, Lipa na M-PESA, a merchant payments tool, Lipa Karo na M-PESA, used for school fees and M-Kopa used for purchasing solar power (Kaffenberger, 2014). The latest study by Global Findex Database 2014 indicates that Kenya had the highest mobile money account holders across the globe at 58% of the adults (FinAccess, 2013).

In the overall, Kenya has performed exemplary good in advancing financial inclusion. As an example, evaluating one user-side indicators of financial inclusion, the adults who own an account at financial institution indicates a great success. The share of adults who owned an account per 1,000 adults was an average of 386 adults for the world, 116 for low income countries while it was 50 for Kenya in 2004 (IMF, 2014). In 2011, situation was very different, the world average was 738 adults, low-income countries was 201, while Kenya had moved to 589 (IMF, 2014). While the average for low income and for the world had increased by less than double, the Kenya figures were more than 10 times, an indication that Kenya's increase in financial inclusion was very high.

Globally, Kenya has performed very well in financial inclusion. Using the access to financial services strand, it was 42.3% in 2014, which compared favorably with the world average of 45.75% (World Bank, 2014). Other studies have shown more evidence on the increase in financial inclusion where the studies have been focusing on access and usage. For instance, FinAccess (2013) noted that in the year 2006 the financially included were 26.4% of the population, this increased to 41.3% in the year 2009 and to 66.7% in the year 2013. In 2015, the levels had gone up to 75% from the whole population and 63% among the 40% of the poor population (Demirguc-Kunt et al., 2015). A study in 2015 indicated that, Kenya was the best performing country globally in enhancing financial inclusion (Villasenor, West & Lewis, 2015). The latest study by FinAccess (2016) indicated that Kenya has maintained high levels of financial inclusion at 75.3%.

As indicated earlier, financial inclusion is recognized to be critical in poverty reduction and attaining inclusive growth through household investment. This critical role makes financial inclusion a development agenda for all economies that are concerned with inclusive growth (Demirguc-Kunt et al., 2015). Studies have confirmed that providing the poor with affordable financial services can help them move out of poverty. This is through household investment which leads to employment and reduction in poverty (Ashraf et al., 2010; Bruhn & Love, 2013; Brune, Gine, Goldberg & Yang, 2013; Ellis et al, 2010; Mastroiannis, 2007; Petreska & Mojsoska-Blazevski, 2013; UNDP, 2013; World Bank, 2008). These studies provide a strong association between financial inclusion, poverty reduction and employment creation through household investment

(Ang, 2007; Cull, Tilman Ehrbeck & Holle, 2014; Narayan, 2005; Park & Mercado, 2015; UNDP, 2013; World Bank, 2014).

The evidence from these studies is in support of a number of theories which form basis of the study. The theories in support of financial inclusion and household investment that informs this study include finance and inequality theory, financial liberalization theory and financial intermediation theory (Ang, 2007; Braunstein & Welch, 2002; Demirgüç-Kunt, Beck & Honohan, 2008; Hachicha, 2005; McPherson & Rakovski, 1999; Odhiambo, 2011).

Though financial inclusion has been confirmed to help in employment creation and poverty reduction through household investment, this is not the case in Kenya. Despite the increase in financial inclusion in Kenya, the unemployment and poverty levels remain high and more pronounced among the youth. Unemployment, poverty and income inequality are still high in Kenya (Balwanz, 2012; Kaane, 2014; KNBS, 2014; KNBS, 2016; Muyia, 2014; Ondoro, 2012; World Bank, 2016b).

Those who are financially included have increased from 26.4% in 2006 to 66.7% in 2013 (FinAccess, 2013) and 75.3% in 2016 (FinAccess ,2016) while those living below the poverty line have moved to about 42% from about 47% in the same time (World Bank, 2014). Rate of unemployed youth increased from 12.5% in 2006 to about 25% in 2013 (Mutia, 2014). Other studies indicate that Kenya compares poorly in reducing unemployment among other developing countries (Kaane, 2014; Mutia, 2014; Muyia, 2014; World Bank, 2015; World Bank, 2016b). For example, South Africa which

compares favorably with Kenya in terms of financial inclusion has been achieving great levels of reducing poverty.

On the income inequality, Kenya has been noted to be doing poorly despite financial inclusion. Income inequality is the disparity in income level among individuals or households in an economy (Gakuru & Mathenge, 2012). It is the overall inequality among various economic groups. The most used measure inequality is the Gini coefficient based on the Lorenz curve. The GINI coefficient usually ranges between zero and one, the closer the values are to one, the greater the inequality. The estimate of Kenya's Gini coefficient indicates that the inequality has been on the increase in the country over the years (Gakuru & Mathenge, 2012). It was 41.1 in the year 2005 but this has gone up to as high as 48.5 in the year 2016 (Bertelsmann Stiftung Transformation Index [BTI], 2016) indicating high inequality. This is against increase in financial inclusion and economic development that has been seen in Kenya for the last few years.

The effect of financial inclusion in employment creation and poverty reduction has been confirmed in other countries. For instance, a bank regulation in India was set that made it mandatory for banks to open four branches in unbanked regions for any new branch opened in urban areas (Pande, 2005). After implementation of this regulation, there was noted substantial impact on poverty reduction.

On investment, Bruhn and Love (2013) noted that the regulation on increase in branch opening regulations resulted to 7.6 percent increase on the proportion of persons who operated informal businesses since more poor people could access financial services.

Hariharan and Martonner (2012) in their study indicated that, increase in financial inclusion by 1 percentage point have effect on productivity in an economy by 0.6 percentage points. Holding other factors constant, it would thus be expected that, from 2007 the productivity in Kenya would have increased by about 24% and this is expected to have a positive effect in employment creation.

Financial inclusion also prevents people from falling into poverty by softening the blow of unexpected expenses and this reduces the chances of increased poverty (Klapper et al., 2016). Increase in accesses to financial services saw Mexico income increase by 7 percent in areas where bank branches were rapidly opened (Andrianaivo & Kpodar, 2011). It was noted the increase did not occur in areas with pre-existing branch, or no branch at all indicating that the increase in income was because of access to finances (Bruhn & Love, 2014).

The increase in use of mobile phone and ICT tools has also been indicated to help in access to finances as these channels improve access to financial services in areas where traditional financial services are unavailable (Andrianaivo & Kpodar, 2011). Access to credit has been confirmed to play a role in employment creation and poverty reduction. In India, access to credit was indicated to help in business expansion, more women to expand their business and invest in small-scale enterprises in Mongolia, increase in self-employment in Bosnia and Herzegovina (Attanasio 2014; Banerjee et al. 2015; Meghir 2014).

It has been noted that the usage of financial services can be determined by individuals' financial capability. World Bank (2014) noted that for a person to make a economic decision, the higher the financial capability the more the viable decisions are. In case financial capability is deficient; the decision made may not be plausible. Social capital was also found to influence the economic life of a person (Hamdan, Yusof and Marzukhi (2014). Those with higher levels of financial inclusion are able to network and succeed economically. It has been noted that the success of a person is dependent on his social capital.

Due to innovations in the financial sector, there are a number of financial products that are offered ICT platform. The usage of these services depends of how one is capable of using ICT technologies (Cohen & Nelson, 2011). In case the level of ICT capability is low among the expected users of the financial products, there may be a challenge in the usage of the same. With much access of the finances where persons can accumulate savings or borrow for investment purposes, the business environment must be conducive for the businesses to thrive (World Bank, 2016a). Actually, the growth of the economy depends heavily on the business environment. Again, the access to formal financial services may depend on the demographic characteristics of a person (Ellis, 2010). Products that are developed by, but its consumption is biased towards certain demographic characteristics, the expected impact may not be realized.

The question that arose out of this was why financial inclusion does not have a positive effect on household investment as has been confirmed in other countries. There are other mechanisms of trying to create employment for the youth such as the 30 percent

reservation for the government procurement and economic stimulus projects. The focus of this study was to find out what are the determinants of investment on financially included youth in Kenya. This study focused on financial capability, social capital, ICT capability, business environment and demographic characteristics that have been indicated to have effect on economic wellbeing of the citizens.

1.2 Statement of the Problem

Financial inclusion that improves on access to affordable financial services is usually related employment creation, poverty reduction and reducing income inequality (Beck et al., 2007). Studies have confirmed that providing poor people with access to affordable financial services, the poor are able to invest and improve their economic life. The poor are able to accumulate savings as capital for investment purposes (Demirguc-Kunt et al., 2015). With the access to finances, individuals can also access credit where they can borrow for household investment. The increase in financial inclusion and the subsequent increases in investment have been found to help in employment creation and poverty reduction (Beck, Demirguc-Kunt, & Peria, 2006; Demirguc-Kunt et al., 2015; Hachicha, 2005; McPherson & Rakovski, 1999; UNDP, 2013; Villasenor et al., 2015; World Bank, 2008).

The critical role played by financial inclusion has seen many countries spend resources to advocate for increase of financial inclusion levels among its citizens (CFI, 2014; Villasenor et al., 2015). Both international and local organizations have been setting aside

resources towards improving financial inclusion in the various countries across the world (Ndii et al., 2011; Villasenor et al., 2015).

Kenya has not been left behind and has carried this global agenda. This has been in policy formulation where Central Bank of Kenya has been playing a facilitation role. Other institutions like Financial Sector Deepening, Bill and Melinda Gates Foundation and Government of Sweden have also played a key role in enhancing financial inclusion (FinAccess 2016; Kimani 2013). The government Kenya has been setting aside funds specifically targeting the youth as a way of enhancing financial inclusion among the youth (Kaane, 2014; Kimando et al., 2012; Sears, 2012). Kenya has also incorporated development of a strong financial services sector in Vision 2030 development agenda. This is from the fact that a well developed financial services sector will allow more individuals to be financially included which should lead to investment.

The finance sector in Kenya has changed over time and to access financial services in Kenya has expanded. Studies focusing on financial inclusion have indicated that Kenya has achieved high levels of financial inclusion overtime (Demirguc-Kunt et al., 2015; FinAccess, 2006; FinAccess 2013; FinAccess, 2016; Kalunda, 2014; Ndii 2011; Villasenor et al., 2015; Wambua & Datche, 2013; World Bank, 2014). It would be expected that the increase in financial inclusion would be coupled with increase in household investment. However, despite the high levels of financial inclusion in Kenya, the positive effect expected from this has not been achieved as unemployment and poverty levels are still high (Mutia, 2014; World Bank, 2015). FSDK (2016) indicated that, after working for the improvement of financial inclusion for the last 10 years, high

levels of financial inclusion has been achieved. The study noted that, the impact expected from high levels of financial inclusion has not been achieved. The inequality gap between those who are considered rich and those who are considered poor is still wide (Beck et al. 2007; Klapper et al., 2016).

Though studies have indicated financial inclusion helps in employment creation and poverty reduction through household investment, this seems not to be the case in Kenya. The much efforts and resources that are used towards financial inclusion are not yielding the expected results in Kenya and especially among the youth (Villasenor et al., 2015). If the resources continue to be used without consummate results, it is a big problem to the financiers and to the country as a whole as unemployment and poverty may continue.

The fact that the unemployment levels and poverty levels are high among the youth is a problem that needs a solution. The government is also spending public funds to advance financial inclusion agenda. When financial inclusion does yield the expected results, the citizens may not be getting value for their money. This problem also needed a solution. There was thus need to carry out a study on how to realize the expected benefits from financial inclusion and at the same time reduce poverty and increase employment. The purpose of this study was thus to evaluate what are the determinants of investment among financially included youth in Kenya.

1.3 Objective of the Study

1.3.1 General Objective

To investigate the determinants of investment on financially included youth in Kenya

1.3.2 Specific Objectives

- i) Establish whether financial capability influences investment on financially included youth in Kenya.
- ii) Evaluate the relationship between social capital and investment on financially included youth in Kenya.
- iii) Find out if ICT capability has effects on investment on financially included youth in Kenya.
- iv) Assess the relationship between business environment and investment on financially included youth in Kenya.
- v) Investigate whether demographic characteristics have moderating effects on investment on financially included youth in Kenya.

1.4 Research Hypothesis

The study tested the following null hypothesis:

H0₁: Financial capability is not significant in determining investment on financially included youth in Kenya.

H0₂: Social capital is not significant in determining investment on financially included youth in Kenya.

H0₃: ICT capability is not significant determining investment on financially included youth in Kenya.

H0₄: Business environment is not significant in determining investment on financially included youth in Kenya.

H0₅: Demographic characteristics do not moderate the effect on investment among financially included youth in Kenya.

1.5 Significance of the Study

There is much emphasis on ensuring that the poor population can access financial services. This is because access to formal financial services plays a critical role in poverty reduction and employment creation all over the world through household investment. However, the expected effect from financial inclusion has not been realized in Kenya despite the high levels of financial inclusion.

The purpose of this study was to find out what could be determining whether the youth invests while they are financially included. With the identification of determinants of investment, it is possible to recommend to the youth and the government on what should be done to ensure that the youth realizes benefits of financial inclusion. This will have an impact on employment creation, poverty reduction and reducing income inequality. In essence, this will reduce cases of criminal activities as cases of idle youth will be minimized. The government will also find the results of this study important, organizations that advocate for financial inclusion, academicians, general public and financial institutions.

Governments are working hard to ensure that the poor population has access to formal financial services. Every government would like to see that majority of its population is out of poverty. The fact that the level of unemployment, poverty and income inequality are still high in Kenya despite the strides made towards financial inclusion is of key concern. The findings of this study will be of key importance to Kenyan government and other governments as it will indicate what determines the realization of the expected potential of the financial inclusion.

Non-governmental organizations that advocate for financial inclusion like World Bank, Department for International Development, Center for Financial Inclusion among others. These institutions spend huge amount of resources to advocate for financial inclusion and works with governments and financial institutions in financial policy formulation. The findings of this study will be of key importance to these organizations.

The other stakeholders are the academicians. Financial inclusion is an area which has elicited a lot of interest in the academic field, thus this study will bring new knowledge to the body of knowledge. People are able to know what determines the realization of the full potential of financial inclusion among the poor and specifically the youth. The youth are holders of bank accounts and especially the mobile money accounts. It will be of great importance for the youth to know what could limit them from realizing the effects of financial inclusion.

The financial institutions will be interested in knowing how they can impact further on the youth. The expectation of the financial institutions is that as they afford bank services

with increased access, there will be increased investment. The financial institutions will again benefit in the long run as this will increase their business. Identifying the determinants will be of much importance to the financial institutions.

Finally, the ICT players will also have an interest of the findings of this study. Due to the adoption of ICT tools and ICT platforms to provide financial services, it will be of key importance for the players to understand the effect of ICT capability on investment among the financially included youth.

1.6 Scope of the Study

The study evaluated whether financial capability, social capital, ICT capability, business environment determines level of investment on financially included youth. The study also evaluated whether demographic characteristics have moderating effects on determinants of investment. Although there could be other factors that determine the investment on financially included youth, this study only focused on the stated variables. The geographical scope of the study was youth within the age of 18 and 35 years in year 2015 in Kirinyaga and Nyeri Counties.

The two counties were selected as they were considered to be a representation of youth unemployment and poverty problems. To start with, the two counties have almost all sectors of the economy. The counties are rich in agriculture where 53% of the residents are engaged in agricultural production. The counties are also endowed with a number of industries that include dairy processing, maize millers and animal feeds producers,

bottling companies, coffee factories and tea factories and foreign exchange from tourism and export of tea.

Secondly, the two counties are also affected by different levels of poverty index between low and high. The fourth reason is the fact that the two counties have been affected by two major problems which are as a result of unemployment; illicit brew and criminal gangs. It is important to recognize that the two Counties are rich in resources, good infrastructure compared to other counties and proximity to major towns, the two counties on overall are not doing badly in terms of poverty and financial inclusion levels. One would thus expect much investment in the two counties; however, this is not the case. Thus, the two Counties were thus considered a good research site for the study.

1.7 Limitation of the Study

The study tool was a structured questionnaire where the youth were expected to give responses. Due to inquisitive nature of the youth, it took more time with some youth as instead of responding to the questions, they wanted to understand why the study and why they were being asked some of the questions. At the same time, some youth were impatient and they thought the interview was taking too long. The two limitations were noted at the time of pilot study. To mitigate them during the full data collection, the research created a good rapport before the interview could start and gave the respondent what is expected of him or her and the time it may take. This prepared the respondents psychologically and the limitation was avoided.

The other limitation was expectation of reward during focus group discussions. Initially, most of the participant expected some allowance after the discussion as it has been the case with some organizations. This limitation was noted during the first two focus groups discussion. To avoid this, the researcher used the point persons who were to make it clear that the group discussion was not to have any allowance. The point persons coming from the same locality were able to convince the youth.

1.8 Definition of Terms

Business Environment -“External forces, factors and institutions that are beyond the control of the business and they affect the functioning of a business enterprise. These include customers, competitors, suppliers, government, and the social, political, legal and technological factors” (World Bank, 2016a)

Electronic Money - Money that is stored electronically, for example, on a computer, mobile phone or plastic card, and can be used to pay for products and services (Financial Inclusion Insights Program, 2014).

Financial Capability - Individuals knowledge of financial products, institutions, and concepts, financial skills such as the ability to calculate compound interest payments, and financial management which includes all the skills, attitudes, and behaviors that

enable individuals to use financial services to their advantage (World Bank, 2014)

Financial Inclusion - The provision of affordable financial services, which includes access to payments and remittance facilities, loans, savings and insurance services by the formal financial system to sections of low-income segments of the society (Agarwal, 2010; Hannig & Jansen 2011)

Information Communication and Technology capability - The capacity to use ICT appropriately and ethically to investigate, create and communicate ideas and information in order for individuals to function effectively at home, at school, at work and in their communities (Australian Curriculum, Assessment and Reporting Authority, 2012)

Investment - Spending money in a business venture or purchasing assets with an expectation of income, and recovered through earnings generated by the business over several years (WebFinance, 2016).

Mobile Banking - Performing banking transactions through a mobile device such as a mobile phone or Personal Digital Assistant (World Bank, 2014)

Social Capital

- Features of social life-networks, norms, and trust that enable people to act together more effectively to pursue shared objectives (Hamdan, et al., 2014).

Youth

-People living and within the age of 18 and 35 years (The Constitution of Kenya, 2010).

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on theories and variables of the study. It discusses the key theories underlying dependent and independent variables, discusses empirical study, develops a conceptual framework and expounds on the research gaps on financial inclusion and investment. The chapter will look at the theories related to financial inclusion and investment and looks at the other scholars who have done studies on variables under this study.

2.2 Theoretical Literature Review

The theories informing this study are finance and inequality theory, financial liberalization theory and financial intermediation theory.

2.2.1 Finance and Inequality Theory

Finance plays a critical role in minimizing the inequality gap. Finance and inequality theory holds that, access to finances determines how different household will be able to develop themselves economically and the income inequality in an economy is reduced. Those with no access of finances are not able benefit from economic activities and thus they live in poverty. The income inequality between those who have access to finances and those who don't have continue to widen (Piketty, 1997; 2000).

This theory indicates that the use of finance reduces the inequality gap. The first direct extensive margin effects are where individuals can use financial services and improve their human and physical capital. It holds that financial system development enables persons who could not be able to access financial products and services initially access the same and improve their human and physical capital. This allows poor persons improve their physical and human capital. In contribution to finance and inequality theory, two models were advanced by scholars Galor and Zeira (1993) and also by Becker and Tomes (1979, 1986) which indicated that transactions and information costs related to financing of education made poor people unable to finance their education. In their model, they predicted that the inequality reduces when poor households borrow for payment of education for their children.

Galor and Zeira (1993) and Becker and Tomes (1979, 1986) gave models which brought about first perspective of viewing the human capital accumulation between those with access to finance and those who don't have. Investment in capital by parents creates the ability of the children moving from poverty and crossing the income inequality gap. This theory assumes that increase in human capital creates a direct relationship with earning power of children. Thus, children with parents with higher financial capability parents are likely to have bigger abilities than children where parents are of less financial capability. Well to do families are also able to access credit for the education of their children when they do not have disposable income compared to the poor. However, under perfect credit markets, even the poor are able to borrow and educate their children. With access to

finance then, the rich and the poor are able to accumulate human capital and in the end, the inequality gap is crossed.

Finance and inequality further indicates that, under imperfect credit markets, only the rich can access finances and the cross-dynasty differences in human capital persist. The consequences are the income and wealth inequality persist (Baland & Robinson, 1998). The credit markets deny the children with high ability children from families that are poor, from accumulating human capital. On the other children who have low ability but whom come from a rich family are able to get more education than their counterparts from poor families. This situation indicates that, poor families are not able to educate their children, cannot access finance to start own business and cannot even insure themselves against shocks. At times, the poor families withdraw their children from school for the children to get employed in poor paying jobs and this hamper human capital accumulation (Baland & Robinson, 1998; Jacoby & Skoufias, 1997).

Lack of access to finances has a big blow on economic wellbeing of the poor by hampering the ability of unfortunate families to build up the human capital of their kids. Failure of accumulation of human capital amplifies the generational persistence of relative incomes, diminishes the economic chances of persons born into poor generation, and worsens the socially efficient distribution of schooling resources (Jacoby & Skoufias, 1997).

Where there are financial market imperfections, initial affluence determines the future wealth of the people in an economy. The wealthy are able to interact with the market

even when it is imperfect, aggregate human capital which improves the income in the long-run. With improvement of the financial market, it is expected that the poor are able to borrow, build-up human capital, aggregate growth and in the long-run, the income inequality will reduce (Baland & Robinson, 1998).

The theory of income and inequality also indicate that, accumulation of physical capital by the rich, which creates source of income is skewed towards those people who have initial wealth. The theory recognizes that to accumulate physical capital, it requires finances. In that case, those with finances are able to accumulate more capital. The more physical capital a person accumulates, the more income he is able to get. This increases the inequality gap. Where the market is perfect and every person can access finances irrespective of the initial wealth, the poor are also able to accumulate physical capital. In the end, the income inequality gap becomes narrower (Jacoby & Skoufias, 1997).

One way of reducing income inequality is provision of public goods for example education. In this case, both the poor and the rich are able to access education. This way, they are able to accumulate human capital. In this kind of a situation, the government uses money that is received from taxation where the wealth is taxed more than the poor and provides public goods. Where then the services are offered equally, the poor and the rich are able to accumulate human capital together. In situations where public goods are not provided, like the schools and hospital, the rich are able to pay for them where the poor are left out (Alesina & Rodrik, 1994). In economies where the poor are not able to borrow and finance their education, in the end they will not be able to accumulate human

capital and physical capital. It was noted that, it is thus better to afford human capital to all the citizens.

Human capital has a bearing on the income of individuals. When the poor are not educated, development of human capital is socially not optimal due to their borrowing limitations. Attainment of human capital increase wage in relation to the returns to capital and in that case, there will be persistence in inequality and stagnation of the economy when this model is followed. It may require a lot of labour and input from industrialists so as to put enough power politically in order to finance education. This can be achieved by developing financial markets which in the long run will be able to help in financing education and thus growth of human capital among the poor (Jacoby & Skoufias, 1997).

Lack of finances and thus low education has seen the inequality gap persist (Benabou 1993, 1996). Where people are not educated and thus they find themselves earning very little, the market forces them towards self-segregation. The highly educated and with higher incomes are ready to pay higher costs for their living and live next to higher educated people who are also earning more.

Income and inequality theory further indicates that earnings are also related to initial wealth as the poor tend to be employed in low-income sectors. Even when the nature of job they are undertaking is highly skilled and thus can be paid high wages, the employers tend to discriminate the poor (Becker, 1957). With owners of business earning super-profits, they do not find it difficult hiring expensive employees rather than higher less expensive employees but from poor and discriminated dynasty. The hiring of expensive

staff is considered just like sharing profit with people of their dynasty. This leaves the poor out of employment or accepting low wages. With monopoly of financing, the financial institutions only finances big organizations, thus there is no competition, and the discrimination persist.

With finance sector reforms, more organizations have access to finance and they can start own ventures. This creates employment to the poor and brings with it competition to the existing organizations. With this competition, the cost of discrimination between the poor and the rich increases. The big organizations thus have to minimize discrimination which means even the poor can earn as much as the rich so long as they have same skills. Becker (1957) as a result argued that, reforms in the financial sector can increase completion in the market, this in the end will minimize discrimination of the poor and the poor will be able to access financial services. In the end, there will be expansion of economic opportunities where the poor will also be able to benefit.

Opportunities for investment depend on the available finances to investor. With little or no access to finances, individuals' opportunities for investment are limited to parents wealth and this will advance persistent inequality. High capital investment can only be afforded by rich individuals of which they continue earning higher incomes and this implies that wealthier individuals continue getting more wealthier while the poor remains poor and the inequality gap persists. Liquidity problem have be found to impede investment of the poor (Blanchflower & Oswald, 1998; Evans & Jovanovic, 1989; Evans & Leighton, 1989).

Greenwood & Jovanovic (1990) evaluated development and income dynamics in a model where money affects dynastic admission to higher expected returns. They noted that it is expensive to assess the viability of a project. It may require initial finances for a person to evaluate a project. This limits the poor from evaluating the viability of a project. Organizations that can help are financial intermediaries. Greenwood and Jovanovic (1990) noted that there are fixed cost when joining financial intermediaries and this limits the poor from using the services of an intermediary. In that case, the growth and bridging of the income inequality depends with the development of the financial systems. In a market where financial systems are not expensive and the poor can join financial intermediaries, the chances of the poor closing the income inequality gap increases. Greater development of financial system enhances and makes realization of an economy where a state of the differences in incomes between dynasties in no longer there.

Where the credit market is imperfect, those who have been living in poverty are constrained in access investment opportunity, as they are not able to get funds to invest on the available opportunities (Piketty, 1997). This leaves those who are poor to remain poor. The credit constraints make the wealth creation to be limited to those households with wealth or who come from wealth families. When the opportunities to investment are tied to the technological viability of the project and initial wealth, the poor find it difficult to invest. This kind of a market makes initial wealth of a would be investor a key determinant on whether the person will invest or not. In the economies where first-best credit policy applies, initial wealth is irrelevant from the view point of productive

efficiency. In that case, initial wealth should not have any consequence on distribution of earnings and wealth (Piketty, 1997; 2000).

Loury (1981) in support of finance and inequality theory argued that the source of credit constraints are related to initial wealth. Without sufficient interest in a project, a household may not be in a position to commit itself to the project and thus the moral hazard. When the credit constraints are there, profitable projects but from poor individuals may fail to be undertaken. This may make the poor people to remain poor. However, in economy where the poor can invest, the poor can educate their children and the poor can borrow, the wealth redistribution increases. In the long run, the wealth of the poor also increases, there is intergenerational mobility in terms of earnings and income inequality is reduced between the poor and the rich.

Newman (1991) agreed with the theory and indicated that credit constraints and value of the first riches also imply the choice of occupation. It determines the person who shall become an employee, who shall become an entrepreneur and who becomes self employed. The implication of this that the poor are constrained by poverty traps (Banerjee and Newman, 1994; Ogbeide, 2013). Those who are poor remain poor forever and those who are wealth accumulate more wealth, the initial wealth inequality continues forever.

Galor and Zeira, (1993) noted that in a situation where the access to credit is first based on the viability of investment by a household and not initial wealth, the inequality would disappear. This is in an economy where the financing of the project is on first-best credit.

In that kind of a market, each person with a viable business would invest in the best investment irrespective of the initial wealth and in the end, all people will be at the same level of wealth distribution in an economy.

Financial frictions in credit markets also limit who can invest or not. Return to physical capital can be different between the rich and the poor. Initial wealth among the people determines who can be able to access external financing and undertake investment. It was noted the issue of adverse selection and moral hazard and can produce credit restrictions (Aghion & Bolton, 1997; Piketty, 1997). In that case, initial wealth can determine the future distribution of income. The initial wealth thus denies the talented but poor individual from undertaking viable investment and this lowers the final expectation of economic effectiveness (Piketty, 2000).

Banerjee & Newman (1993) indicated in situations where majority are poor, the kind of investment undertaken are very little investment. In that case, the persons are not able to grow themselves, there is always inequality, and the growth is very slow. On the other hand, in a state where there some people who are rich while others are poor, the growth can be faster. It was noted that, where there are some rich people they are able to start bigger business and employ the poor. In a well functioning economy where everyone can borrow, from the little income the poor earn they are able to borrow from financial institutions. In the long run, everyone is able to start a business and the growth is much faster.

The direct margin effects come from the fact that access to finance can help reduce negative shocks. Galor and Zeira (1993) and Becker and Tomes (1979, 1986) models noted that when the market is more developed there is a lot of negative shocks on the poor and it affects most the unbanked and the poor people in the society. In support of this, Baland and Robinson (1998) and Jacoby and Skoufias (1997) indicated that there is a relationship between education and the handling of negative income shocks among the poor. When the rich is faced with negative shock financially, the person is able to borrow and thus the education of the children is not affected. On the other hand, poor families use the funds set for education of their kids to smoothen income shocks. In that case they end up withdrawing their kids from school and even sometimes they use the kids in supplementing the income by having the children work for a pay. Thus, the inequality gap of the parent with access to finances will not widen in times of shocks.

The poor have been found to suffer more when a risk is realized as majority have very little risk diversification methods. Thus, the poor sometimes tend to undertake the investment with the little they have. The poor are able to diversify and insure themselves against shocks. In that case, the poor shy away from investment compared to the rich (Stiglitz, 1974; Townsend 1982). With financial markets that provide risk-diversification, the services have an effect on investments and investment opportunities for the rich and the poor. Having policies that provide for insuring risky investments being offered the financial system could substantively influence the persistent income disparity between the wealthy and the unfortunate

The more one is earning, the more one is able to save for investment for his own or even for the children. Savings has seen the rich accumulate more wealth and the gap widens. In this kind of a setting the rich save more, invest more and earn while the poor are not able. In the long run, the inequality gap between the unfortunate and the wealthy increases. Finance and access to finance services allows the poor families lessen liquidity restrictions, enlarge investment opportunities and mitigate the risk. The development of the financial systems influences both the credit allocation and economic growth. This however have consequences to the poor and the rich differently. Where financial development causes demand for the skilled labor only, the people who were rich and able to be educated and thus more skills gets the jobs, and the inequality increases. On the other hand, where demand for low skilled labour is created from the development of the financial systems, the poor are also able to get jobs and the income inequality between the rich and the poor decreases (Jerzmanowski & Nabar 2007).

Financial development was found to reduce inequality and enhance growth. Financial deficiencies that include transaction and information costs, could be retraining the low-income persons who do not have collaterals and credit record. In that case, the poor are not able to access credit form the market. Not only does denying the poor a chance to borrow, but this also affects the efficiency in resource allocation. This limits the flow of capital from the among the poor and even where the poor have an investment which can give high return, they are not able to invest kin it (Aghion & Bolton, 1997; Galor & Zeira, 1993). It was viewed that, development of the financial system has far reaching impacts to the poor. It enhances resource allocation and thus the poor can access the

resources. Secondly, it helps in aggregate economic growth in the market and the poor also benefit from the economic growth as it creates more employment. Finally, it reduces credit limitations, which is a major hindrance to the development of the poor. With these, the inequality between those who have and those who do not have is minimized. It should be noted that from entrepreneurship perspective, where financial market is not well developed and disregard the poor, poor entrepreneurs usually continue being poor as the available resources are lent to rich entrepreneurs with enough collateral instead of lending to people with the most viable and profitable business ideas (Aghion & Bolton, 1997; Bardhan, 2000).

Demirguc-Kunt and Levine (2009) in support of the finance and inequality theory confirmed that finance access has positive impact to individuals. It was noted that, the relationship between Gini coefficient and financial development is negative because the financial development helps in reduction of income inequality. Secondly, development of financial system put forth an excessively positive effect on relatively poor. Demirguc-Kunt and Levine (2009) noted that financial development benefits the poor more than the rich. The poor benefits more from the aggregate growth as a result of financial development. Actually, 40 of the benefits from the poor is as a result of reduction of income inequality from the development of the financial market. In conclusion, the scholars agreed that development of the financial system is associated with alleviation of poverty in the economy and it is associated with the reduction of people living below the poverty line.

This theory of finance and inequality has faced some critique. The theory recognizes the importance of finance to bridge the inequality gap. However, the theories do not treat financial market frictions as one of the features that endogenously change the economy. The theory treats finance as the main thing in bridging the inequality gap and ignores other parameters such information asymmetry, which is detrimental in shaping future of citizens.

This theory again assumed that improvement of financial system where all can access finance was to benefit the rich and the poor in equal measure (Becker & Tomes 1979, 1986). The theory was not cognizant with the fact that that finance can function on the rigorous margin. Development of financial system was to benefit persons who were already in the financial system, which are the rich individuals and already fully established firms. As a result, the effect of the development of the financial system may have the benefits enjoyed more by the rich individuals and thus widening the inequality gap between the haves and the have-nots (Greenwood & Jovanovic 1990).

The theory again failed to recognize that the effect of the financial market can be through indirect mechanisms. In this case, the development may see a change in aggregate production and credit allocation. This may see demand for skilled labor increase, which may relatively benefit the rich compared to the poor. As a result, the rich enjoy the positive effect of the development of the financial system more (Townsend, 1982).

2.2.2 Financial Liberalization Theory

The theory of financial liberalization concept was developed from the works of McKinnon (1973) and Shaw (1973). The two introduced one model where the economy where financial markets are underdeveloped. McKinnon argued that developing economies are closed economies where there is limited access to external finance and self-financed investments. With this situation, McKinnon observed that governments intervened in financial markets for specific reasons that revealed investment efficiency. They argued that this could create opportunities for corruption and monopoly privileges, cheapening capital goods and indirectly subsidizing investment costs.

McKinnon (1973) and Shaw (1973) challenged the case for low controlled interest rates and financial repression, and they advocated for financial liberalization and development for economic-growth enhancing policies. With government intervention, there is much stress on the informational role of prices and the place of financial intermediaries in implementing the market. The liberalization would change the pricing mechanism and decentralized judgment for the rationing mechanism of repressed finance (Shaw, 1973). Extension of the monetary system and financial intermediation play a crucial role in compensating for these imperfections.

McKinnon and Shaw models in endogenous growth literature envisaged a kind of complimentary hypothesis. McKinnon-Shaw complementarity hypothesis postulates that it is not about the cost of finance but the accessibility of finance that hinders investment in financially subdued economy (Kargbo, 2011). They argued that investment in a typical

economy depends on the availability of funds in form of savings and thus with increase rate of real deposit, there is also increase in investment because the financial restriction is relaxed (McKinnon, 1973). Thus, providing members an avenue of saving where those with excess cash can save and those in need of cash can borrow have a positive effect on the overall investments in the world (Shaw, 1973). As investment increases, they reduce the income inequality and at the same time create more employment (McKinnon, 1973).

The connection between financial development and the growth of the economy is anchored on the complementarity between liquid money and capital (McKinnon, 1973). The assumption is that investment cannot take place without first an accumulation of a quite a significant amount in form of bank savings in the financial institutions.

From McKinnon (1973) complementarity hypothesis view, it was stated that real money and capital assets are more of complements in a developing economy. This hypothesis held that, where there are no developed financial markets where people can borrow, people have to first accumulate huge money balances before an expensive project can be undertaken. There was thus need for vehicles to help in accumulation of money for indivisible projects. The implication from the hypothesis was that, demand for money in an economy depends on three factors; real rate of interest on bank deposits, real income and the real average return on capital. The positive relationship between demand for money and average real return represents a complementarity between money and capital.

McKinnon (1973) and Shaw (1973) were of the opinion that, potential investors must first accumulate monetary assets before investing in physical capital. When the financial

market is attractive, people will put their money in the financial institutions and accumulate savings for purchase of physical assets in the future. With financial repression, the financial markets will not be attractive and people will tend to consume more rather than saving. The point by McKinnon was that if returns on monetary assets are kept low through repressive policies, the public is discouraged from saving and accumulating them and the incentive to invest wanes. This in the end slows the process of capital formation.

McKinnon (1973) believed that having deposit and loan rate ceilings, was noted to slow economic growth. The effects of repression are more felt in time of inflation where savings would fall and people would prefer to hold non-depreciating assets such as land that are in fixed supply. This will drive the demand non-depreciating assets making it more difficult again to accumulate physical capital. This has far reaching consequences in the economic growth and hurts the poor more. With the enactment of the Banking Act, 2016, the growth of the financial market may slaken (The Banking Act, 2016). People may find more optimal to consume than to save their money in the bank which may not be earning high interest as when the market is liberalized.

For there to be economic development, McKinnon proposed a financial policy that took account of such distortions. The policy was to make domestic assets more attractive and that ensures there is efficient allocation of capital resources in the best productive manner. McKinnon argued that government intervention was not development driven, rather it was driven by the perception that market functioning might not necessary satisfy social objectives of governments, and thus the government had to intervene. Whether the

intervention achieved the social agenda or not, McKinnon noted that, this intervention brought about distortion in the market mechanisms and structure and especially in underdeveloped economies. These distortions affected the economic growth and thus, he argued that governmental interventions should cease to cure the market distortions.

McKinnon and Shaw went further to claim that interest rate ceilings and high reserve ratio requirements acted as tools of financial repression. They both lower rates of return on the assets and a lot of money are set aside as reserve money. The two financial repression tools increases the demand for credit and they create disincentives to save. In support of McKinnon and Shaw argument, Caprio, Atfyas and Hanson (1994) indicated that there are four major consequences of creating financial repression through lowering interest rates. They noted that first, households will be biased towards current consumption. Secondly, there will be informal lending from outside the banking sector, third, this will stimulate investors to favor capital intensive projects and finally it will promote high-risk low borrowing and this raises the risk of potential delinquency. These consequences inhibit the growth of an economy and hurt the poor most.

In Shaw's model (1973), with expansion of financial intermediaries, there is increased savings among the citizens. Moreover, when the savings grow more than real economic growth, they promote investment. The model also noted when the real interest rate is positive, it promotes financial deepening through mobilization of savings that again promote growth as a result of higher productivity capital. In that case as the volume of savings increases, there is higher productivity capital and in the long run, there is growth in the economy (McKinnon, 1973). The review of the Banking Act on capping interest

rates will have an impact on how the financial market will operate (The Banking Act, 2016).

McKinnon (1973) and Shaw (1973) models put emphasizes on differing facets of raising finance. For McKinnon, the model puts emphasizes on the connection involving deposit rate and investment. The models suggests, finances for investment have to be raised internally through internal savings. On the other hand, Shaw model looked on the role played by financial intermediaries. The model proposed for a model that can be able to provide a mechanism of raising provided for getting funds from external sources. The views by both models are more of complementary in nature (Molho, 1986).

Shaw argued that for there to be real growth in an economy, financial institutions must be developed. Shaw noted that financial intermediaries do provide those who want to invest with access to borrowing services. They also give the investors enticement to save and to buildup capital, that makes borrowing even cheaper. Those with liquid assets have incentives to save and those in need of liquid have places to borrow from (Shaw 1973). Shaw was of the opinion that a well-functioning financial market needed to facilitate intermediation between debtors and creditors. The scholar argued that higher interest rates would create higher savings and a more effective functioning of the financial sector, thereby ensuring a real return to creditors and the real cost to borrowers. Development of the financial system hence increases enticements to save, raises the quantity and effectiveness of investments and hastens economic growth (Fry, 1982).

In support of Shaw's argument, McKinnon added that the providing funds from inferior projects in an underdeveloped business environment were as significant as fresh net saving (McKinnon 1973). McKinnon and Shaw both agreed that liberalization of the financial market would increase investment efficiency. To agree on this, they noted that efficiency could arise from a number of avenues. This can be through raising the interest rate to the market clearing rates, or by reducing the inflation rate. They further indicated that liberalization requires fiscal discipline to succeed, as government deficits are financed by taxing the domestic financial system.

Shaw (1973) and McKinnon (1973) viewed financial intermediaries playing crucial role in resource allocation. Both McKinnon and Shaw described economies with imperfect costly information, heterogeneous agents and goods and incomplete markets. They held the view that repression prevents the monetary system from fulfilling its pricing function. Consequently, prices are dispersed and do not reflect social costs, resources are misallocated and growth impeded. They noted that intermediaries specializing in the production of information allow them to set prices that reflect and signal opportunity costs. This provides information to the potential investors and makes the market active. The two noted that, when for instance there are high interest rates and an indication of low capital availability, it attracts savings to banks who allocates them efficiently because of their information.

The two theoretical specifications by McKinnon and Shaw on financial deepening equation drew a symbiotic relationship between finance and development. The two relationships bring about the development of the real economy. The relationship brings

about the prediction that deepening of the financial system is dependent on the real interest rate and real income. The complementarity between money and capital creates a relationship between economic development and financial sector deepening. The hypothesis was of the assumption that, there are no investments that can be done unless there is buildup of a huge amount of bank savings in a financial institution. McKinnon further indicated that, the ratio of investment should be positively associated to real rate of return on money balances. The reasoning behind is that, since rise in return on bank deposits, raises the demand for money and the real money balances in the economy. Since demand for money and real interest rates are complimentary in nature, the ratio of investment (McKinnon, 1973)

In a self-financed capital, when real return on money is high, in a way, it encourages buildup of real money balances in an economy. The money accumulated is then used in financing of expensive projects which cannot be divided into smaller projects. This hypothesis creates a double process of which demand for real money balances is dependent directly on average return to capital. As a result, the ratio of investment ratio to GDP increases with the deposit rate of interest. The hypothesis also noted that, due to indivisibility of investment, demand for money will be larger, the greater the ratio of investment to total expenditure.

With government repression, where the interest rate is controlled by the government it becomes difficult to know when funds are available or when there are no funds. This brings distortion in the market and it does not operate efficiently. Thus, the two advocated for the removal of financial repression, which included all governmental

measures, tax or otherwise distort domestic capital markets. They argued that government role should be restricted to maintaining noninflationary monetary growth and neutral fiscal policy.

The hypothesis further noted that, in developing countries, lack of organized capital and money markets poses a challenge, as there is no wide spectrum of financial and physical instruments for the individuals to store their wealth. At the same time, financial instruments apart from money cannot be easily marketed due to the lack of information and absence of operating capital market. In that case, McKinnon's hypothesized that an increase in the preferred rate of capital growth that is personal savings at any income level leads to an increase in the average ratio income. This implies that a rise in return on capital leads to an increase in the need of real cash balancing holding for accumulation purpose. Thus, money is not a competing asset; rather money is conduit through which accumulation takes place in developing countries. This implies that an increase in real return on money can raise sharply investment saving propensities in contrast to Neoclassical where return on money does not directly affect propensity to save because all firms have perfect access to external finance. So higher return on money enlarges real cash balance holding thus relaxing the saving investment bottleneck in developing countries (McKinnon, 1973).

Another support to McKinnon and Shaw was by Bencivenga and Smith (1991) who observed that intermediaries have an important role in promoting growth where capital investment is illiquid as intermediaries reduce the need to hold liquid assets. In support of McKinnon and Shaw theory on financial market liberalization, it was argued that,

financial intermediation was thought of an organizational arrangement mechanism, by which agents exchange information and make coordinated economic decisions. They noted that financial intermediaries help complete the markets and hence reducing the effects of uncertainty. This expands trading opportunities and they permit individuals to insure against future uncertain events.

Thornton (1990) supported McKinnon and Shaw liberalization theory indicated that there is a strong association between capital accumulation and investment. Thornton (1990) used Indian data covering the period 1964-84, to test the complementarity hypothesis through money demand and saving functions. They also used data from Nepal and found support to McKinnon's complementarity hypothesis. Pentecost and Moore (2004) also evaluated this hypothesis McKinnon using multivariate cointegration and vector error correction models between money and capital for India. The findings by two strongly supported the hypothesis. In that case, the findings supports the savings in banks and other financial institutions.

The demand and supply determination of prices allows individuals equate marginal rates of substitution in expectation terms. Due to higher advantage of financial intermediaries in gathering information, they are better-off in information production compared to other players. The argument was that financial system should be liberalized to do its job. The government should be left to pursuing only macroeconomic stabilization policy, public good provision and current budget surpluses on the fiscal front, while maintaining steady nominal money growth, setting a rediscount rate, ensuring easy entry and providing deposit insurance in the monetary sector (Bencivenga & Smith, 1991).

Kar and Pentecost (2001) noted that McKinnon and Shaw argument on that financial intermediary on monetary sector reduced market imperfections due to heterogeneity, indivisibilities and imperfect information. This was because money allows banks to pool savings for investment and allocate these to high return uses. They noted that, the heterogeneous information and uncertainty prevailing in undeveloped economies prevented those with indivisible investment opportunities from borrowing on the external market. This left them to depend on their own endowment. This leads to government intervention with where it uses financial constraints by circumventing the domestic capital market through measures such as cheap credit and tariff protection.

Kar and Pentecost (2001) went further to note that, the measures by government distorts the allocation role played by prices. As a result, the prices fail to reflect or signal the opportunity cost of resources in an economy. They noted that, full liberalization will permit banks to attract savings and channel funds to all investors who can earn a high return, thus breaking the confines of self-finance. To provide credit, Shaw argued that, banks must acquire information of which the costs must be covered by loan rates. In that case the market has to be liberalized so that the market forces sets the optimal price.

There have been contrary opinions on the hypothesis of liberalization. The hypothesis failed to recognize the fact that there are other financing methods not only self-financing. Secondly, the financial liberalization theory assumes a situation of competitive model market. However, Stiglitz (1989) pointed out that there are a number of market imperfections that go beyond the moral hazard and the adverse selection which are mostly viewed market imperfections. There are other issues, which are divergence in the market.

Some of them include private cost of bank failures, insolvency costs in the market, and the externality effects of few bad banks in the economy. The divergence of the financial market is different from McKinnon-Shaw model where it is assumed that the role of financial intermediaries is setting prices in the market because of supply and demand for money.

McKinnon and Shaw world of finance was a world does not exist. McKinnon and Shaw assumed a world of three actors where there were two exchanges where the prices between the actors was the cost of intermediation. With the supply and demand between the actors, the individuals reach to a pareto optimality. In the real world this does not happen. There other factors that determine the robustness of a financial market, interest rates and inducements are only dimensions of finance.

It should also be noted, savings don't only depend on the interest rate, the increase in interest rate does not mean that the savings will automatically increase. In some instances, the savings may decrease due to increase in savings. The other criticism is from the fact that the theory believed that initial savings. However, it has been noted that, a times banks do create credit to persons, not necessarily requiring them to do some savings. In that case, savings by individuals may not have any impact on the credit availability in the market. McKinnon and Shaw view that the liberalization of financial system ignored the negative effects of the real interest rate. The high real interest rates can cause an increase in deposits in the economy. This will result to excess capacity and as a result, the higher interest rates will make the economy worse off. This will

deteriorate the income distribution, results inflation increase and consequently, reduce the economic growth (Stiglitz & Weiss, 1981).

McKinnon-Shaw theory of financial liberalization ignored the critical role the securities market can play in the development of the economy. Actually, securities markets play a principal role in external financial liberalization in countries that are developing. However, McKinnon-Shaw model fails to incorporate this contribution in their model. Where the securities market is well developed, it may offer a great source of alternative financing which will be used in financing of investment in an economy (Stiglitz & Weiss 1981).

Though financial intermediaries are found to play a critical role, under Arrow and Debreu model, financial intermediary are found to play no role. When the market is perfect, the allocation of resources is pareto and thus financial intermediary plays no role. For this theory to hold, it requires a big quantity of securities. However, vibrant trading is found to be effectively complete even with limited securities. Similarly, it has been found that, banks have been there from immemorial times, providing deposit services for households and granting loans to individuals in need of capital. Marine insurance has been there for quite a long time. On the other hand, financial intermediaries have become significant recently and actually only not in all countries in the world. In these time banks still played the role of transforming money through individual savings to big and corporate investments.

Though complementarity hypothesis has been seen to work and supported through test, it had a shortcoming due to it is not able to calculate a reasonable measure of the return on capital in economies that are developing. In addition, McKinnon's model assumed that individuals have to accumulate savings for them to be able to invest in indivisible projects. The hypothesis ignored the role played by financial intermediaries where they can provide financing for viable projects, not necessarily when a person have put savings with the financial intermediary.

The much reforms and innovation of the Kenyan financial market has seen some of the provisions of the hypothesis being achieved. With mobile money and agency banking, Kenyans are able to save at their convenient. The technologies have seen financial services taken to where the people are. The mobile money and agency banking fulfils the provision of the theory which looks at providing an avenue for saving as a critical tool towards accumulation of capital for investment purposes.

2.2.3 Financial Intermediation Theory

The theory of financial intermediation began to emerge during the 1970s with the seminal contributions of Rothschild and Stiglitz (1976) and Akerlof (1970) and is based on the principles of imperfect information. In a perfect market, there are a number of assumptions that in real life they do not hold. The perfect market assumes that there is no one strong individual who can influence the market in any way by either through prices, placement of huge borrowings. The borrowing conditions are the same for all borrowers in the market either the rich or the poor. In a perfect market, there are no discriminative

prices, all the participants have equal competitive advantages. In this form of market, there are no transaction cost of obtaining information for the borrowers, their information can be accessed freely by all those who want to use the information. All the participants in the market have unlimited access to information that can influence the market prices. Due to informational asymmetry, there are a number of imperfect that leads to forms of transaction costs.

Information asymmetry arises when only the borrowers who knows the returns from the investment. This results to moral hazard that may minimize the ability of repaying the loan. To cure this, financial institutions have come up to reduce these costs. The information asymmetry generates market imperfection that leads to transaction costs. In the case of financial intermediaries, the market is able to overcome these cost.

Financial intermediaries are considered as information sharing coalitions in an imperfect market (Leland & Pyle, 1977). The banks can work together, share information and achieve economies of scale. They then undertake delegated roles of monitoring the financial markets on behalf of the savers. This increases the return to scale and thus, individual investor will leave monitoring to finance intermediaries (Diamond, 1984). Diamond and Dybvig (1983) indicated that financial intermediaries are also considered as an association of depositors that offer persons with assurance against particular shocks that unfavorably influence their liquidity.

Diamond and Dybvig (1983) argued that banks act as an association of depositors that guarantees and secures the funds of those who save against all the risks that could

negatively affect the situation of liquidity. Leland and Pyle (1977) viewed financial intermediaries as an association of depositors for distribution of information among the depositors. Diamond (1984) noted that financial intermediaries act as agents of the depositors who take the money from the depositors. The money is lent out to borrowers and the income is passed to the depositors who are the owner of the funds. In the end, the depositors have a right to withdraw the money when they want them.

The financial intermediary plays another critical role of information gathering and sharing (Claus & Grimes, 2003; Hirschleifer & Riley, 1979; Leland & Pyle; 1977). The challenge with imperfect information is the fact that this information cannot be sold as it is regarded as public good. Thus, not many organisations that are willing to invest heavily on resources that will be used publicly. Banks are thus obliged to get information at lower cost which can be shared by other intermediaries without losing information advantage.

Financial intermediaries are able to come up with exceptional skills in assessing potential borrowers and investment in projects. Banks are in a position to signal information advantages to lenders as other market players without losing the information advantage. Actually, financial institutions are able to obtain information at a lower cost than it would cost individual lenders. This is made possible by the fact that the financial institutions have exceptional skills and at the same time, they do not duplicate the process of information (Claus & Grimes, 2003; Hirschleifer & Riley, 1979).

In addition, there is increase in return to scale where there is intermediation in the financial market (Claus & Grimes, 2003). Financial institutions have developed

exceptional skills over time in assessing potential borrowers and projects for investments and this makes the information gathered of higher quality than what would be gathered by individual lenders. Finally, financial intermediaries are able to utilize information for many periods and they use the information severally over time. Leland and Pyle (1977) officially showed that a financial institution can disseminate information to potential investors about prospective borrowers at a much cheaper cost than it is for individual borrowers. Financial intermediaries are thus able to minimize transaction cost in finance market and thus the market is able to expand.

Assets in the market do face a number of risk characteristics. Financial intermediaries are able to change and transform the risks and overcome market failures in the market. The market asymmetry is as result of the fact that sometimes, the borrowers have more information than the lenders. This results to situations where the lender is not in a position to get the difference between borrowers who have differing credit risks, until after the lender has lent out the money. This results to adverse selection, where the market leaves more risky borrowers in the market due to increase of interest rates. This leaves the financial market to risky borrowers who are ready to pay the high interest rates and invest in risky projects (Leland & Pyle, 1977).

As per financial intermediation modern theory, financial intermediaries are usually active in the market due to the fact that there are market imperfections that restrict depositors and borrowers to trade directly with each other. Again most of the market imperfections are related to market information asymmetry where financial intermediation have an upper hand. Financial intermediaries come in and fill the gap where they undertake

monitoring of borrowers on behalf of the depositors who may not have the capacity to do so. In the long run, financial intermediaries end up having more advantage in terms of information compared to the depositors and the investors (Claus & Grimes, 2003).

Financial intermediaries are important in bridging the mismatch of maturity of finances between the savers and the borrowers. It also provides an avenue of payments between economic parties and acts as a clearinghouse in the financial system. Due to this, financial institutions are engaged in a more of qualitative asset transformation activities in the economy. Regulations have been put in place in the financial system so that sustainability is maintained. With the regulations, financial intermediaries are provided with a basis of enacting a production of their monetary services (Claus & Grimes, 2003).

The other approach on financial intermediation is based on the foundation of transaction cost. Benston and Smith (1976) together with Fama (1980) developed this approach. The approach have a different view of the technology used by the participants in the economy. The approach holds that, financial intermediaries are an association of individual creditors and debtors who are there to take advantage of economies of scale at the basis level of technologies used in the transactions. It should be noted that , under this approach, what are considered as transaction costs are not the transfer cost alone, it includes other costs like research costs, and evaluation and monitoring costs. In that case, financial intermediaries plays the role of transforming financial assets, offering liquidity in the market and providing opportunities for placement and diversification. Financial intermediaries are able to do this at a low unit cost as compared if every individual had to monitor his or her own costs (Hellwig, 1991; Pyle, 1971).

Diamond and Dybvig (1983) analyzed liquidity provision, another important role of financial intermediary. In Diamond and Dybvig's model, depositors are uncertain about the timing of their future spending needs and they are risk averse. They thus opt to put their finances in the banks. If there are no intermediaries in the market, majority of the investors will be locked a long-term illiquid investments that can only give high yield pay offs to the persons who are ready to wait for a longer period. The persons who are not is a position to wait liquidate their investment prematurely and as a result they get low payoffs for their investments (Diamond & Dybvig, 1983; Leland & Pyle, 1977). With financial inclusion, there can be a risk sharing mechanism between those who want to consume early and those who want to make consumption later in life (Claus & Grimes, 2003).

The aspect of liquidity provision also plays a key role in the investment cycle (Claus & Grimes, 2003). Those who do not have the current use of their liquid cash deposits with the bank in form of savings. The money is lent out to those with investment needs at the current period (Diamond & Dybvig, 1983). This way, the financial intermediary plays role of efficient resource allocation and helps in creating investment. The banks becomes critical in the economy due illiquidity nature of some assets (Diamond & Dybvig, 1983).

The role of financial intermediaries in providing liquidity has gained ground in the recent past. It a key function for both the lenders and savers, both at individual level and at corporate levels. Financial intermediaries have a role to play a role of ensuring that there is efficiency in bringing the borrowers and lenders together. With transaction costs, the rationale for the development of financial institutions is exogenous.

Diversification within the financial institution has been cited as another major reason of existence of intermediaries (Diamond, 1984). Diamond indicates that after diversification, financial institutions are handed over the expensive task of monitoring credit agreements. Financial intermediaries have to select an agreement that will give the return to financial intermediary. To mitigate the risk, diversification becomes the way out for the intermediaries. This is not possible with individuals. With the diversification, the losses that may arise from adverse or moral hazard are very minimal and financial intermediaries can bear them.

The final approach on financial intermediaries was anchored on the technique of rules of the monetary development, of financing and saving of the economy. Merton (1995) and Guttentag, and Lindsay (1968) developed this approach. The technique recognizes that rules influence the liquidity and solvency of intermediaries. It was again noted that the rules regarding capital in the intermediaries influence the health and the ability of refinancing and the debt recovery techniques. The financial intermediaries was again due the need of savings in the economy, financing in the economy and money production in the economy (Guttentag & Lindsay, 1968; Fama, 1980; Merton, 1995). Regulation in the finance market affects solvency and liquidity with the financial institution.

It was noted the ability of the bank to refinance and extract money from lenders justifies the existence of financial intermediaries. However, financial regulation been to playing a critical function in financial economy. Though regulation in the financial sector has been found to exogenous to financial industry, majority find it crucial for the success of the financial market. Regulation will require an institution where the same can be applied. In

this case, financial intermediaries come in handy. This also due to the fact that, the value of money and its development , where money is the raw material of the financial services in the financial services industry, is determined and defined by the state. The main reasons of regulating the financial industry are to have a sound financial system and fiscal policies. Also, the development and enactment industrial, fiscal and financial policies also add up to to the main reason of regulating the financial industry (Boot & Thakor, 1993; Kareken, 1986; Scholtens & Wensveen, 2003).

The advent of technologies in the financial system has seen an increase in financial intermediation. With agency banking and mobile money, citizens are able to access financial services at their convenience. This has reduced transaction costs to the citizens and to financial intermediaries. The use of the technology in the financial system has also seen a lot of the services left to the consumers of the products to serve themselves. With differences in ICT capability, this has seen some of the potential customers stay aback (Cohen & Nelson, 2011).

There have been a number of critiques on this theory. To start with, this theory assumed that, there must be an intermediary for there to be investment. However, as per Arrow and Debreu model, during resource allocation, households and the forms interact in the market for markets for investment purposes. With this, there is no role that is played by financial intermediaries. At the same time, with perfect markets, there in no need of financial intermediaries as the allocation of resources is Pareto efficient. In that case, this theory of financial intermediaries does not hold.

In the view of Modigliani-Miller theorem, it was noted that financial structure is irrelevant and persons do build portfolio which would have been developed by intermediary and as a result, the financial intermediaries are found to create no value (Fama, 1980). For the financial intermediation to take place, big amount of financial instruments are required for it to hold apart from exceptional cases. This is not the case though in the developing market, yet financial intermediaries play a role.

2.3 Empirical Literature Review

Empirical literature review is a search of the published works, including books and periodicals that looks at the theory and provides empirical results that are relevant to the topic being studied (Zikmund, Babin, Carr & Griffin, 2010). It is a comprehensive survey of previous inquiries related to a research question. The study on empirical was geared towards evaluating the areas that are directly related to area of research (Kaifeng & Miller, 2008). This review allowed the researcher to bring out the intellectual and historical context of the area of the study and help indicate why the research is important (Kaifeng & Miller, 2008).

2.3.1 Financial Capability and Investment

Studies have been done on evaluation of financial capability and financial decision-making. To start with, Ibrahim and Alqaydi (2012) carried out a study to examine financial capability among individuals living in the United Arab Emirates (UAE) and evaluate the relationship it has with different kinds of financial products. The study noted low levels of financial capability among the respondents. The results of the study

indicated that the average level of financial capability was significant statistically in usage of financial products. The study concluded that financial capability affected the usage of the financial products towards investment. This study looked at the usage of financial products, however, it didn't indicate whether the usage was for consumption or investment purposes.

Ellis et al., (2010) studied the effect of financial capability among financial inclusion using FinScope survey data from Kenya and Tanzania. Specifically, the study was examining borrowing and saving behavior by persons, the basis for which they invest, the barriers to access they face, the types of financial services they use, and how this differs according to personal characteristics. The Kenya 2006 survey was undertaken from 4214 respondents, while 2009 survey was undertaken from 6598 respondents, while Tanzania 2006 survey was undertaken from 5434 respondents. The main supply side barriers to access identified by survey respondents in both countries related to lack of financial capability. This included not knowing where to access a financial service, or how financial services work. The study concluded that due to the low level of financial capability, the people were not able to take advantage of financial inclusion and undertake investment. However, this study ignored that fact that financial inclusion was low at this particular time and low financial inclusion levels affected usage.

Githui and Ngare (2014) confirmed that financial capability influences significantly financial decision making. This was from a study carried to find out the effect of financial capability on planning for retirement in Kenya, a component of financial inclusion. The individuals targeted by the study was owners of the businesses in Nairobi County, both

permanent employees and those on temporary basis in the SMEs in Nairobi County. Primary data was collected by a face-to-face interview where the responses were recorded in a questionnaire. Both in descriptive statistics and in inferential statistics were used to analyze the data. The results of the study indicated a young but again rapidly growing population where the levels of financial capability were relatively low. The study concluded that, the low levels of financial capability negatively affect financial decision-making leading to low investment. However, there was limitation in terms of the scope of the study, the study only looked at retirement planning yet modes of investments are many.

Mwangi and Kihiu (2012) carried a study on the association of financial capability and access to financial services. The main objective of the by Mwangi and Kihiu (2012) was study was to analyze the effect of financial capability on access to financial services in Kenya. The study first sought to get the level of financial capability in Kenya and its effects on access to credit for investment purposes. The study noted that the access to finances was not the same across the various financial strands, it differed from strand to strand. By use of multinomial logit technique to give details on access to the four main financial service access strands, this study established that financial the levels of financial capability are low among Kenyans. This study also found that the likelihood of a financially capable individual staying financially excluded was considerably high requiring for enhanced investment in financial capability programs to overturn the trend. Those excluded could not use financial inclusion for investment purposes. This study supported the idea of financial capability and investment. However, though, the study

only focused on access to credit. Financial inclusion includes more products like savings and insurance products.

King'wara (2014) noted that financial capability is increasingly important. In fact, it is now necessary for consumers acquire the skills to be able to survive in modern society and cope with the increased convoluted and diversity of financial services and products. To find out this importance, King'wara (2014) carried out a study with the objective of assessing the level of financial capability among Kenyan university students and in what way do the university students financial capability is related to their financial behavior. The study was carried out among Egerton University students at the Nakuru Town Campus College in November 2013. The questionnaire tested students financial knowledge, financial behaviors, financial attitude, and their influences, as well personal characteristics matters. By the fact that the respondents were students from the same university may have influenced their responses.

Park and Mercado (2015) also tested the relationship between financial inclusion and poverty by carrying out a study on financial inclusion, poverty, and income inequality in developing Asia. The study considered that financial inclusion is critical element that makes growth inclusive as access to finance can enable economic agents make long-term consumption and economic decisions. The study constructed financial inclusion indicators to assess financial inclusion in 37 Asian economies. The study also assessed financial inclusion and other control variables on poverty and income inequality. The results of the study indicated that financial inclusion significantly reduces poverty and lowers income inequality. This study concluded that provision of young and old for

example retirement pensions, conducive financial systems, financial regulation oversight will broaden financial inclusion and this would contribute to poverty reduction and lower income inequality.

The study by King'wara (2014) revealed that students are not as financially capable as expected and this affected the financial decisions made. However, the scope of this study was limited as it focused on students. Again, because the students were within the same environment, it may be biased on the responses. Finally, the study did not indicate the theory it was based on. The findings were agreement by studies done by Gitari (2012) carried a study to assess the financial capability of the pension fund managers.

Gacharu and Mwirigi (2014) analyzed the impediments on the disbursement of the money set aside for in Kenya. The general objective of this study was to find out the challenges in the disbursement of the money meant for youth and which is disbursed through youth enterprise development fund. The research was descriptive survey of the youth in Mombasa County where a sample of 91 youth who were identified through stratified random sampling. Two youth officers, two youth fund officers and two micro finance experts were also interviewed. From the analysis, the youth scored a mean of 38.03% out of a possible 100% on financial knowledge. This is an indication that the level of knowledge on the youth fund among the youth is low. Results of the findings indicate that low level of financial capability hampers the youth from making full use of the youth enterprise development fund and thus no significant impact of the fund among the youth. The study recommended conducting periodical training sessions for the youth

and business and finance related areas. Though the results indicated a relationship between financial capability and investment, the sample size was relatively small.

All the above studies recommended training to enhance financial capability among the youth. Foreign Policy Centre [FPC] (2014_b) noted that the importance of financial capability and even suggested that there is need to change the approach on how training is offered to the young people from early ages. It is also important to have training that take into consideration soft skills such as effective communication, team working and reliability, solid numeracy and financial literacy. The soft skills help the youth fit in the labour market more than when equipped with technical skills. Actually, one can get technical skills from what is called on the job training and development.

2.3.2 Social Capital and Investment

Exclusion from social networks and institutions has been a defining feature of being poor in developing countries. When one cannot have valuable networks, the person cannot get credit and even credit information, insurance among others, it becomes hard for one to improve economic status and change his or her economic status (Fafchamps & Lund 2003; Fafchamps & Minten, 2001). Social capital has been found to as a way of creating mutual insurance mechanism in the communities where if a person has a problem, the community members come to his assistance. Those communities that are endowed with strong social networks are at a stronger position to fight poverty as compared to communities where the social network is weak.

According to Narayan (1995), social capital is usually dynamic and has been found to be useful in accessing economic opportunities like jobs, contracts. There are professional bodies where members of certain professions come together in order to advocate for their rights and also help the members secure jobs as a network. Thus those with close knit associations are able to leverage on the power of social capital to leverage and gain economic benefits (Holzmann & Jorgensen, 1999).

Social capital in this study has been taken as the individual networks within the society. Various scholars have studied social capital in different perspectives. Hamdan, Yusof and Marzukhi (2014) indicated that social capital refers to social associations and the attendant beliefs and trust (Putnam, 1995). Social capital refers to associations among persons' social networks and beliefs of trustworthiness and reciprocity that come from them. Social capital can be viewed to comprise of six dimensions which include groups and networks, trust among members of the network, collective action and cooperation among the persons. It further includes social cohesion and inclusion, information and communication among the members and empowerment and political action (Hamdan et al., 2014).

Studies have indicated that social capital is critical in the improvement of life's quality (Hamdan et al., 2014). Those with low levels of social capital may not be able to take advantage of financial inclusion. Most of the youth are at development stage in life and mostly, they have not developed networks with high stock of value (Paaskesen & Angelow, 2015; Schaefer-McDaniel, 2004). Lack of strong network has an implication

on the social capital of the youth. There was thus need to investigate whether levels of social capital determines financial inclusion on investment among the youth.

Hamdan et al., (2014) confirmed the effects of social capital and economic wellbeing by a study in Malaysia where the relationship between quality of life and social capital were evaluated on an urban neighborhood. The study was carried out by use of questionnaire as data collection tool where 797 respondents were used. The study noted high levels of social capital among the households. The study confirmed a relationship between social capital and specifically indicated the social capital dimensions were dependent on neighborhoods. Thus, social capital helped inn improving quality of life. The gap in this study was the fact that, the study was on urban.

In Africa Balogun, Suliamon. Yusuf, (2011) carried a study in Nigeria to find out the influence of social capital in Nigeria. Specifically, social capital and economic welfare of rural household in Nigeria. The study confirmed social capital to have effects on financial investment. The study used sampling technique that was in multistage and structured questionnaires in data collection. Data was collected from 390 households from Ekiti and Osun states. The study found that households belonged to at least two associations. The result of regression indicated that location, marital status, household size, primary occupation cash contribution index and heterogeneity index of households significantly impacted welfare. The study concluded that, social capital played a key role on household welfare and poverty alleviation. This study focused on the rural household whereas social capital is in both the urban and rural areas.

Here at home, Kangogo, Lagat and Ithinji (2013) carried out a study to find out the effect of social capital in the how households participate in micro-credit and their repayment history. This study was carried out in Moiben Division, Uasin Gishu County, Kenya. The sample size for the study was 174 respondents where multi-stage sampling technique was used to identify the respondents. The researcher personally administered the questionnaire. For the analysis, the study used Heckman two stage and a Tobit regression models were employed in addition to descriptive statistics. The results from this study indicated that the experience in a group had an effect on the rate of repayment among the respondents. Thus, the experience in group borrowing, peer pressure, meeting attendance index and heterogeneity index, number of visits by loan officer, all which enhances social capital, positively and significantly influenced the performance. The financial performance in this case was associated with household ability to make decisions on repayments. The results of this study agree with other studies on the effect of social capital and economic wellbeing, but the sample size of the study was relatively small.

Another study in Kenya was by Mwangi and Ouma (2012). They carried a study to evaluate what role social capital could play in access to credit. The researchers carried out a study to find out those factors that may enhance access to loans in the informal sector. The study used McFadden's Random Utility Model (RUM) where the utility of a person faced with various options. The study used FinAccess 2009 national survey data. The study revealed a positive relationship between social capital and access to credit. Thus, the study concluded that in a way, social capital helps in expanding access to financial services in an economy. This was for the fact that, the study noted the higher the

number of groups one is associated with, the higher chances the person had in accessing credit. To enhance access to financial services, this study recommended that, financial institutions should take into consideration group associations while designing financial products. The study focused on access of credit from the informal sector, whereas, financial inclusion is about access to formal financial services.

Kyalo and Maina (2014) also confirmed the relationship of social capital and economic wellbeing. Their study evaluated challenges facing women entrepreneurs in Kenya with focus on social capital and financial inclusion as they try to move out of poverty. Findings of the study revealed that social networks were the main challenges facing women entrepreneurs. The study thus recommended that there is need to enhance social capital to enable the poor move out of poverty. In the context of financial inclusion, there is thus need to enhance social capital so that the poor can be able to take advantage of financial inclusion. Nyangena and Sterner, (2008) also confirmed that, for the development of the people there is need for networking. In their study that was evaluating social capital and financial institutions in rural Kenya, they identified that social networks have had a play in the development of Machakos town.

Marshall and Oliver (2005) noted that social capital theoretically encompasses much more than family relationships and business contacts. It includes working with others in the community. Further, social capital enables people to attach greater value in their family, friends and associates that facilitate collective action. It makes people feel they will not like to do anything that will be against the friends and relatives. 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. This has seen the many groups coming up in the rural areas as a way of enhancing social capital. The main disadvantage to the youth is that they have not joined the social groups and thus, their social capital is low.

Success in business was also associated with social capital as indicated by Mbugua^a, Mbugua^b, Wangoi, Ogada and Kariuki (2013). The scholars studied factors affecting the growth of micro and small enterprises on tailoring and dressmaking enterprises in Eldoret. The study noted a relationship between social capital and success in business. Those with less than two years in the business and thus less networks and registered no growth accounted for 54.4% while those with more than five years and similarly registered no growth accounted for 53.3%. Those with less than two years in self-employment and were yet to establish their own market niche and had no regular customers could be an early sign of despair or business failure. The category that had 3-5 years in self-employment and wide network registered the highest growth rate of 66.7%. This was clear evidence of social capital and economic growth.

Social capital enables access to private information unavailable to credit markets, monitor members' behaviour and punish individual members who go against the social norms (Mwangi & Ouma, 2012). The researchers further noted that sharing information amongst members reduces transactions costs. The sense of belonging facilitates collective decision-making and the solidarity and reciprocity that emerge from the networks diminishing opportunistic behaviour. This improves financial behavior and decision

making among the group. Thus, the increase in social capital has far-reaching effects on investment among the youth.

Heterogeneity in groups helps in facilitating confidence that other members will indeed repay for the unintended defaulting members. This is from the belief that the group is likely to receive subsequent loans in the future and that those who intentionally do not repay in will not get the next round of borrowing. This increases the trust the group gets from lenders and therefore the group is able to get more support. This sees the members of the group benefit from the external financiers as compared to if the person was seeking finances in individual capacity (Kangogo et al., 2013).

An empirical investigation on the effects of social capital on welfare of rural households in the Southwestern, Nigeria also confirmed social capital to have effects on financial investment (Balogun, Suliamon & Yusuf, 2011). This study followed a multistage sampling technique. The data was collected by use of structured questionnaires and was collected from 390 households from Ekiti and Osun states. The study used six dimensions of social capital which were the percentage of members of the household belonging to local level institution, cash contribution index, heterogeneity index, labour contribution index and decision making index. The study noted that households belonged to at least two associations and the most important one was religion association. The result of regression indicated that location, marital status, household size, primary occupation, cash contribution index and heterogeneity index of households significantly influenced

the welfare. The study concluded that there is need to enhance social capital ties as this has an impact on poverty alleviation.

2.3.3 ICT Capability and Investment

The objective of adopting technology is to improve on the performance of the organizations or life of an individual (Narayan, 2005). Michael (2013) noted that, if there is to be development by use of technology, there is need to have technology that recognizes the economic boundaries and limitations of the poor people (Narayan, 2005).

On the interaction between financial inclusion and technology, many studies have been undertaken. Hashim (2007) studied Information Communication Technology (ICT) adoption among Small and Medium Enterprises (SMEs) owners in Malaysia. The study examined the degree of Information Communication Technology (ICT) skills, usage, and acceptance among owners of SMEs in Malaysia and especially in finance related matters. The study included 383 SME owners using a survey instrument developed from the constructs used in the diffusion of innovation theory. The findings showed that the level of ICT skills possessed by SME owners in Malaysia was poor and their use of ICT was low. This made it difficult for poor Malaysian to utilize ICT for economic advantage. This was in support findings by Indian Banks' Association (2007) which had similar findings. The study recommended capacity building in order to enhance technology adoption.

Availability of ICT does not translate to usage. West (2015) observed that poverty, expensive devices, and high telecommunications fees hinder access to information

communication technology. He indicated that lack of disposable financial resources makes it difficult for the poor to purchase devices or gain access to digital services. Income levels were indicated as a key barrier to internet access, and internet penetration levels is often the lowest in countries with the lowest GDP per capita. They argued that unless these poor individuals utilize free or cheap products, they could not be able to gain the benefits of the technology revolution. This may not hold for a longer time as the telecommunication costs keep on changing and in the current times, the prices have really gone down.

Gigler (2011) designed an different assessment structure which applied Sen's ability technique to the study of ICTs in with the aim of placing peoples' well-being, instead of technology in the heart of the study. This study focused on empirical evidence in Bolivia as witnessed in rural communities on how they used ICTs. From the study, it was noted that, it not just the access to ICTs, but it all depends on how the ICTs help in enhancing information capabilities, and how the informational capabilities influence political, social, economic and cultural dimensions. Unfortunately, this study didn't indicate the sample size.

Center for Financial Inclusion (2013) indicated that there are challenges that hinder ICT enabled financial inclusion reaching its anticipated levels and thus the adoption levels are low. The study indicated that fear of technology by prospective customers, lack of client education, related to both financial and technological innovation, gaps between access and use, lack of integration among others inhibit new applications of technology. The research found a big gap between the persons who could access physical technology and

those who use the technology. The most affected are the less educated or less experienced with technology and do not know how to use the technologies (Michael, 2013). The study concluded that the financial habits and use of technology by middle class is inapplicable to the poor in the society. However, the study didn't give any recommendation on what should be done on the usage of technology between the rich and the poor.

Despite the progress in financial services that are formal in nature in Kenya, access to these services through technology is still low. According to Omwansa and Waema (2014), one of the main challenges is the access to the services is through innovative technologies that are not convenient to the poor people. They noted that poor need financial tools that are appropriate, flexible, convenient, quick and affordable. It was noted that agent network and mobile money channels provided the best avenue for reaching the very poor. However, the business case for serving this segment of the market has not been well developed to attract and make the main players to be actively involved. The study never gave a recommendation of what should be done.

Ng'ang'a and Mwachofi (2013) studied the means of approaching the enhancing the adoption and uptake of Mobile and Agency Banking technologies adoption and their diffusion in Kenya. The study was critical as the two have key role in enhancing financial inclusion. This study used a comparative survey data, which was collected from SMEs and Banks agents from Karatina and Likuyani districts, which are both rural based. The surveys evaluated the views of bank agents and their customers and tried to find out the usage of bank agency both from the agents and the customers and whether there was effect from both. This study found that despite advocacy on bank agents and

proliferation of bank agents across the two towns only few people were using the agents. The paper recommended that there should be intervention that will address all the factors that inhibit full usage of the mobile money and agency banking in Kenya. The study was concentrated on two districts and thus could not be used as representative of the country.

Wambua and Datche (2013) did studied of Equity Bank in Mombasa County, with the objective of analyzing the innovative factors that affect financial inclusion. The study was specifically evaluating the perceived risk on innovated channels and innovated delivery channels. The study employed the descriptive survey research design with both quantitative and qualitative approaches where it targeted 20,585 Equity Bank customers operating in 5 branches within Mombasa County. Descriptive statistics and correlation analysis were used to analyse the data, the presentation of findings was by use of graphs, frequency distributions and pie charts. The research concluded that the innovated channels of distribution are generally underutilized, the banks that roll out new channels of distribution such as E-Banking, Agency banking, and M-banking are still experiencing influx lengthy queues in their banking halls. The study were on customers from one bank, however many banks were offering agency banking in the same region.

Mokaya (2012) studied the adoption of information and communication technology by small enterprises in Thika Municipality, Kenya. The study revealed that most people use basic communication tools such as cell phone where 75% used text and voice while 34.6% internet. It was also noted that most small enterprises operate on hand-to-mouth financial existence and thus have a weak financial capacity. The results indicated a statistically significant relationship between financial capacity and ICT adoption with a

chi-square value of 7.890 at 0.049 significance level. It noted poor perceive the cost of ICT to be very high and this has a negative effect on adoption. Communication infrastructure, the level of education and knowledge has significant effect on adoption. Mokaya (2012) concluded that ICT has not been well embraced by poor in Kenya. He recommended that the government of Kenya should develop an appropriate programme to encourage ICT adoption by poor, eliminate all taxes on ICT, and establish a special fund to support ICT adoption; support training programmes to develop the capacity of SMEs to embrace ICT; invest in appropriate communication infrastructure for poor people.

According to West (2015), increase in internet access would have a major impact on poverty alleviation and strengthening the middle class. Extending the internet access in developing economies to the same level with developed countries can raise incomes and living standards and by about USD 600 per person a year while lifting about 160 million people out of extreme poverty. The value of the Internet derived from the fact that it leads to increased investment and creates jobs for high-skilled workers in the developing world. A case study in Rwanda noted that, the country formed partnerships with leading technology companies to advance technology in the country. The collaborations have brought valuable new funding into the country, broadened Internet access across the country, helped advance the knowledge society, and provided benefits for millions of people.

However, not every analyst is optimistic about the impact of ICT on poverty reduction. In their overview, Torero and von Braun (2006) found that some studies have expressed

skepticism of the beneficial effects of ICT. Access to ICTs depends on income, education, and resources and that the so-called 'digital divide' is part of a much broader development divide. The analysts view that socioeconomic development contributes to a greater use of ICT and not the reverse.

Nelson (2010) also noted that not all ICT has positive effects. The scholar indicated that technology has been touted to be creating new channels of access to banking services. Cell phones have been found to be replacing and substituting brick and mortar banks branches. However, the older people are intimidated by technology and this has seen situation whereby older people are allowing access to their accounts to the young people. The young people on the other hand are quick to grasp the new technologies and master the functionality Unfortunately, they understand very little in management decisions that the technology can provide. New convenience in access of finances through debit cards, ATMS and mobile phones present a challenge to those who want to control spending (Nelson 2010). This has affected those who would control spending, do saving for future investment (Cohen & Nelson, 2011)

The advancement in technology has enabled the financial service providers to differentiate financial (Center for Financial Inclusion, 2013; Michael, 2013). These products are channeled through the internet and sometimes, the customers are expected to access them online. For the poor people, this becomes a big challenge as their level of technological usage is very low. Due to this deficiency, the poor tend to stay aback as they are not in a position to access the products on their own.

Adopting technology in financial transactions terminates marginalization of the poor from the formal economy by making it cheaper to serve them. A company can transact with a digitally embedded customer simply by linking their corporate digital account to the customers digital account. On the other hand, no provider would wish to serve a cash-based customer as the company must first establish physical infrastructure to interface with their cash. Where the poor are thus not able to embrace technology, they are not able to take advantage of the increasing financial inclusion (Kaguara & Wanjiru, 2015).

Acilar (2011) noted that according to the results of Turk-Stat yearly surveys, computer and Internet usage has significantly increased in Turkey over time. However, differentials on ICT capability still existed between poor and rich. The results further revealed that computer and the Internet usage rate among young generation is considerably higher than that among elders. There was a difference in digital usage between different demographic characteristics; younger and older; male and female; education levels; and rural and urban.

Omwansa and Waema (2014) noted that despite the progress in formal financial services in Kenya, access to formal financial services through technology is still low. The study indicated that one of the main challenges is the access to the services is through innovative technologies that are not convenient to the poor people. They noted that poor need financial tools that are appropriate, flexible, convenient, quick and affordable. It was noted that agent network and mobile money channels provided the best avenue for

reaching the very poor. However, the business case for serving this segment of the market has not been well developed to attract and make the main players to be actively involved.

Kaguara and Wanjiru (2015) further noted that, physical cash again has a disadvantage as the providers get to know very little about the customers. Reason being the fact that physical cash transaction leaves no record at all. Without this kind of record, service providers are able to know whether a client regularly repays his loans to the local moneylender and sends money to his family at the end of each month. This is not the case for the poor and this information asymmetry forces service provider to lump low- and high-risk customers into the same risk pool. With digital transactions, it is possible to identify customers who pay their transactions promptly and they may be able to be given less costly loans. This encourages investment which may not be the case for the poor who don't take up digital money. It is thus important to connect poor people to a digital financial system since this solves cost barriers to reaching poor people and reduce substantial cost out of the system. This also paves the way for more robust commercial efforts to serve the poor.

Bowen, Morara and Mureithi (2009) noted the informal sector creates more than seventy percent of the jobs in the country. However, the jobs in this sector face myriad of challenges, which include competition from large firms, cheap imports, debt collection and insecurity, which are components of business environment. This was from a study that was carried from 198 businesses trying to understand how businesses manage the challenges they face. This study noted that the challenges evolve according to different macro and micro conditions. This study noted though the success of the business is a mix

of different strategies, including the support of government in improving business environment. In detail, the study noted that 89.4 percent of respondents mentioned competition while 68.2 percent mentioned insecurity as a challenge. It was indicated that debt collection, lack of working capital and power outages are challenges by 54.5 percent, 53 percent and 44.9 percent of the respondents respectively.

2.3.4 Business Environment and Investment

Conducive business environment is a prerequisite for successful investments in an economy. Inclusive business is environments where there is interconnection between networks and there are independent players, of which their actions can help businesses succeed, grow to large scale and generate impact in the economy. The environment includes many types of actors, which may include governments, research institutions, intermediaries, companies, development partners and civil society organizations. Poor business environment may affect success of financial inclusion especially on taking up investments (UNDP, 2013).

In Sub-Saharan Africa, businesses operate in a challenging environment. It was noted that there is no reliable market information, on the regulations, the regulatory environment is inadequate. Further, the physical infrastructure is miserable and a number of places. Poor people again lack the necessary skills and knowledge that is required for them to be involved in productively through value chain. Access to finances is again minimal again among the poor. When the business environment is like this, businesses have to fill the gap and as a result, there are transaction costs involved. The poor business environment

has made it impossible for the Africa to exploit the enormous potential (Africa Development Bank [AfDB], 2014).

Alliance for Financial Inclusion, a member-based organization that brings together regulators from about 80 countries in the globe published a survey in the year 2010 that asked its members to discuss the trends and the challenges in financial inclusion (Gardeva & Rhyne, 2011). The survey was intended to provoke dialogue about what financial inclusion is and how to achieve it. This survey gauged the views of 301 industry participants from around the world who were financial service providers, and members of support organizations, investors, with a strong voice from the microfinance. The study noted that one of the major obstacle of leveraging on financial inclusion and undertake investment among the poor is unfriendly business environment (Gardeva & Rhyne, 2011). Considering that the respondents were from participants around the world, the sample size in this case was small.

A status report of Philippines on financial inclusion in 2013 highlighted the results in pioneering measures to promote greater financial inclusion in the country. These included the expansion of the physical reach of banks through the so-called micro-banking offices, extended virtual reach through electronic money (e-money) and wider range of affordable financial products through microfinance. The report also featured the financial inclusion indicators for the Philippines. The study noted that bank loans increased for the year 2013 by 17%. The study further noted that the increase in loan were highest in three cities where business environment was good for investment and an indication of the role

business environment plays on investment among financially included youths (Supervision and Examination Sector, 2013).

Global Microscope 2014 assessed regulatory environment for financial inclusion across 12 indicators and in 55 countries (The Economist Intelligence Unit [TEIU], 2014). This was through the Microscope was originally developed for Caribbean I and Latin America countries in 2007, it was later expanded to a global study in 2009. The Microscope study framework considers products and institutions that reflect financial inclusion in a country. The 2014 report included interviews and desk analysis that was conducted between June and August 2014. The study noted that countries with favorable business environments are likely to have favorable conditions for investment as a result of financial inclusion. The study was a desk analysis and this may be biased.

The Kenyan business environment has been rated poor. Kenya ranked position 108 out of 189 which is an improvement from 136 out of 189 economies in “Ease of Doing Business” survey which focuses on the business environment (World Bank, 2015; World Bank, 2016a). UNDP (2013) noted that there is need to enhance business environment for African countries to harness its potential. Unfortunately, the parameters used do not consider corruption and insecurity, which are major challenges for Kenya.

In Global Competiveness Report, Schwab (2015) noted that, Kenya business environment was not conducive for business. The report of 2015-2016 ranked Kenya position 99. This report indicated that the most problematic factors for doing business were corruption. Corruption affected heavily on the performance of businesses in Kenya. This was

followed by inadequate supply of infrastructure, access to finances, inefficient government bureaucracy and tax rates. It was noted that for the businesses to expand in the country, there is need to improve business environment.

Kama and Adigun (2013) argued that if the legal environment is favorable to lending, this might enable banks to operate more profitably. This will eventually lead to expansion of banking services and investment. It noted government has a critical role of ensuring that business environment is conducive, so that the citizens can operate and interact with consumers in a mutually beneficial way. It is the role of government through the regulatory organs to strengthen land and property registries as well as enhance the transparency and efficiency of court systems. It should also play role in promotion investment in communications, physical infrastructure, and services and power. The argument by the scholars were valid, it only that they were biased towards access to loans.

Government regulations have facilitated the transformation of financial system in great deal. Through Central Bank of Kenya, a number of regulations were put into place which saw the success of M-Pesa. The granting of M-Pesa money transfer service license after liberalization of the telecommunication sector showed clearly government commitment towards regulation that was in support of business environment. This enlarged access to [f]deposit facilities have seen financial intermediaries ability to mobilize savings increase, while on part of the citizens it can facilitate economic growth by increasing the ability of households to undertake investments (Andrianaivo & Kpodar, 2011; Kama & Adigun,

2013). However, due to poor business environment, citizens are not able to undertake the investments. This study did not consider other money service providers.

Kenya's infrastructure is a major contributor to poor business environment as it is insufficiently developed though huge amount of budget is allocated to development infrastructure (Kibet, Mutai, Ouma₁, Ouma₂ & Owuor, 2009). This makes Kenya to be uncompetitive and it affects investment especially among the poor. To improve this, there has been need for the policy makers to improve transport and communication in Kenya. To improve productivity and savings in the rural areas, the government should increase its involvement in these rural areas. This may include through projects such as water supply, connection to electricity, extension services among others. With this, the business environment will improve, households will be motivated to increase productivity, income will increase and there will be a growth in savings. Actually, AfDB (2014) noted that Kenya has a very high potential for investments, but business environment is challenging. Unfortunately, it did not indicate on how to tap the this potential apart from improving infrastructure.

Studies shows that Kenya business environment is still not conducive (World Bank, 2015; World Bank, 2016). This could hinder the youth who would wish to start business shun away despite the availability of money. Other youths could have started the business but they are not able to operate it full cycle. The relationship between household investment and business environment on financially included population has not been comprehensively studied. Thus, the youth are not able to realize the impacts of financial inclusion as expected.

2.3.5 Demographic Characteristics and Investment

Studies have shown that a relationship exists between demographic characteristics and how different people with different demographic characteristics use financial services (Ellis et al., 2010). Demographic characteristics that are considered in majority of these studies includes age, gender, level of education, marital status and place of residence. It was important to assess whether, demographic characteristics have same effects among the youth. The youth was an important group as when the youth are provided with the right skills and with the right resources, they are able to take risk and engage themselves in productive activities.

Demographic characteristics have effects on usage of financial inclusion on investment. Zakaria and Sabri (2013) reviewed studies on financial capability. The study noted that financial capability differs across different demographic characteristics. In particular, it was indicated that younger people, women, those on low income and low levels of education, literacy and numeracy were identified to lack financial capability. Lack of financial capability affected the usage of financial services for investment purposes. Another study done by Paaskesen and Angelow (2015) had similar findings where usage of financial services for economic benefits differed across different demographics. The studies had a gap as they only considered the age of the respondents.

Ardic, Heimann and Mylenko (2013) carried out an analysis of cross country data set. This study relied on data from World Bank Group and Financial Access database by CGAP. Using this database, the study got the number of all persons who were unbanked

all over the world as per the data they were using. They further evaluated the state of the savings and borrowing as well as the financial retail networks, and with this they discussed the status of financial inclusion across the globe. The findings indicated there, the market still had gaps and there was a lot that needed to be done in the area of financial inclusion. The access to finance services was different across different individuals and where poor people use informal financial services as it is perceived to be expensive for formal financial service providers to provide financial services for the poor. This limits access of loans from financial institutions by the poor and thus this less investment from this segment. This study considered only the unbanked population, however, if the banked population would have been important to the study.

Mwangi and Sichei (2012) using multinomial probit models, in their study drew a comparative analysis of the role played by individual characteristics on access to credit from various strands in 2006 and 2009. The survey was based on data for 2006 and 2009 surveys that was collected by Financial Sector Deepening (FSD) Kenya, which was done in collaboration with Kenya National Bureau of Statistics (KNBS) and Central Bank of Kenya. The results from this study indicated that, there is variance in access and usage of financial services for economic purposes alongside demographic characteristics. The study only indicated there was a variance between access and usage, but it did not indicate which the variances are.

Clamara, Pena and Tuesta (2014) carried out a study that comprised quantitative technique to find out the drivers of financial inclusion in Peru, based on data collected from surveys. The study was to identify significant correlations that may influence

financial inclusion or exclusion of persons and/or firms. The study analyzed the relevant characteristics for financial inclusion and for those individuals excluded from the formal financial system. The study found that factors demographic characteristics had an effect on access of financial services. Specifically, the study noted that level of education, being a woman, level of income had influence of the level of access of financial services. This study ignored the usage of financial services by the respondents.

Ellis et al, (2010), using 2009 survey data found a statistically significant and positive relationship of age with credit from banks, SACCOs, MFI and ASCAS. The study also observed that age had a positive statistical significant relationship with access to credit from banks and SACCOs. In addition, it was noted that, couples were found to be borrowing more than single people are. This is clear evidence that demographic characteristics affect because of financial inclusion.

Johnson and Arnold (2012) also noted age was important influence of financial inclusion because the younger people were less likely to use financial services as compared to older people who were often using the financial services. Similarly, Ndi (2011) noted, among Kenyan adults, those were using financial services more were those between 35 and 44 years of age. Those under 25 years of age and those above 55 years of age were found to be least likely use financial services. Majority of those under 25 years of age were in school and they didn't have money. World Bank (2014) had similar studies that indicated older people globally use formal financial services than younger people.

On education, Johnson and Arnold (2012) noted that education was in a strong way related to the probability of using a bank account. In particular, 39% of persons with secondary education had a bank account, which was higher compared to those with primary or no education. The same relationship was found in SACCOs where 18.4% of those with secondary education as compared to those without education at 8%.

2.4 Research Gap

From the reviewed relevant literature, it can be noted that, financial inclusion has impacted positively to the wellbeing of citizens (Ellis et al, 2010, 2010; Mastroiannis, 2007; Petreska et al., 2013; UNDP, 2013; World Bank, 2008; World Bank, 2014). With access to finance, individuals are able to get out of poverty traps through households investment (Beck et al, 2005; Paaskesen & Angelow . 2015; Vighneswara, 2011; World Bank, 2008). Studies have also confirmed that Kenya has achieved high levels of financial inclusion (Demirguc-Kunt et al, 2015; Villasenor et al., 2015; World Bank, 2014).

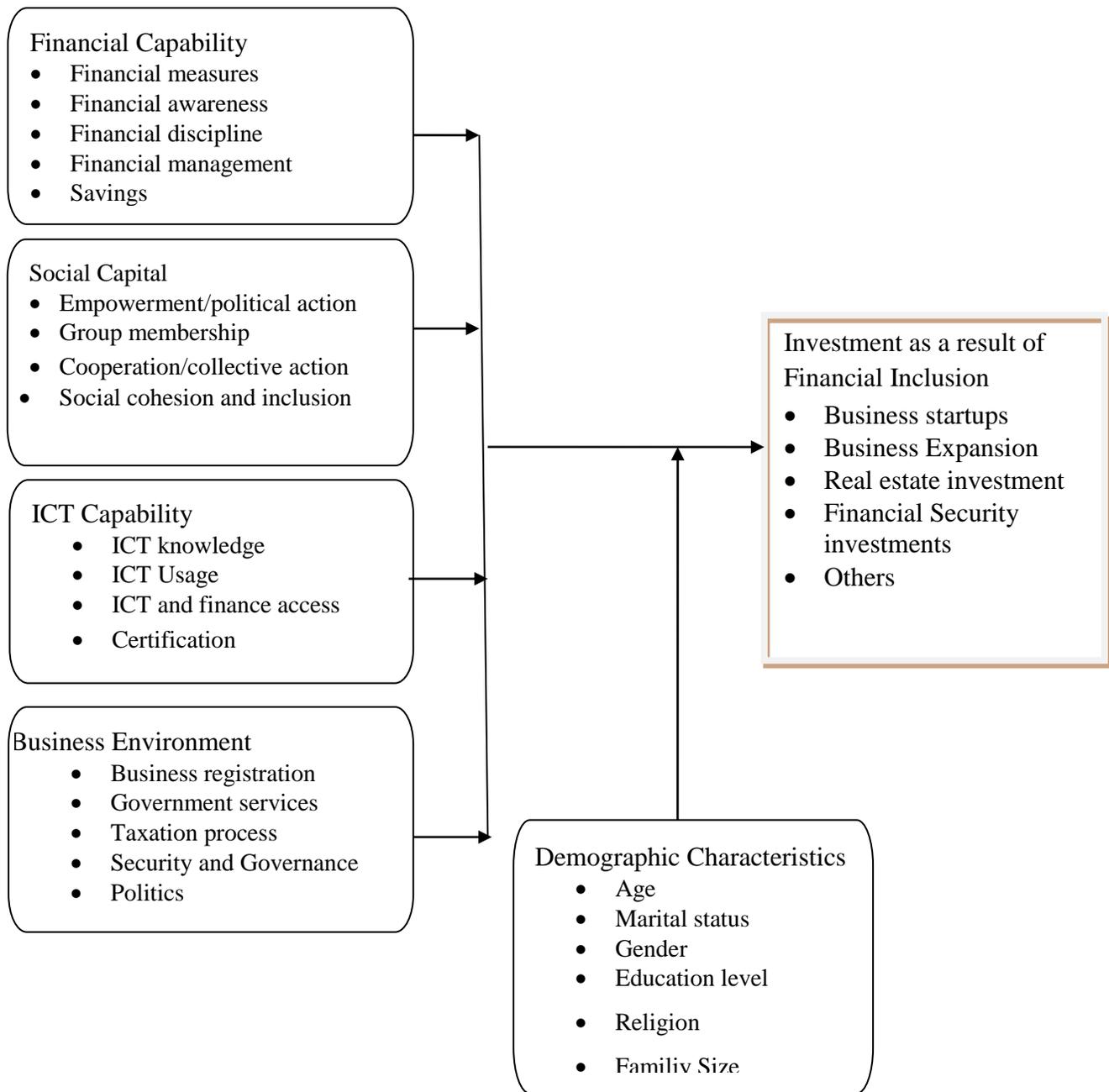
Most of the provisions of the theories of this study are met; members of the public can access financial services; citizens have savings facilities; the financial markets have been liberalized and credit facilities are available to those with viable ideas. Thus, from the theoretical and empirical literature reviewed, it would be expected that, both levels of unemployment and poverty would have declined. Despite this, studies show that the level of unemployment and income inequality is still high among the youth in Kenya (Muiya, 2014; World Bank, 2014).

However, the studies have not indicated clearly, what determines whether a youth will leverage potential of financial inclusion through household investment. There was need thus to identify the determinants of investment on financially included youth beyond inclusion. The study would then indicate whether the determinants are missing among the youth. If the youth do not have what determines whether they can be able to invest or not, they will be unable to invest and move out of unemployment and poverty despite the high levels of financial inclusion. This study will fill this gap by studying the variables that could be determining whether a youth will take advantage of financial inclusion and invest.

2.5 Conceptual Framework

Conceptual framework helps the researcher to create awareness and understanding of the area being researched on and communicate the same. It explains the various interactions between variables of the study (Kombo & Tromp, 2009). The conceptual framework for this study shows the relationship between independent variables and effect of financial inclusion that is investment. It conceptualizes that financial capability, social capital, technology adoption, business environment determines investment on financially included youths. It also conceptualizes that demographic characteristics have moderating effects of investments on financially included youth in Kenya.

The following is the conceptual framework of determinants of investment on financially included youth in Kenya



Independent Variables

Moderating Variable

Dependent Variable

Figure 2.1: Conceptual framework for the determinants of financial inclusion on investment among youth in Kenya

Figure 2.1 conceptualizes that, financial capability, social capital, ICT capability and business environment influences investment among financial included youth. It also indicates that, the demographic characteristics do have moderating effect on investment among the youth.

Savings, certification, politics religion and family size were some of the sub-variables that were related to the variables in the conceptual framework. However, the sub-variables were not used in the study.

2.5.1 Financial capability

Financial capability is the ability of a person making informed decision that can help in uplifting ones economic life. World Bank (2014) noted that financial capability has an effect of financial decision making. Persons who have higher financial capability have been found to be doing better economically. This is from the fact that they are able to use available financial information to make decisions that can improve their economic life. This has seen persons undertaking investment at a higher rate than those who have low financial capability (Cole, Sampson & Zia, 2011). In this study, it is expected that, financial capability will influence investment among the youth positively. The higher the financial capability, the higher the level of financial capability. In this study, financial capability variable was measured by four sub-variables, which included financial measures, awareness of financial products, financial management skills and financial discipline.

2.5.2 Social Capital

It has been indicated that, social capital has a positive effect on the wellbeing of individuals (Hamdan et al., 2014). Those with high levels of social capital are able to take advantage of economic activities compared to those with low levels of social capital. Thus, the higher the social capital, the higher the economic wellness of a person. In this study, it is expected that social capital will influence investment positively such that, the higher the social capital the higher the investment. In evaluating social capital, four sub-variables were used which included empowerment and political action, groups and networks, social cohesion and inclusion, and collective action and cooperation

2.5.3 ICT Capability

The financial sector has undergone transformation and a number of financial services are offered through ICT platform (Kalunda, 2014). For a person to be able to use them, he must have ICT capability. It has been noted that, offering financial services through ICT platform has enabled many people access the services, however, this has not resulted to usage (Himma & Bottis, 2013). For there to be full usage of financial services, people must have access to these services and have ICT capability to use them. In that case, for a person to be able to take full advantage of financial services, the person must have ICT capability (Cohen & Nelson, 2011). In this study, it was thus expected that, ICT capability is positively related investment. Those with high ICT capability are able to take advantage of financial services offered through ICT platform and invest. In measuring ICT capability, three sub-variables were used which included ICT knowledge, ICT usage and Access to Financial Services through ICT.

2.5.4 Business Environment

For the businesses to thrive in any economy, the business environment must be accommodative to all types of business. Where business environment is conducive, people are able to start business and those who are already in business are able to expand (AfDB, 2014). When the business is not conducive, it hurts the youth most. In that case, the youth may not be able to undertake investment even if they are financially included. In this study, conducive business environment is positively related to investment, as business environment improves, so does the increase in investment. In evaluating business environment, four sub-variables were used which included Business Registration and startup requirements, Access to government services, Taxation Process, and Security and governance.

2.5.5 Demographic Characteristics

Demographic characteristics have been indicated to have moderating effect on usage finances (Ellis et al., 2010). There are differences on usage of finances between different gender, different age groups, and persons with different level of education, place of residence. In this case, even when it comes to investment, the more one uses financial services, the more the person is expected to invest. Demographic characteristics considered in the study were gender, age, marital status, place of residence and level of income.

2.5.6 Investment

Investment was the dependent variable of the study. With improvement of the other variables of the study, it was expected that there would be more investment. The higher the financial capability, the higher the investment (World Bank, 2014). It was also noted

that, as social capital of a person increases, so does the investment. On ICT capability, those with higher levels of ICT capability are able to take advantage of financial services and undertake investment, while improvement of business environment is related to increase in investment. Demographic characteristics were indicated to have moderating effect on investment. In evaluating investment, the youth were given five options, which included starting or expanding their business, buying property, investing in finance market, started farming project and none of the activities

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the research philosophy, research design, population of the study and research site. It will further presents the sample and sampling design, sample size, data collection, pilot test, validity and reliability of the data and ethical issues. Finally, data analysis and presentation, operationalization of the variables will be presented.

3.2 Research Philosophy

This study adopted positivism philosophy. Saunders, Lewis and Thornhill (2009) defined research philosophy as a belief in relation to the way in which data about an observable fact should be gathered, analyzed and used. The research philosophy adopted in a research guides on the important assumptions on how the researcher will view the world. Johnson and Clark (2006) noted that it is important for researchers in business to be conscious of the philosophical commitment made through a research policy as this has an important impact of what to do while carrying out the research. It also helps the researcher understand the subject under investigation.

According to Saunders et al., (2009), there are four types of philosophies which can be adopted for a research; positivism, interpretivism, realism and pragmatism. The philosophy adopted in research depends on the practical considerations and the view of

the association between the available knowledge and the procedure of developing that knowledge (Johnson & Clark, 2006).

Positivism philosophy assumes that reality is fixed, directly quantifiable, and predictable and that there is just one truth, one external reality. Positivism philosophy combines deductive logic with empirical observations to predict human behavior (Zikmud et al., 2010). Three fundamental issues were considered while adopting this philosophy. First, the research was interested with the observable social reality. Secondly, the positivist philosophy was adopted since the research is assumed to be undertaken in a value free way. That is, the researcher was not affected or was not affected by the subject of study as he was independent (Saunders et al., 2009). Finally, it was expected that results of this study will be replicated in other areas, and as such the study used a structured methodology to achieve this and the results of this research will be used for generalization in similar circumstances (Zikmud et al., 2010).

3.3 Research Design

This study adopted a descriptive survey research design. A descriptive survey research design is a research where data is collected from a representative sample of individuals using instruments such as questionnaires, observations, and interviews (Polit & Beck, 2003). Kothari (2004) and Orodho (2003) describe a descriptive survey design as a design that seeks to represent accurately the characteristics of a particular situation, individual or a group. In this study, research design was a blueprint on how the data of the study was to be collected. This is most widely used in non-experimental research

designs in many disciplines to collect large amounts of survey data from a representative sample of individuals from the targeted population.

Polit and Beck (2003) indicated that in a descriptive study, researchers observe, delineate, count, and classify. Further, they describe descriptive research studies as studies whose main objective is the accurately portrayal of the characteristics of situations, persons, or groups, and the frequency with which certain phenomena occur. This study therefore adopted descriptive research design as it was to collected data as accurately as possible, to portray the characteristics of the situation. This research design was used in all the variables of the study.

3.4 Research Site

Research site is the identified area from where the data is collected from (Polit & Beck, 2003). In this study, the data was collected from Kirinyaga and Nyeri Counties in all the constituencies in the counties. The two counties were selected because of a number of factors. First, the two counties have almost all sectors of the economy. The counties are rich in agriculture where 53 percent of the residents are engaged in agricultural production. The main farming activities are tea, coffee and dairy farming and horticulture.

Second, the counties are also endowed with a number of industries that include dairy processing, maize millers and animal feeds producers, bottling companies, coffee factories and tea factories (Muturi, 2015). The county also has advantage of earning foreign exchange from tourism and export of tea. Some of tourist attractions sites are Mt.

Kenya National Park, Aberdare National Park and the Baden Powell Burial Site (Muturi, 2015). The two counties give a fair representation of the economic activities in Kenya.

Third, the two counties are also affected by different levels of poverty index. Kirinyaga county poverty level stands at 36 percent and contribute 1.2 percent to the national poverty level. However, some parts of Mwea constituency, which is in this County, is the poorest constituency in central Kenya region. The average poverty prevalence is 43 percent even though in one location the poverty prevalence is as high as 53 percent. In the county, urban poverty in the county stands at 60 percent, while in the rural area it stands at 32.5 percent. It has been noted that the poverty levels are attributed to semi-arid conditions of the lower zones of the county where rain fed agriculture is not feasible (Kirinyaga County Government [KCG], 2013).

The situation on poverty is similar in Nyeri County where poverty index of the county shows that 28.8 per cent of the population live in absolute poverty. Place like Kieni constituency, which is semi-arid and has some areas with high levels of poverty. Again, Nyeri has slums and the highest pockets of poverty are found in slums such as Majengo, Kiawara, colonial villages in Mathira, Kieni and Tetu as well as the landless who reside in many villages next to the forest areas (Nyeri County Government [NCG], 2013). Thus, the two counties give a fair representation of the other counties as poverty levels ranges between very low and very high.

The fourth reason is the fact that the two counties were affected by two major problems which were as a result of unemployment; illicit brew and organized criminal gangs.

Though the two counties are not among the poorest in the country, the unemployment and frustration among the youth is high. This had lead to emergence of illegal gangs and abuse of alcohol where illicit brew has been causing havoc in the two counties. The two counties were highly affected by illicit brew compared to other counties in Kenya. A study by NACADA indicated that Kirinyaga County was leading in alcohol abuse at 75.8 percent while it was 68 percent in Nyeri County. This study further indicated that in Nyeri and Kirinyaga, 61 per cent of drinkers did it daily (NACADA, 2010). It was indicated that among the major causes of abuse of alcohol are idleness (79.2%), unemployment (58.5%), and poverty (55.2%) among the youth (NACADA, 2010). Muri (2015) noted similar findings where majority of the youth are affected. On illicit brew, Musungu and Kosgei (2015) noted that the situation was becoming worse compared to 2010. Alcohol-attributable death toll in 2010 was 6557; in 2011 it was 5395 while in 2012 it was 7146. Worse still, death and hospitalization occasioned by drinking were still on the increase. This study noted worrying is the fact that that the majority of those affected by the alcohol menace are the youth, who are the most productive members of the society. Both national and county governments have put mechanisms to reverse this.

The two counties have been affected heavily by criminal gangs. It has been indicated that, the roots of gangs in Central Kenya was due to unemployment and lack of means of earning livelihood among the youth (Kiruthu & Mbataru, 2014). Both Counties recognize the challenge of insecurity. They attribute this insecurity to the large population of

unemployed youths, emergence of sects, drug abuse, and family feuds (KCG, 2013; Muturi, 2015; NCG, 2013).

It is important to recognize that the two Counties are rich in resources, good infrastructure compared to other counties and proximity to major towns. As it has been indicated, the two counties on overall are not doing badly in terms of poverty levels. In terms of financial inclusion, the two counties are well served compared to other counties. Kirinyaga County is ranked position 3 while Nyeri County is position 8 countrywide in terms of access to mobile money (FSDK, 2014). One would thus expect much investment in the two counties, however, this is not the case. Thus, the two Counties were considered a good research site for the study.

3.5 Population of the Study

The target populace of the study was the Kenyan youth. This segment of population forms one third of the whole population, which translates to 14 million youths (KNBS, 2016). The accessible population was all Kenyan youth who could be easily included in the sample within the research site of the study that is Nyeri and Kirinyaga Counties.

The study targeted the youth for a number of reasons. To start with, studies have shown that the level of unemployment in Kenya is very high and growing among the youth (Mutia, 2014; World Bank, 2015). Further, the youth form one third of the whole of Kenyan population, and thus, when this group is economically inactive, the problem has a big impact in the society (KNBS, 2016). The other reason is that, at this time in life, a

person is physically active and has high potential. Another consideration is that when the youth are not engaged with any economic activity at this time, they start engaging in criminal activities (Mutia, 2014). Finally, the young people have higher affinity for risk and as such, if they are empowered, they can risk and take up investments.

3.6 Sample and Sampling Design

Probabilistic sampling is where the units of study are scientifically chosen such that every unit in the populace has an equal probability of being picked. Probabilistic sampling design was used for this study due to a number of reasons. To start with, each element has an equal chance of being selected (Buglear, 2003; Gall_a, Gall_b & Borg, 2007; Polit & Beck, 2003), and this minimizes the errors of estimation. The second reason is that the design also ensures that the errors of estimation and the significance of the results of the study can be measured (Buglear, 2003). Lastly, systematic bias was controlled and results were generalized, thus the results of this study were used to represent other youths in the country. Using probabilistic sampling design gave all the youths in research site an equal opportunity of being selected as a respondent.

3.7 Sample Size

Studies that collect a lot of data are considered wasteful (Gerstman, 2003). Therefore, prior to collecting data, it is necessary to determine the sample size requirements of a study. The sample size for this study was established by use of Bartlett, Kotrlik, and Higgins (2001) Table, (Appendix IV). The sample size established by the use of the table has been found to be representative of studies and the same can be generalized (Bartlett,

Kotrlik, & Higgins, 2001). Other scholars who used this table to determine the sample size and considered the sample size representative included LaVergne (2013), Gawlik (2016), and Alukwe, Ngugi, Ogollah and Orwa (2015). The researcher believed that by using the table, the sample size was a representative of the population.

As per the table, the minimum sample size of this study was 370 youths at 95% level of confidence. The statistics indicate that, the people in the bracket of youth are a third of the total population (KNBS, 2015). With an estimated population of 42 million people, youth constitutes about 14 million of the population. The sampled respondents was from each and every constituency from the two counties in the proportion of the population in the constituency as per 2009 census. The respondents from each county and respective constituencies are as indicated in Table 3.1.

Table 3.1: Composition of the Respondents

The following Table gives the respondents from the various counties;

Constituency	Population (2009 National Census)	Constituency Proportion of the total Population in Two Counties	Minimum Respondents per Constituency	Sampled Respondents per Constituency
Kirinyaga County				
Mwea	190,512	15.6	58	72
Gichugu	124,672	10.21	38	48
Ndia	99,515	8.15	30	38
Kirinyaga Central	113,355	9.28	34	42
Nyeri County				
Tetu	78,320	6.41	24	30
Kieni	175,812	14.39	53	66
Mathira	148,847	12.18	45	57
Othaya	87,374	7.15	27	34
Mukurweni	83,932	6.87	25	31
Nyeri Town	119,273	9.76	36	45
Totals	1,221,612	100	370	463

Minimum number of respondents were expected to be 370, however respondents exceeded by 25 percent to 463 to increase the response rate. The 25 percent that was exceeded with, was distributed equitably among the constituencies.

3.8 Data Collection

The main data of the study was primary data which was collected where a questionnaire was used. This study also included observation and focus group discussion as a way of validating the responses in the questionnaire. Swetnam (2007) defined questionnaire as a structured set of questions designed to get information from a sample prepared in a simple, direct and appropriate language. The researcher administered the questionnaire on face to face to enhance the quality of the responses and increase response rate.

Swetnam (2007) and Kothari (2004) agree that a questionnaire has various advantages. The advantages include low cost even when the universe is large and spread geographically, free from the bias of the interviewer, answers are in respondents' own words and respondents who are not easily approachable can also be reached conveniently through mail. Further, respondents have adequate time to give well thought out answers, and large number of respondents can be reached and thus the results can be made more reliable and dependable. The questions in the questionnaire of this study were adopted from various questionnaires used by World Bank, Hashim, IMF, FSD who were studying the variables similar to variables of this study (Hashim, 2007: OECD INFE, 2011). The questions were customized to fit this study and they were both in quantitative and qualitative data. For the qualitative data, likert scale was used which ranged between 1 and 5, where 1 was strongly disagree, while 5 was strongly agree.

The researcher sampled households at random where a youth in a household was interviewed and responses recorded in the questionnaire. The researcher would then

skip six households to any other household with a youth. If the seventh household there is no youth, the next household with a youth would be selected and the circle continued. The study further used triangulation in data collection. This included focus group discussion where the researcher held seven group discussions. The study also used observation again a way of verifying some of the responses provided in the questionnaire.

3.9 Operationalisation of the Variables

The variable of the study are operationalised in section 3.9.1 to 3.9.6 and indicated in Appendix V

3.9.1 Investment among the Youth

The study collected the status of investment among the youth where the youth were required to indicate whether they had invested or not. The youth were given five options, which included starting or expanding their business, buying property, investing in finance market, started farming project and none of the activities. Where the youth indicated they had invested in either of the four available options, it was coded 1, else zero. The scores were summed up where the maximum score was 4 and a minimum of zero. Since the study was interested in those who had invested and those who had not invested, the data was transformed using SPSS where those who had invested in one or more investments was coded 1, else 0. This converted the data to binary variable which is used for analysis. This process transformed the dependent variable into binary variable and thus used in binary logistic regression in testing the five variables of the study. .

3.9.2 Financial Capability

Financial capability variable was measured by four sub-variables, which included financial measures, awareness of financial products, financial management skills and financial discipline. The questions were adopted from financial capability tool developed by International Network on Financial Education (INFE) under Organization for Economic Co-operation and Development (OECD) developed a number of parameters to assess financial capability (OECD INFE, 2011). Financial measures were tested by evaluating the youth knowledge of financial concepts, which included simple arithmetic, inflation, risk diversification and compound interest. The youths were required to respond to the questions giving answers to the questions. For each correct answer, the youth was awarded a score of 1, else 0. The scores were aggregated where the maximum score was 4 and a minimum of 0.

Awareness of financial products was concerned with the youth's awareness of the financial products on offer in the financial system. The study required the youth to indicate whether he/she was aware of financial products. For each financial product a youth was aware of, it was scored 1, else 0. The scores were then aggregated where the highest score was 12 and a minimum of 0. The higher the score, the higher the financial products awareness.

Financial management skills and financial discipline data was collected in likert scale where youth were required to rate themselves against eight questions. These questions were based on the questions in the questionnaire adopted for the study. The answers in

likert scale ranged from five, strongly agree to one, strongly disagree. The negatively phrased questions in this section were first reversed by use of SPSS. Data was tested for multicollinearity, by use of R-Matrix, Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy, confirmed with Bartlett's test of Sphericity were used to ensure that the data was adequate for data reduction. To examine the hypothesis that the variables are uncorrelated in the population, Bartlett's test of sphericity was used which was significant at $p < 0.000$.

Principal component analysis and varimax rotated analysis was conducted to determine the significant factors in financial capability measures. Principal components analysis gave basis of removal of the redundant items in the variable. The retained components were named by looking at the content that loaded more on the same element and identified common themes. The data was reduced and two factors, financial management skills and financial discipline.

The relationship between four financial capability variables and the investment among the youth were then evaluated by use of binary logistic regression.

3.9.3 Social Capital

In evaluating social capital, four sub-variables were used which included empowerment and political action, groups and networks, social cohesion and inclusion, and collective action and cooperation. Empowerment and political action was evaluated on youth involvement in leadership in the community and other associations. The questions required the youth to indicate whether they are involved in any leadership role. Those

who were involved were coded 1, else 0. The study noted 38.3% were involved in leadership roles. Secondly, the study was interested in youth membership in groups. The youth were required to indicate whether they are members of any group. Those who were in groups were coded 1, else 0.

For social cohesion and inclusion, and collective action and cooperation the youth were required to rate themselves against 9 questions. These questions were based on the questions in the questionnaire adopted for the study. The questions were in likert scale of 5, where 5 indicated strong social cohesion and inclusion, and collective action and cooperation while 1 indicated weak collective action and cooperation. Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy, confirmed with Bartlett's test of Sphericity was used to ensure that the data was adequate for data reduction.

Principal component analysis and varimax rotated analysis was conducted to determine the significant factors in social capital. The retained components were named by looking at the content that loaded more on the same element and identified common themes. The data was reduced by use of principal component analysis where two factors were extracted, cooperation and social cohesion. The two factors extracted accounted for 68.36 percent of all the factors in the study. The relationship between the social capital sub-variables and investment were tested by use of binary logistic regression.

3.9.4 ICT Capability

The study wanted to test the ICT capability and the relationship with investment. ICT capability was tested by use of 15 likert scale questions. These questions were based on

the questions in the questionnaire adopted for the study. The questions ranged between five, strongly agree and one, strongly disagree. The study required the youth to rate themselves against the 15 questions. Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy, confirmed with Bartlett's test of Sphericity was used to ensure that the data was adequate for data reduction. Principal component analysis and varimax rotated analysis was conducted to determine the significant factors in ICT capability measures. Principal components analysis gave basis of removal of the redundant items in the variable. The retained components were named by looking at the content that loaded more on the same elements and identified common themes. The data was then reduced by use of principal component analysis where 3 factors were extracted; ICT knowledge, ICT usage and Access to Financial Services through ICT. The factors extracted were used to test the third hypothesis.

3.9.5 Business Environment

The fourth hypothesis was in the relationship between business environment and investment. The data collected required the youth to rate business environment in their counties. These questions were based on the questions in the questionnaire adopted for the study. The questions were ranging between five, strongly agree and one, strongly disagree. The study required the youth to rate themselves against the 17 questions. Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy, confirmed with Bartlett's test of Sphericity was used to ensure that the data was adequate for data reduction.

Principal component analysis and varimax rotated analysis was conducted to determine the significant factors in financial capability measures. Principal components analysis gave basis of removal of the redundant items in the variable. The retained components were named by looking at the content that loaded more on the same element and identified common themes. The data was then reduced by use of principal component analysis where 4 factors were extracted; Business Registration and startup requirements, Access to government services, Taxation Process, and Security and governance. Binary logistic regression was used to test the fourth hypotheses.

3.9.6 Demographic Characteristics

The study wanted to evaluate whether demographic characteristics had any moderating effects on investment among the youth. Demographic characteristics considered in the study were gender, age, marital status, place of residence and level of income. For gender, male was coded as 1, female 0. Age was put into four categories which were category 1: 18 – 20 years, category 2: 21- 25 years, category 3: 26 -30 years and category 4: 31 – 35 years. Marital status was put into two categories, married and not married.

Place of residence was either urban or rural where rural was coded 0 while urban was coded 1. Highest level of education was put in to four categories; Lack of Formal Education; Primary Education; Secondary Education; and Post Secondary. They were coded 1 to 4 respectively. For hypothesis five, demographic factors are added in model testing hypothesis 1 to 4 in order to find out whether it will have any moderating effect relationships.

3.10 Pilot Test

A pilot study was done to check validity and reliability of questionnaires in collecting data required for purposes of this study. Dawson (2002) argued that pilot testing helps researchers to find out whether the questionnaire will obtain the required results. Cooper and Schilder (2011) indicated that, the rule of the thumb suggests that 5% to 10% of the sample for the study should be adequate for the pilot test. Reliability was tested by use of thirty nine questionnaires which were piloted with randomly selected youth who were not to be included in the final study sample.

This study used both construct validity and content validity. Content validity is often established using content experts to make judgments on the process followed (Mertens, 2010). A judgmental procedure of assessing whether a tool is likely to provide content valid data is to request professionals or experts in the particular field to review it and give suggestions on content improvement within the tool (Mugenda, 2008). The supervisors and experts who have done studies on finance reviewed the questionnaire for the study. The questionnaire was adjusted according to the experts advise before subjecting it to the final data collection exercise.

Mugenda (2008) viewed construct validity as the extent to which a particular measure relates to other measures in a way that is consistent with theoretically derived hypothesis concerning the concept. To assess construct validity, the questionnaire of the study was separated into several areas to make sure that each section reviewed information for specific objectives, and also ensure that same was closely linked to conceptual

framework for this study. Factor analysis was then used to validate hypothetical constructs so as cluster items or characteristics that seem to correlate highly with each other in defining a particular construct (Bhattacharyya, 2011; Brett, Ted & Andrys, 2010).

Reliability is the consistency of the questionnaire and is concerned with the robustness of the questionnaire (Kalof, Dan & Dietz, 2008). To ensure reliability, two approaches were used in assessing the reliability (Kalof et al., 2008). The first approach was to test re-test. With this approach, the approximations of reliability were gotten by showing a relationship of data collected by use of the same questionnaire collected still under similar circumstances. This questionnaire was administered on the same respondents twice. After one week, the same questionnaire was administered again on the same respondents. The two scores obtained were calculated where the score were highly correlated indicating that the questionnaire was reliable. The test re-test was done within an interval of one week because if the duration was longer, the respondents may have given different answers. After retest, the correlation was 0.72 and thus the questionnaire considered appropriate for data collection using this measure.

The second approach was Cronbach's alpha, which was used to evaluate the internal consistency for the questionnaire. This assessed the level to which the elements that make up the scale are all evaluating the same underlying characteristic. The statistic indicates on average the correlation among all of the items that make up the scale. The reliability was tested by getting the correlation between the responses to every queries within the questionnaire with other queries in the questionnaire.

Zikmund et al., (2010) view that Cronbach's alpha 0.8 and above are considered to have very good reliability and those between 0.7 and 0.8 good; while those between 0.6 and 0.7 indicate fair and satisfactory reliability. For this study, Cronbach's alpha coefficient which was 0.7 and above was considered appropriate. Test results of the study are presented in Section 4.4, Table 4.1 under the findings of the study.

3.11 Ethical Issues

In commerce and management study, there are two main philosophical standpoints on ethics, these are deontology and teleology (Cooper & Schindler, 2011; Saunders et al., 2007). The deontological view holds that the end result served by a study in no way can validate the use of study that is unethical. Teleology view holds that that the end result served by a study justifies the study process. In that case, the advantages of a study finding would be evaluated against the costs of carrying out a study unethically (Cooper & Schindler, 2011; Saunders et al., 2007). This research maintained high level of ethics. The research questionnaires did not have any deceiving questions to the respondents. All the data collected during the research was solely used for this study and confidentiality has been maintained throughout the study. The researcher sought permission from the relevant authorities for administration of the questionnaires.

3.12 Data Analysis and Presentation

Data analysis was a mix tools of because the data collected was qualitative and quantitative. For the qualitative data, a likert-type scale with range from one to five was used where one was strongly disagree while five was strongly agree. The data was edited

by checking through the completed questionnaires. Editing helped in detecting errors, omissions, indicated where correction was required, and this certified that maximum data quality standards were achieved. It also ensured that the data was accurate, in line with other facts gathered, entered uniformly and well arranged. After editing the data, variables were defined and labeled and numbers assigned to each of the possible responses (Pallant, 2005). This data was analyzed using software.

In the analysis, the study first started by profiling the respondent as per the demographic characteristics by providing descriptive statistics for each. The results were presented in form of tables and charts. Inferential statistics and quantitative data was used as it was in the analysis. However, for qualitative data in likert scale, it required reduction to fewer constructs before it could be used to test the hypotheses. To start with, the data was tested for multicollinearity, by use of R-Matrix, where the determinant should be greater than 0.00001(Field, 2000).

Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy of was used to find out whether data collected in likert scale was appropriate for factor analysis. KMO statistic is a measure of sampling adequacy both overall and for each variable (Hosmer & Lemeshow, 2000). High values of between 0.5 to 1.0 indicated that factor analysis was appropriate (Muganda, 2008). To evaluate the hypothesis that the variables are not correlated in the population, Bartlett's test of sphericity was used. Significant Bartlett's Test of Sphericity means that factor analysis is appropriate as a method of data reduction.

Principal component analysis with varimax rotated analysis was used as data reduction technique. Principal components was run in SPSS and factor scores were are extracted and saved as variables in SPSS in a new column. This study only considered interpreting components with factor loadings of absolute value greater than 0.4 (Field, 2005,2012; Stephens, 1986; Yaya, 2012). Components with less loadings were dropped from the analysis and this gave basis of removal of the redundant items in the variable. The retained components were named by looking at the contents that loaded more on the same factor and identified the common themes (Field, 2005). The factors were named by identifying common themes loaded to a factor as they represented a construct. These new variables were used for further analysis in testing the hypothesis.

Binary Logistic Regression analysis was done for each of the hypothesis indicating whether the individual hypothesis is statistically supported or not (Cooper & Schindler, 2011). Binary Logistic regression is used in situations where response variable is a binary response variable. A number of researchers have carried research where the response variable was binary and they used binary logistic regression (Abeka, 2011; Barako & Gatere, 2008; Bush, 2009; Ellis et al, 2010; Shem, Misati & Njoroge, 2012; Titus, Mburu, Korir & Muathe, 2013; Vizcain, 2005; Wanjau, Gakure & Waithaka, 2003). Cox and Snell's R-Square was used to determine the variation of dependent variable explained by logistic model (O'Connell, 2005). To test the strength of the association on the predictor variable and the dependent variable, Nagelkerke's R-Square was used (Damodar, 2009). The overall goodness of fit of the model was tested using Hosmer and Lemeshow (H-L) test.

The response variable was expected that either the youth have invested, coded as 1, else 0. To test whether there is any statistical significance between independent variables and the dependent variable, logit model was used as indicated in Equation 3.1 (Pampel, 2000).

Logit model;

$$\text{Logit}[p] = \ln \left[\frac{p}{1-p} \right] = \beta_0 + \beta_1 X_1 + \dots + \beta_n X_n \quad \text{Equation 3-1}$$

p = probability that a youth will invest

β_0 = Constant

$X_1 - X_n$ = are the explanatory variables

$\beta_1 - \beta_n$ are the coefficients from the log of the odds ratio function

To compute the probability of the overall significance statistics, equation 3.2 was used (Pampel, 2000).

$$p = \frac{e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n}}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n}}, n = 5 \quad \text{Equation 3-2}$$

Where:

p = the probability that youth will invest,

e = the base of natural logarithms (approximately 2.72),

The results of the analysis were categorized along each research objective. The results were presented in tables, figures, charts and graphs. The study analyzed the results and compared the results with studies in literature review. Inferences were drawn from tested hypothesis and conclusions and recommendations were made based on the results of the descriptive and inferential statistics on which the data was subjected to.

To establish whether demographic characteristics have moderating effect between investment and the independent variables three models were to be estimated. To start with, a base model was estimated to determine the relationship between the responsive variable and the predictor variables. This is indicated in equation 3.3 (Pampel, 2000).

$$p = \frac{e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4}}{1 + e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4}} \quad \text{Equation 3-3}$$

Where

FC = Financial Capability

SC = Social Capital

ICTC = ICT Capability

BE = Business Environment

Secondly, moderation is captured by estimating multiple regressions models as specified where moderating variable is included as an explanatory variable. This is indicated in equation 3.4 (Pampel, 2000).

$$p = \frac{e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4 + \beta_5 DC_5}}{1 + e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4 + \beta_5 DC_5}} \quad \text{Equation 3-4}$$

Where

FC = Financial Capability

SC = Social Capital

ICTC = ICT Capability

BE = Business Environment

DC = Demographic Characteristics

Finally, moderation is estimated to give the effect and direction of the moderator on the predictor variables and its total effect on the responsive variable. This is done by getting a product of explanatory variable and moderating variable. This is indicated in equation 3.5 (Pampel, 2000).

$$p = \frac{e^{\beta_0 + \beta_1 FC_1 * DC + \beta_2 SC_2 * DC + \beta_3 ICTC_3 * DC + \beta_4 BE_4 * DC}}{1 + e^{\beta_0 + \beta_1 FC_1 * DC + \beta_2 SC_2 * DC + \beta_3 ICTC_3 * DC + \beta_4 BE_4 * DC}} \quad \text{Equation 3-5}$$

Where

FC*DC = Financial Capability * Demographic Characteristics

SC*DC = Social Capital * Demographic Characteristics

ICTC * DC= ICT Capability * Demographic Characteristics

BE*DC = Business Environment * Demographic Characteristics

CHAPTER FOUR

4.0 DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This study investigated the determinants of investment in financially included youth in Kenya. Specifically, the study evaluated whether financial capability, social capital, technology adoption and business environment determines investment on financially included youth in Kenya. The study also evaluated whether demographic characteristics of the respondents had any moderating effect on investment among financially included youth in Kenya. This chapter presents response rate, summary of sample characteristics and descriptive characteristics. This chapter finally presents tests of the five hypotheses as per each study objective.

4.2 Reliability Tests Results

This study contained multiple types of questions which used likert scale type questions. The likert type scale questions from the four objectives were evaluated for reliability before they could be used in the analysis. Objective five and the dependent variable questions did not use likert type scale and thus they were not included in reliability tests. Cronbach's alpha coefficient was calculated for all the questions in likert scale for the pilot study and final study and the results are as indicated in Table 4.1.

Table 4.1: Reliability Test Results

	Number of Measures	Cronbach's Alpha Coefficient		Type of Variable
		Pilot Results	Final Results	
Financial Capability	8	0.788	0.845	Independent
Social Capital	9	0.701	0.803	Independent
ICT Capability	15	0.752	0.833	Independent
Business Environment	17	0.804	0.918	Independent

As indicated in Table 4.1, Reliability test for final study Cronbach's alpha coefficient were all above 0.7 for all the variables. This indicates that the questions that were in likert scale were testing what they were expected to test. The results from the questions were used for further analysis in the study.

4.3 Response Rate

The data for the study was collected between December 2015 and February 2016 using a questionnaire. The researcher and research assistants who interviewed the respondents and filled the questionnaires did the data collection. The research assistants were taken through an induction session to fully understand the contents of the questionnaire. This enhanced response rate, accuracy of the data and time taken to complete data collection. The minimum number of questionnaires required was three hundred and seventy (370), which was determined by use of Bartlett, Kotrlik, and Higgins (2001) Table. However to increase the response rate, first, this number was increased by 25 percent and four hundred and sixty three (463) questionnaires were distributed. Secondly, the researcher used research assistants that were

thoroughly inducted on the objective of the study and how to maintain a good rapport with the respondents. This increased the response rate and the accuracy of the questionnaire where four hundred and twenty (420) questionnaires were accurately filled which represented 91.8% response rate as indicated in Table 4.2.

Table 4.2: Response Rate per Constituency

Constituency	Minimum Respondents Required	Questionnaires Distributed	Accurately Completed Questionnaires	% Response Rate
Kirinyaga County				
Mwea	58	72	62	86.1
Gichugu	38	48	39	81.3
Ndia	30	38	36	94.7
Kirinyaga Central	34	42	42	100.0
Nyeri County				
Tetu	24	30	29	96.7
Kieni	53	66	54	81.8
Mathira	45	57	54	94.7
Othaya	27	34	31	91.2
Mukurweni	25	31	29	93.5
Nyeri Town	36	45	44	97.8
Totals	370	463	420	
Average				91.8

Saunders, Lewis and Thornhill (2007) suggest a 30 to 40% response is considered adequate, Sekaran (2003) documents 30%, and Hager, Wilson, Pollack and Rooney (2003) recommend 50%. Based on these assertions, the response rate for this study was considered adequate.

4.4 Characteristics of the Respondents

To understand the respondents and representativeness of the sample, several information on the respondents was sought. The study aimed to bringing forth responses that showed gender, age, marital status, dwelling place and level of education of the youth. The study further evaluated the current occupation and the level of income of the respondents. The preliminary investigation was important for the study as it was to help in indicating the representation of the sample. The findings on the characteristic of the sample are presented in section 4.4.1 to 4.4.7.

4.4.1 Gender of the Respondents

The study sought to find out the distribution of gender among the respondents. Gender may have influence the usage of financial services and the study had to categorize the respondents according to their gender. Majority of the respondents were men at 52.1% while female were 47.9% as indicated in Figure 4.1.

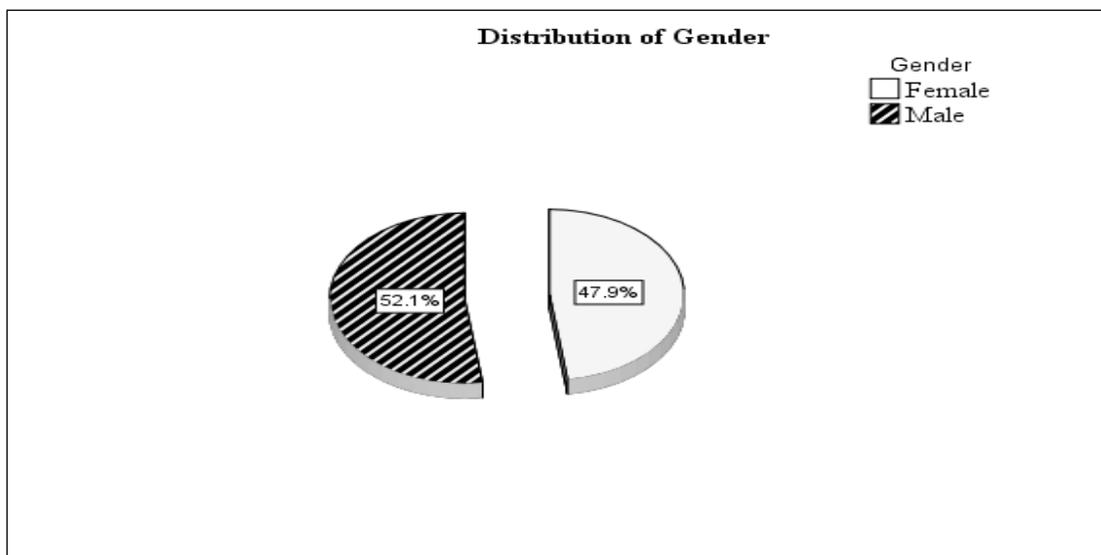


Figure 4.1: Distribution of Gender of Respondents

From Figure 4.1, both genders were fairly distributed in the study. This reflects the national statistics where men and women are almost equal in numbers. Though women were slightly fewer than men from the questionnaires completed accurately, women were more active in focus group discussions than men were. The study noted that men were willing to give information on one on one interview while women were willing to share general information in an open forum. This indicated the effect of demographic in handling finances.

4.4.2 Age Groups of Respondents

This study was targeting the youth aged between 18 years and 35 years. It was however important to assess the different ages of the youth who participated in the study. Age was categorized in to four age groups of 18 to 20 years, 21 to 25 years, 26 to 30 years and 31 to 35 years. The distribution of respondents by age group is presented in Figure 4.2. Ages 18-20 years had the least respondents which was 13 percent. Age groups 21 to 25 years was 32 percent, age group 26 to 30 years was 25 percent while age group 31 to 35 years was 30 percent.

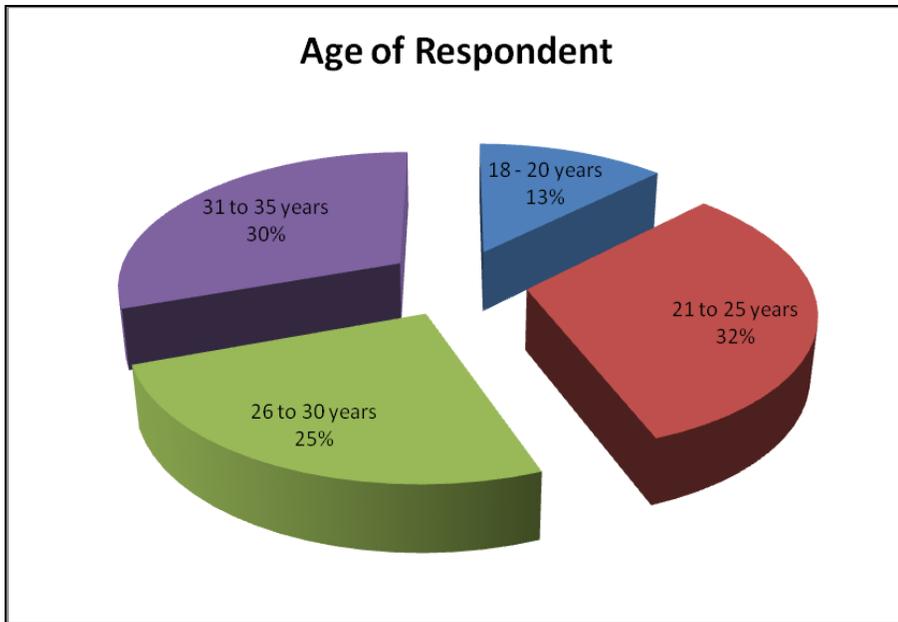


Figure 4.2: Distribution of the Respondents' Age

The results show a fair distribution of the respondents across the age groups. The category with the least respondents was 18-20 years, which was 13%. At the age of 18-20 years, majority of the youth are in school and may be the cause of low response rate.

4.4.3 Marital Status of Respondents

The study sought to find out the marital status of the respondents as this could affect the financial behavior of a person. The study required the respondent to indicate whether they are married or not married. Majority of the respondents, 55.4% were not married while 44.6 % were married. The results are as shown in Figure 4.3.

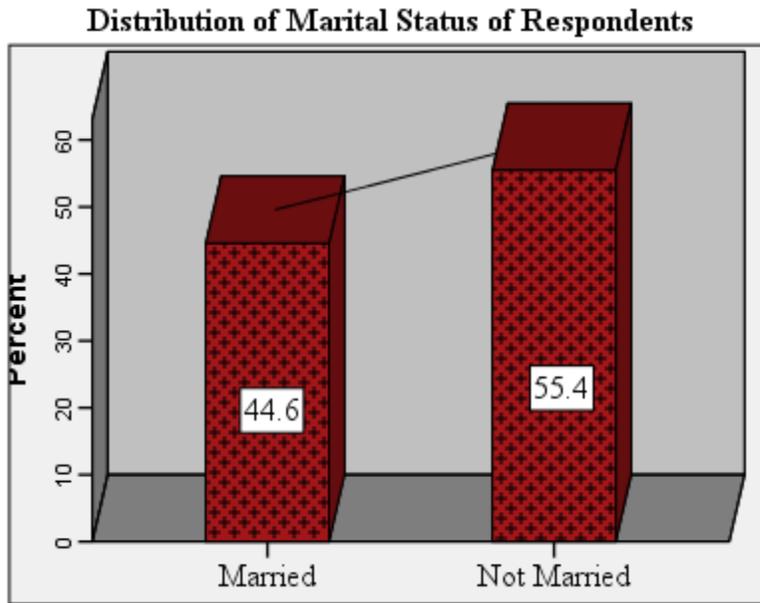


Figure 4.3: Distribution of Marital Status

These results were not unusual as majority of youth are usually not married. During focused group discussion, marital status was found to have a bearing on investment. Married young people were found to more interested in the long-term investment compared to their counterparts who were not married. This could be to the fact that when one is married, he has more responsibilities of providing for the family.

4.4.4 Place of Residence of Respondents

The financial behaviors of citizens could be influenced by the geographic location. The availability of financial services is different between rural areas and urban areas. The respondents were thus categorized on whether they live in the rural area or urban area. Majority of the respondents, 74% were rural dwellers while 26% were urban dwellers as indicated in Figure 4.4.

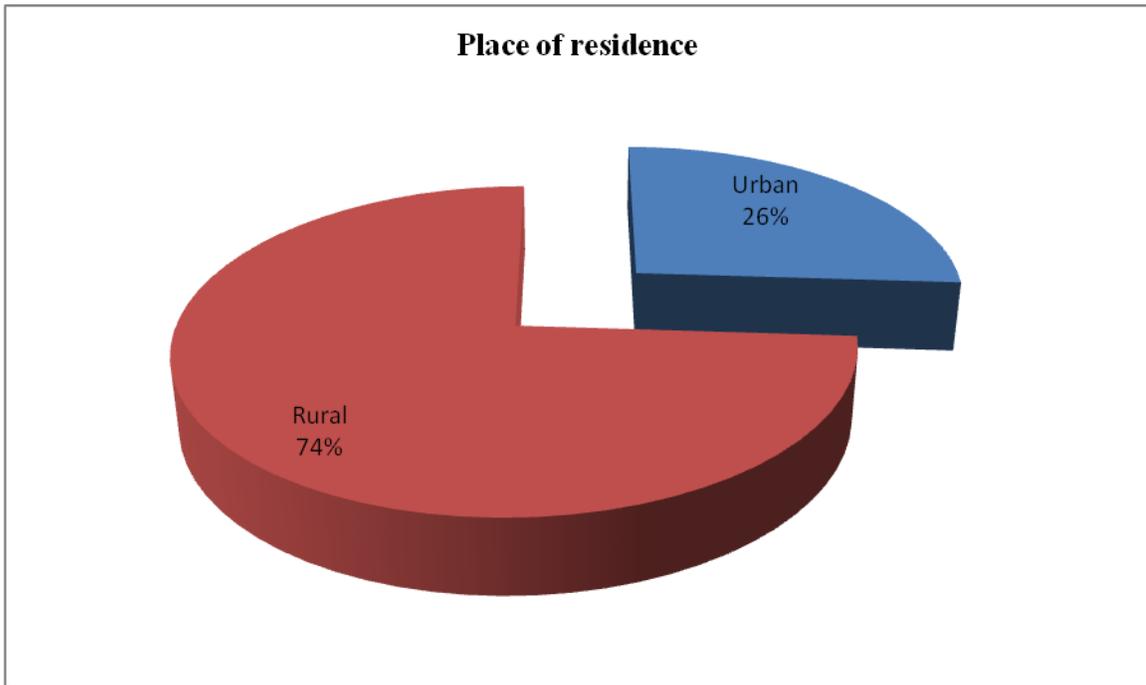


Figure 4.4: Residence of Respondents

These results indicated that better proportion of the respondents was living in the rural area. The high response rate of rural dwellers was by the fact majority of the Kenyan citizens are rural dwellers. Similarly, the bigger parts of Nyeri and Kirinyaga Counties are rural areas.

4.4.5 Level of Education of the Respondents

Education level of a person may have a bearing on decision-making. This study thus sought to find out the level of education of the respondents. The respondents were required to indicate their level of education between no formal education, primary education, secondary education and post secondary education. Education level analysis

indicated that majority of the respondents was post secondary at 37.7% while those with no education was 7.6%. The level of education of respondents is as indicated in Table 4.3

Table 4.3: Level of Education

Level		Percent (%)	Cumulative Percent (%)
	No Formal Education	7.6	7.6
	Primary Education	22.4	30
	Secondary Education	32.1	62.3
	Post Secondary	37.7	100
Valid	Total	99.8	
Missing	Non-responsive	0.2	
Total		100	

The results indicate that only 7.6 percent who did not have formal education. A big number of the youth had pursued education beyond secondary school. The total of youth whose education was beyond secondary school was 69.8 percent. The level of education was found to have a bearing during focus group discussion as those youth who had higher levels of education were making more informed contribution in relation to financial matters and investment. Actually, those with low level of education could not express themselves clearly in English or Swahili. In the rural areas, the discussions had actually to be conducted in Swahili and native language to accommodate all the members in the group. When level of education is low, it may affect the youth while looking for financial services.

4.4.6 Personal Economic Status

Table 4.4 shows the distribution of respondents' occupation. The respondents were required to indicate their main occupation between being self-employed, being in formal employment, casual laborer, working in the family farm/business and not working. The results indicated that majority of the youth, 29.3 percent were in self-employment. The youth who were not working were 24.5 percent; this is a big percentage considering that, this is the active stage of a person. Only 13.1 percent who indicated to be formally employed.

Table 4.4: Current Occupation

Occupation		Percent (%)	Valid Percent	Cumulative Percent
Valid	Self Employed	29.3	29.5	29.5
	Employed	13.1	13.2	42.7
	Casual Laborer	25.7	25.9	68.6
	Working in the family farm/business	6.7	6.7	75.3
	Not working	24.5	24.7	100.0
	Total	99.3	100.0	
Missing	Non-responsive	0.7		
Total		100.0		

These results indicates the state of the youth as almost a quarter of the population, 24.5 percent is not working. The big percentage of the youth who are not in productive employment results to idle labour. During focus group discussion, the contribution by the

youth who were not working was found to be biased towards their frustration rather than on financial inclusion and investment.

4.4.7 Monthly Income of Respondents

The study sought to find out the level of income of the respondents. This required the youth to indicate the amount of money he or she earns from below Kshs 5,000 to above Kshs 100,000. Those who were not earning were required to indicate as so. The results indicates that the minimum earnings was nil with a maximum of Kshs 75,000. Majority of the youth were earning 7,500 per month. The various levels of earning of the youth was again shown in Figure 4.5 which captures all the levels of earning. Figure 4.5 shows that majority of the youths 30.1 percent were earning less than Kshs 5,000.

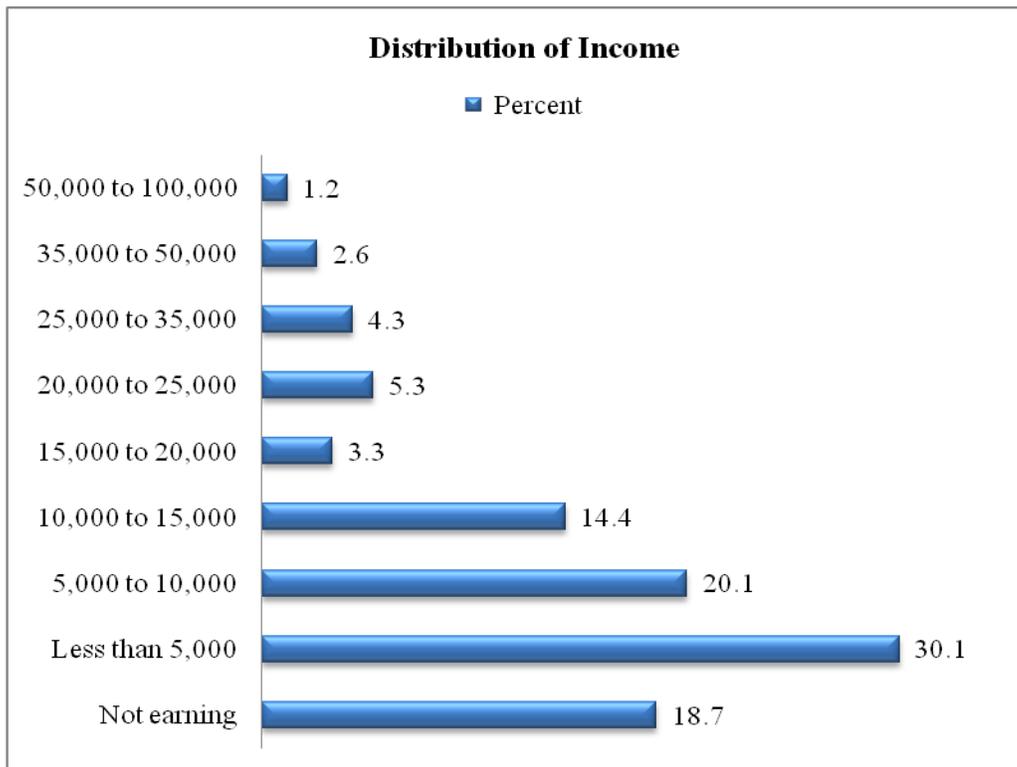


Figure 4.5: Distribution of the Level of Income of Respondents

The results indicate a very poor state of the youth with the median income being Kshs 7,500 which translates to about Kshs 250 per day. This indicates that the youths who can contribute enormously to the economy are underutilized. This study recognized the role played by farming as source of food for the households which would ideally be bought or rent that you ideally be paid for. The two were not considered as part of income in this study so as to give all the respondents same platform on assessment of income. Lack of income and low levels of income among the youth was noted to be hurting the youth during the focused group discussion. The study noted a number of youth who did not have any hopes of ever investing with their current level of income.

4.5 Financial Inclusion and Investment of Youth

The general objective of the study was to find out the determinants of investment on financially included youth in Kenya. To achieve this objective, the level of financial inclusion of respondents was first evaluated. Three facets of financial inclusion were evaluated which were; access to financial services, access to credit facilities from formal financial institutions and purchase of insurance. The youth were required to indicate whether they had a savings bank account, they had mobile money account, whether they have ever borrowed from a financial institution and whether they have ever purchased insurance. The level of financial inclusion in terms of access to financial services through bank accounts was 77.8 percent while those accessed through mobile phones was 81.0 percent. On overall, 92 percent had access to formal financial services through commercial bank, cooperative society, microfinance or mobile. Borrowing from financial

institutions was at 29 percent while insurance was at 17 percent. The results are as shown in Table 4.5.

Table 4.5: Financial Inclusion Levels among the Respondents

Financial Product	Percent
Have a bank account	77.8
Have a mobile savings Account	81.0
Have borrowed from financial institution	29.0
Have bought Insurance	17.0

The 81 percent ownership of mobile money account and 77.8 percent of bank account as shown in Table 4.5 and 92 percent on overall clearly indicates high levels of financial inclusion among the youth as per the two finance services access strands. It was however unfortunate that borrowing and insurance uptake among the youth was on the lower side at 29 percent and 17 percent respectively. Thus, though majority of the youth could access financial services, they are not taking full advantage of the same.

The study sought to find the reason for low uptake of loans and insurance during the focused group discussion. It was noted that the youth feared to take up loans, as they believed loan would bring more problems to them. One youth indicated that, “going for a loan is like taking oneself to prison”. Other youth indicated that they can only take a loan if they were employed; they also believed that lenders don’t disclose all the information while negotiating for loans. This negative attitude towards loans could be the cause of low loan uptake.

On insurance uptake, majority who had bought insurance were those who were in self-employment as they had bought insurance for their businesses. From the focused group discussion, this was one product that youth do not clearly understand how it operates. Interestingly, some youths indicated that buying insurance is wishing oneself bad luck. Lack of understanding on how insurance operates and the misconception could be reasons of low uptake.

The study then evaluated investment among the youth with the aim of finding out whether the levels of investment are in tandem with financial inclusion. The youth were requested to indicate whether they had undertaken any type of investment among operating a business, farming project, investing in financial market in form of stocks, treasury bills or buying property with expectation of income from the property. The questions allowed the youth to give all the investments he/she is undertaking if more than one type of investment. The youth who had invested in at least one type of investment were 47.1 percent while 52.9 percent had not taken any form of investment. These results clearly show that, the youth who had invested had were less than 50 percent.

Even though 92 percent of the youth was financially included, only less than half of the population has taken some form of investment. Ideally, everybody should try to undertake some form of investment. Figure 4.6 indicates the form of investment undertaken by the 47.1 percent who had invested. From all the investments undertaken by the youth 46 percent was in farming. This was followed by business at 34% while the least investment was buying property at 6 percent

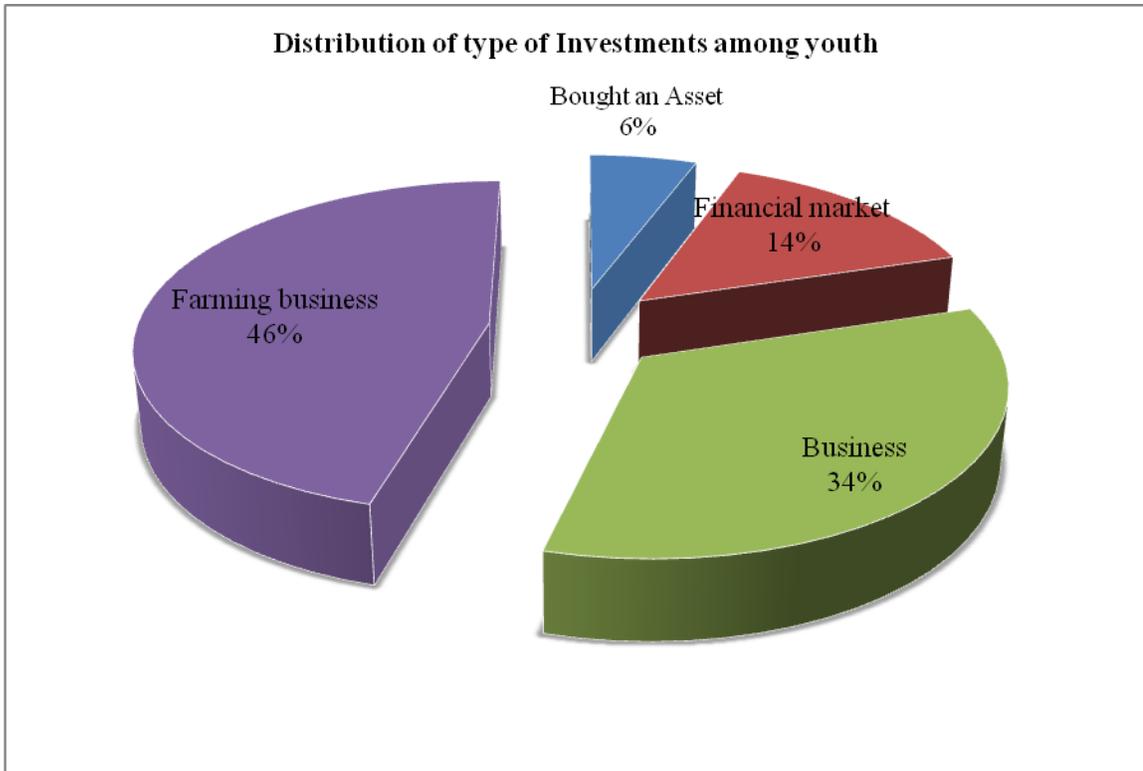


Figure 4.6: Investment by Youth

The high percentage of agriculture was confirmed during focus group discussions, which was popular among the youth. The new technologies in farming were found to attract the youth to farming and thus the high percentage of farming. The popular farming technologies that were embraced by youth were green house farming, hydroponic farming and improved indigenous chicken.

The study further assessed the financing of the businesses by the youth. This was done by requesting the youth to indicate the main source of financing of their investment. The results indicated that majority of the youth financed their investments from own savings

at 26.9 percent of the total population, followed by loans at 16.7 percent of the total population. The results are as shown in Table 4.6.

Table 4.6: Financing of Investment

Mode of financing		Percent
Valid	Own Savings	26.9
	Donations from Parents /Relatives	2.0
	Donation from friends	0.3
	Loan	16.7
	Sale of an asset	1.0
	Total	46.9
Missing	Have not invested	53.1
Total		100.0

The results show poor utilization of financial services. Though there is a big percentage of the youth who have access to financial services, very few were taking full advantage of the financial services. The number of youths who access financial services is as high as 92 percent. Those who had borrowed are 29 percent. However, not all the 29 percent who borrowed for financing investment as only 16.7 percent indicated loan as source of finance for investment. The other 12.3 percent borrowed for consumption purposes.

With the increased financial inclusion, the expectation is that the youth would not only open bank accounts, but also borrow from the financial institutions and undertake investments. However, this is not the case. The question as to why youth are not taking full advantage of financial inclusion is again coming out in this study. The full effect of financial inclusion, which is investment, has not yet been achieved among the youth.

It was thus important to find out what determines whether a person is able to take advantage of financial inclusion and undertake investments. This study thus sought to find out the relationship between investment as dependent variable and financial capability, social capital, ICT capability and business environment as independent variable among financially included youth. Demographic characteristics were also analyzed to find out whether they had any moderating effect on investment among financially included youth. .

4.6 Effect of Financial Capability on Investments on Financially Included Youth

The first objective of the study was to establish whether financial capability determines investment on financially included youth in Kenya. Financial capability was assessed through individual's financial knowledge, skills, attitudes, and behaviors towards finance and financial products. This study adopted parameters developed by International Network on Financial Education under OECD. Financial capability was measured in two methods, self-awareness and objective measures of test scores.

The first approach relied on self-assessment where the respondents were requested to evaluate their financial capability skills as well as to provide information about their attitudes toward financial decisions, knowledge and information. The second approach relied on the objective test, which assessed the respondents' knowledge of financial terms, understanding of various financial concepts and ability to apply numerical skills in particular situations related to finance. The financial capability measures in the study were Financial Product Awareness, Financial Measures, Financial Management Skills and Financial Discipline.

4.6.1 Financial Products Awareness

The first assessment of financial capability was through awareness of financial products. The youth were asked to indicate whether they were aware of the various financial products. Awareness of a product was scored 1, else, 0. Table 4.7 shows that majority of the respondents were aware of the various products. Mobile phone services were the most popular among the youth at 98.8 percent, followed by youth fund at 98.6 percent. The product that scored least was mortgage at 80.0 percent while further analysis indicated that, only 70.5% were aware of all the financial products. The average score was 0.9317 out of a maximum of 1 with the overall standard deviation of 0.0527.

Table 4.7: Financial Products Awareness

	Percent	Mean	Std. Deviation
Mobile phone savings account like Mswari	98.8	.9905	.09736
Youth fund	98.6	.9881	.10872
A savings bank account	97.9	.9809	.13702
Uwezo fund	96.9	.9714	.16699
Mobile phone loans	94.5	.9475	.22331
Insurance	94.5	.9475	.22331
Women fund	92.4	.9260	.26206
Micro finance	91.0	.9117	.28408
A pension fund	91.0	.9117	.28408
Mobile phone payment account	90.2	.9045	.29421
Agency banking	89.0	.8998	.30068
A mortgage	80.0	.8019	.39904
Average		.9317	.0527

The results in Table 4.7 indicate that awareness of the various financial products was high among the youth. This high awareness corresponds well with the high rate of financial inclusion noted in section 4.5 of this report. The 0.0527 standard deviation infers that 68% of the responses were spread within one standard deviation of the overall mean. The standard deviation for each response line is also shown in Table 4.7. The standard deviation statistical rule of 68%, 95% and 99.7% applies in all the interpretations in the rest of the document.

4.6.2 Financial Measures Test Scores

The results in Table 4.8 gives the result of the youth on various financial measures test scores. The youth were required to select an answer on multiple-choice questions that measured their understanding of simple financial arithmetic, interest computation, risk diversification and inflation. Simple arithmetic scored highly at 92.33 percent. 81.53 percent got the interest rate question correctly while 70.26 percent got the risk diversification question correctly. The question that the respondents performed poorly was on inflation where only 32.09% got the question correctly.

Table 4.8: Financial Concepts Test Scores

	Mean Statistic	Std. Deviation Statistic
Imagine that five friends are given a gift of Kshs 1,000. If the friends have to share the money equally how much does each one get?	0.9233	0.2665
You lend Kshs 1,000 to a friend one evening and he gives you Kshs 1,000 back the next day. How much interest has he paid on this loan?	0.8153	0.38848
Do you think that the following statement is true or false? “Having a business selling same type of goods usually provides a safer return than a business selling different types of goods.”	0.7026	0.45765
Now imagine that the friends have to wait for one year to get their share of the Kshs 1,000 and inflation stays at 10% percent. In one year’s time will they be able to buy	0.3309	0.47112
Average	0.693	0.2577

On evaluating understanding all the financial measures, the study noted that only 24.7% got the four questions correct as indicated in Table 4.9.

Table 4.9: Overall Performance in Financial Measure Test Scores

Number of Correct Responses	Percent	Valid Percent
Got four correct	24.5	24.7
Got three correct	41.2	41.5
Got two correct	21.9	22.1
Got one correct	9.8	9.8
Got none correct	1.9	1.9
Total	99.3	100.0
Non-responsive	.7	
Total	100.0	

These results indicated low level of financial capability among the youth while using this strand. During focus group discussion, the youth were found to be ignorant in risk diversification and inflation which again scored poorly in the questionnaire. The effects of inflation were tested during focus group discussion where merry-go-round concept was used. Youth indicated that, they prefer to be the last in merry-go-round so that they do not “feel the pain” of contributing. This was in disregard to time value of money where the earlier one receives money, the higher the value it has.

4.6.3 Financial Behaviour of Respondents

The study further evaluated personal financial behavior of the respondent. This was a self-evaluation of the financial behavior of the respondents where likert scale was used. Respondents were required to indicate how strongly they agreed with financial statements that related to their financial behavior. The scale was 5 to 1 where 5 was “Strongly

Agree” where on the other end 1 was “Strongly Disagree”. Before the analysis, the negatively worded questions were reversed.

Table 4.10 shows the result of the analysis of financial behavior. It was indicated that 33.3 percent agreed that before they buy something, they first consider whether they can afford it. This was followed by those who indicated that they are prepared to risk some of their own money when saving for making an investment at 20.7 percent. 17.6 percent indicated that they set long-term financial goals and strive to achieve them. The question that least people agreeing with was a statement that indicated that one finds it more satisfying to spend money than to save it for the long term.

On the scores, the parameter that scored highest was where respondents indicated that they consider whether they can afford something before they buy which scored 3.09. This was followed by paying bill on time that was at 2.48 of the total possible scores of 5.0. The study noted that most of the people do not keep close watch of their financial affairs as this scored least, 2.23 out of the possible 5 scores. The mean score for the parameters was a scores of 2.47 which is less than half and positively skewed.

Table 4.10: Financial Behaviour

	Agree	N	Disagree	Mean Statistic	Std. Deviation Statistic
Before I buy something I carefully consider whether I can afford it	35.7	30.7	33.3	3.09	1.26
I pay my bills on time	51.4	35.7	12.6	2.48	1.12
I am prepared to risk some of my own money when saving or making an investment	66.2	12.9	20.7	2.41	1.16
I keep a close personal watch on my financial affairs	70.2	13.6	16	2.23	1.07
I set long term financial goals and strive to achieve them	63.1	19	17.6	2.46	1.01
I tend to live for today and let tomorrow take care of itself	61.9	22.1	15.7	2.38	1.08
I find it more satisfying to spend money than to save it for the long term	51.2	39.5	8.8	2.42	0.95
Money is there to be spent	63.5	22.6	13.6	2.33	1.05
Average				2.47	0.26

The results indicate the mean score to be less than 50 percent of the possible score as it was 2.47 of the possible 5.0. In addition, the average score is positively skewed indicating majority of the respondent rated themselves to have low level of financial capability. Standard deviation on 0.26 infers that 68% of the responses were spread over a standard deviation of one of the overall mean. This indicates low level of financial capability among the youth. From focus group discussion, those who were earning very

little, especially the casuals, had very little hope of ever accumulating any meaningful savings. Thus, their income was only to pay their bills and thus there was no initiative to save for investment.

4.6.4 Test for Sampling Adequacy on Financial Behavior

The study tested for sampling adequacy to ensure that the data collected was adequate for factor analysis. Sampling test was done by use of SPSS software. First, the study tested for multicollinearity. Determinant from correlation matrix was computed and it was 0.013 which was above the recommended of 0.00001 indicating there was no multicollinearity between the variables. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was computed as indicated in Table 4.11. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.820. Bartlett's Test of Sphericity was highly significant as $p < 0.0001$.

Table 4.11: KMO and Bartlett's Test Financial Behavior

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.821
Bartlett's Test of Sphericity	Approx. Chi-Square	1785.328
	Df	28
	Sig.	0.000

The Kaiser-Meyer-Olkin measure of 0.820, which was above 0.5, indicates that data collected was acceptable for factors to be extracted. Bartlett's Test of Sphericity, which was significant means that factor analysis, was appropriate for this study.

4.6.5 Factor Analysis for Financial Behavior

The data for financial management skills and financial discipline had eight parameters. These parameters were correlated with each other as they were measuring the same

construct. To improve construct reliability and to reduce a large number of items into factors, observed variables were reduced to a smaller number of factors. Principal component analysis, which is a variable reduction procedure, was used. Varimax rotation was done to maximize loadings and minimize low item loadings, therefore producing a more interpretable and simplified solution. Varimax rotation is orthogonal rotation of factor axes to maximize the variance of squared loadings of a factor on all the variable in a factor matrix.

Kaiser criteria of Eigen value greater than 1 rule in combination with Scree plot test were used to determine the data to retain. Any component that displayed an Eigen value greater than 1.00 was retained as it was accounting for a greater amount of variance than had been contributed by other variables. The data extracted is shown in Table 4.12.

Table 4.12: Component Analysis Results for Financial Behavior

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.961	49.516	49.516	3.050	38.123	38.123
2	1.701	21.264	70.780	2.613	32.657	70.780
3	.667	8.332	79.112			
4	.555	6.932	86.044			
5	.375	4.684	90.728			
6	.306	3.824	94.552			
7	.246	3.077	97.630			
8	.190	2.370	100.000			

Extraction Method: Principal Component Analysis.

Principal component analysis indicated that, two factors had Eigen value of more than one and they accounted for most of the variance in the observed variables at 70.78%. The two factors were retained.

Further, the Eigen value were graphed against the factor number in a scree plot. By use of scree plot, two factors above the break of the of the plot were retained. This is indicated in Figure 4.7

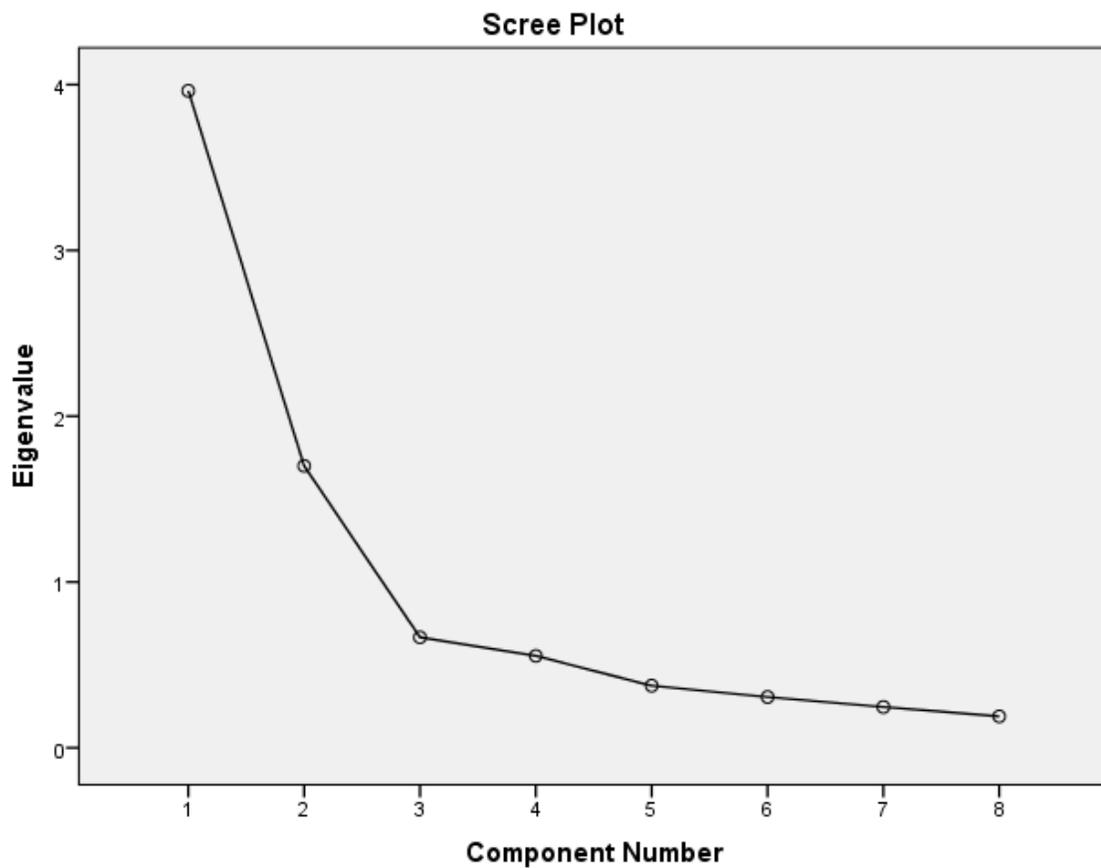


Figure 4.7: Scree Plot on Financial Behavior

From the Figure 4.7, the scree plot graph, two values were above the break and thus

retained as they accounted for higher percentage of all the factors. From the third factor on, the line is almost flat, meaning that each successive factor is accounting for smaller and smaller amounts of the total variance.

The results of the rotated matrix are shown in Table 4.13. The values in the table represent the distribution of the variance after varimax rotation. Varimax rotation tried to maximize the variance of each of the factors and thus the variance accounted was distributed over the extracted factors. Rotated Component Matrix table contains the rotated factor loadings, which represent both how the variables are weighted for each factor and the correlation between the variables and the factor. All the factor loading for the two components were more than 0.4 and thus they were all retained.

Table 4.13: Results for Financial Behavior Rotated Component Matrix

Financial Behavior Parameters	Component	
	1	2
Before I buy something I carefully consider whether I can afford it	.746	
I tend to live for today and let tomorrow take care of itself	.871	
I find it more satisfying to spend money than to save it for the long term	.846	
Money is there to be spent	.893	
I pay my bills on time		.748
I am prepared to risk some of my own money when saving or making an investment		.865
I keep a close personal watch on my financial affairs		.711
I set long term financial goals and strive to achieve them		.827

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 3 iterations.

By use of Principal Components analysis where Varimax rotation method with Kaiser Normalization were used two factors were extracted. The factors extracted are then interpreted and named. Interpreting rotated solution usually involved determining what each of the retained components measures. This involved identifying the variables that demonstrated high loadings for a given component, and determining what these variables had in common. A brief name was assigned to each retained component that describes its content. The naming ensured that the constructs reflected the theoretical and conceptual

intent of this study. In the Rotated Component Table, the factors in first components were related to financial discipline and thus they were named “Financial Discipline”. The factors in component two were more related to financial management skills and they were named “Financial Management Skills”.

The study then tested the degree of correlation and levels of significance of financial capability sub-variables. The sub-variables displayed a weak correlation among themselves. The results are indicated in Table 4.14.

Table 4.14: Multicollinearity Test Results on Financial Capability

		Financial Measures	Financial Awareness Score	Financial Discipline	Financial Management Skills
Financial Measures	Pearson Correlation	1	.337**	.217**	.166**
	Sig. (2-tailed)		.000	.000	.001
	N	417	417	416	416
Financial Awareness Score	Pearson Correlation	.337**	1	.096*	.205**
	Sig. (2-tailed)	.000		.050	.000
	N	417	419	417	417
Financial Discipline	Pearson Correlation	.217**	.096*	1	-.001
	Sig. (2-tailed)	.000	.050		.990
	N	416	417	418	418
Financial Management Skills	Pearson Correlation	.166**	.205**	-.001	1
	Sig. (2-tailed)	.001	.000	.990	
	N	416	417	418	418

The results indicate that there was no risk of multicollinearity between the variables. Multicollinearity between the variables leads to spurious results. High degree of multicollinearity may limit software packages from performing the matrix inversion required for computing the regression coefficients or it may make the results of that

inversion inaccurate and unstable. With no multicollinearity, the variables were used for regression as they were.

4.6.6 Binary Logistic Regression of Financial Capability and Investment

The study was to test a null hypothesis that there is no relationship between financial capability and investment. The study evaluated the individual effects of the independent sub-variables and the overall effect of the independent variable. In testing the hypothesis, binary logistic regression Equation 3.1 was used. The variables of the study were X_1 = Financial Measures, X_2 = Financial Products, X_3 = Financial Discipline and X_4 = Financial Management Skills. To compute the probability of the overall significance statistics, Equation 3.2 was used.

Binary logistic regression analysis was run where Financial Measures, Financial Products Awareness, Financial Management Skills and Financial Discipline were tested whether they have any relationship with investment on financially included youth in Kenya. Omnibus Tests of Model Coefficients was used to test whether there is a significant difference between the log-likelihoods of the baseline model and the new model. The results from the study are shown in Table 4.15 indicating model chi square has 4 degrees of freedom, a value of 26.090 and a P value < 0.000.

Table 4.15: Omnibus Tests Results for Financial Capability and Investment

		Chi-square	df	Sig.
Step 1	Step	26.090	4	.000
	Block	26.090	4	.000
	Model	26.090	4	.000

The results shows that the test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably had effect on dependent variable (chi square =26.090, degree of freedom =4 P value =.000 with). This was further confirmed by the fact there was an improvement from the baseline model that explained 52.6 percent of the cases compared model with predictor variables that explained 64.5 percent of the cases.

The strength of relationship between predictor variable and responsive variable was tested by use of the likelihood and pseudo-R² values. The results of the study are shown in Table 4.16 where -2 Log likelihood was 549.445^a, Cox & Snell R Square was 0.061 and Nagelkerke R Square was 0.081.

Table 4.16: Log likelihood Test for Financial Capability and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	549.445 ^a	.061	.081

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Nagelkerke R Square was considered to explain the relationship. Nagelkerke R Square indicated that 8.1% of the variation was determined by the variables of the study. Hosmer and Lemeshow Test, was used to tests whether the model was a good fitting model. The results of the test indicated a chi-square of 11.254, with 8 degrees of freedom and P value of 0.188 as shown in Table 4.17.

Table 4.17: Model Fit Test of Financial Capability and Investment

Step	Chi-square	df	Sig.
1	11.254	8	.188

A model is a good fit if H-L goodness-of-fit test statistic is greater than .05. The H-L statistic has a p-value of 0.188 >0.05, indicating that the model of the study is quite a good fit. This was further confirmed by prediction success overall which improved from 52.6 percent to 64.5 percent.

Wald statistic was used to test the significance of each predictor variables against the dependent variable. The binary logistic regression analysis results are shown in Table 4.18. This table provides regression coefficient (B), the Wald statistic to test the statistical significance and Odds Ratio (Exp (B)) for each variable category. The B coefficients were 0.264 for Financial Management Skills, 0.217 for Financial Discipline, 0.041 for Financial Products Awareness and 0.284 for Financial Measures. For Wald Statistics for testing Odds Ratio, it was 6.302 for Financial Management Skills, 4.237 for Financial Discipline, 0.338 for Financial Products Awareness and 6.297 for Financial Measures. Financial Management, Financial Discipline, and Financial Measures were statistically significant, but Financial Products Awareness though positively related to investment was not statistically significant.

Table 4.18: Binary Logistic Regression of Financial Capability and Investment

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1 ^a	Financial Measures	0.284	0.113	6.297	1	0.012	1.328
	Financial Products Awareness	0.041	0.071	0.338	1	0.561	1.042
	Financial Discipline	0.217	0.106	4.237	1	0.04	1.243
	Financial Management Skills	0.264	0.105	6.302	1	0.012	1.302
	Constant	-1.367	0.784	3.035	1	0.081	0.255

a. Variable(s) entered on step 1: Financial Measures, Financial Products Awareness, Financial Discipline, Financial Management Skills

The binary logistic regression results showed that Predicted;

Logit of (Invest) = -1.367 + (0.284) * Financial Measures + (0.041) * Financial Awareness + (0.217) * Financial Discipline + (0.264) * Financial Management Skills.

The log of the odds of a person investing was found to be positively related to predictor variables. The positive B coefficients for predictor variables indicated that increasing predictor variables score is associated with increased odds of investing. The Odds ratio expressed as Exp(B) column indicate the overall effect on dependent variable of increasing the predictor variables.

From the results, Financial Management Skills was statistically significant in predicting whether a youth will invest or not if provided with finances, the overall effect was 6.302 , $df=1$, $p=.012$. Thus, increase in Financial Management Skills among the youth increases the probability of investing by 30.2%. Financial Discipline was also statistically significant in predicting whether a youth will invest or not if provided with finances with overall effect of $Wald=4.237$, $df=1$, $p=.040$. Financial Measures overall effect was $Wald=6.297$, $df=1$, $p=.012$ indicating that Financial Measures were positively related to investing and was statistically significant.

Financial Products Awareness though positive was not statistically significant in predicting whether the youth invests or not. The overall score was $Wald=0.338$, $df=1$, $p=.561$. Odds ratio for Financial Products Awareness was 1.042 indicating that a one-unit change in Financial Products Awareness changes the odds of investing by a multiplicative factor of 1.042. Financial Management Skills was found to be the variable with the greatest overall effect.

4.6.7 Overall Effect of Financial Capability and Investment

The study tested whether total score of Financial Capability had any significant effect on investment on financially included youth. The study noted that, for the overall effect, the strength of relationship between predictor variable and responsive variable was tested by use of the likelihood and pseudo- R^2 values. The results of the study are shown in Table 4.19 where -2 Log likelihood was 550.081^a, Cox & Snell R Square was 0.059 and Nagelkerke R Square was 0.079.

Table 4.19: Strength of Relationship between Financial Capability and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	550.081 ^a	.059	.079

Nagelkerke R Square was considered to explain the relationship. Nagelkerke R Square indicated that 7.9% of the variation was determined by the Financial Capability. Hosmer and Lemeshow Test, was used to tests whether he model was a good fitting model. The results of the test indicated a chi-square of 9.629, with 8 degrees of freedom and P value of 0.292 as shown in Table 4.20.

Table 4.20: Model Fit Test for Financial Capability and Investment

Step	Chi-square	df	Sig.
1	9.629	8	.292

A model is a good fit if H-L goodness-of-fit test statistic is greater than .05. The H-L statistic has a significance of 0.292 which means that the model of the study is quite a good fit. Wald statistic was used to test the significance of each predictor variables against the dependent variable. The binary logistic regression analysis results are shown in Table 4.21.

Table 4.21: Binary Logistic Regression of Overall Financial Capability and Investment

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Financial Capability	.188	.040	21.779	1	.000	1.207
	Constant	-2.764	.585	22.333	1	.000	.063

a. Variable(s) entered on step 1: Financial Capability.

The B coefficient was 0.188 while Wald Statistics for testing Odds Ratio was 21.779. The log of the odds of a person investing was found to be positively related to predictor variable. The positive B coefficient for predictor variables indicated that increasing predictor variable score is associated with increased odds of investing. The Odds ratio expressed as $\text{Exp}(B)$ indicate the overall effect on dependent variable of increasing the predictor variables.

From the results, Financial Capability was statistically significant in predicting whether a youth will invest or not if provided with finances, the overall effect was 21.779, $df=1$, $p=.000$. Thus, increase in Financial Capability among the youth increases the probability of investing by 20.7%. This study rejects the null hypothesis that, Financial Capability is not statistically significant in determining investment on financially included youth in Kenya.

4.7 Effects of Social Capital on Investment on Financially Included Youth

Social capital plays a key role in development of a person's economic status. Social capital is about the friends one has and the networks one has with friends. The whole idea about social capital is that one's family, friends, and associates that constitute an important asset that can be leveraged for material gain. When one is provided with finances, he has to network to know the available opportunities or how to go about in the business startups for him to undertake economic activities.

Without access to networks, it is hard to work one's way out of poverty. Much of the information is shared within the social networks. Ideas of where to get finances, credit

information, insurance, how to utilize financial products and opportunities where one can invest are shared within formal and informal networks. The concept of group lending for instance in borrowing by financial institutions is as a way of enhancing social capital as it is believed to help in sharing of information. Thus, increase in financial inclusion where social capital is low may mean that the persons will not be able to leverage potential of financial inclusion.

Social capital constitutes six dimensions which includes groups and networks; trust; collective action and cooperation; social cohesion and inclusion; information and communication; and empowerment and political action (Hamdannet al., 2014). This research focused on four dimensions, which included empowerment and political action, groups and networks, collective action and cooperation, and social cohesion and inclusion.

4.7.1 Empowerment and Political Action

Involvement in leadership gives the youth a chance to get key information and also network with other leaders in the society who have useful information. The opportunity to interact and network with other leaders in the community helps them increase their social capital. To evaluate empowerment and political action, the youth were required to indicate whether they are involved in any leadership role in the society. This included community organization, youth groups, sports clubs, religious groups, ad hoc social committees or any other association. The results in Figure 4.8 indicated that, 39% of the respondents were involved in some form of leadership.

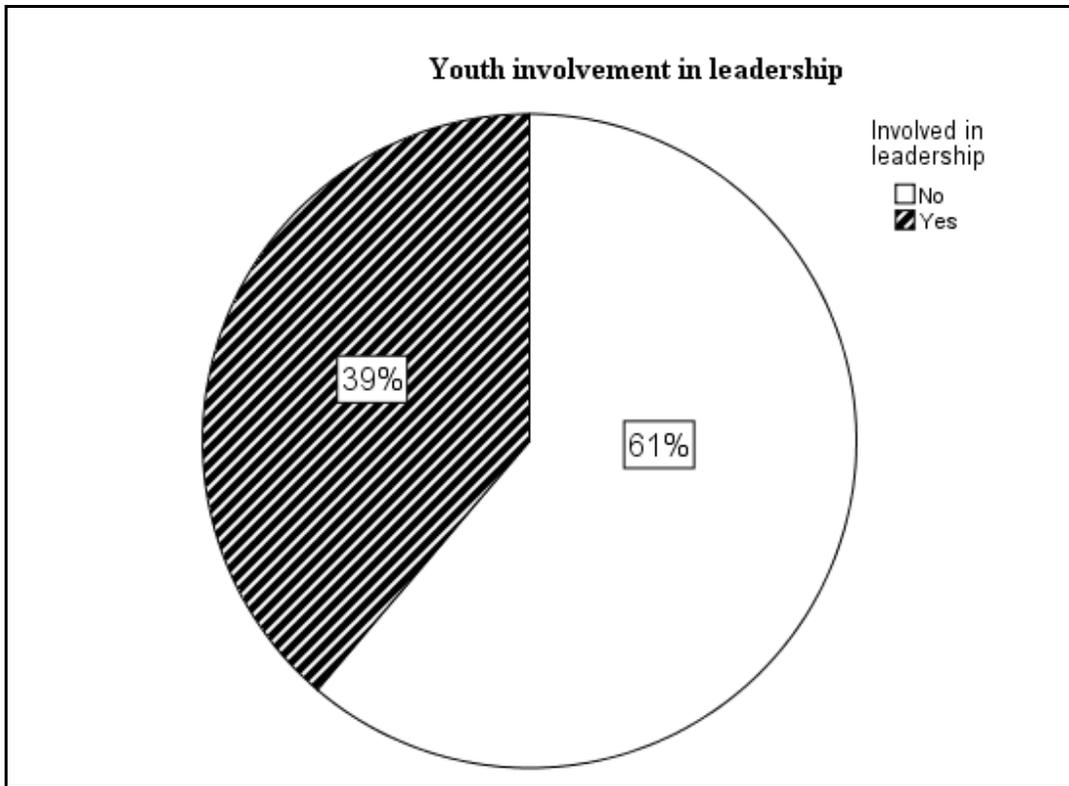


Figure 4.8: Youth Involvement in Leadership

Though leadership has been indicated to be a key contributor in improving social capital, only about one third of the respondents were involved in leadership roles. This implies that, only one third gains social capital from leadership. The other two thirds are left out and in this case, their social capital could be low compared to those who participate in leadership.

4.7.2 Groups and Networks

Membership to groups is another key factor that has impact on social capital. Coming together as a group can help members achieve a number of things they may not achieve on their own. Members of a group usually benefit from information sharing in the group

especially where the group's objective is economic in nature. This is in most of financial institutions that advocate for group lending for the vulnerable segment of the society like women and youth. From the study, majority of the youth, 64.5 percent were found to be members of a group as shown in Figure 4.9.

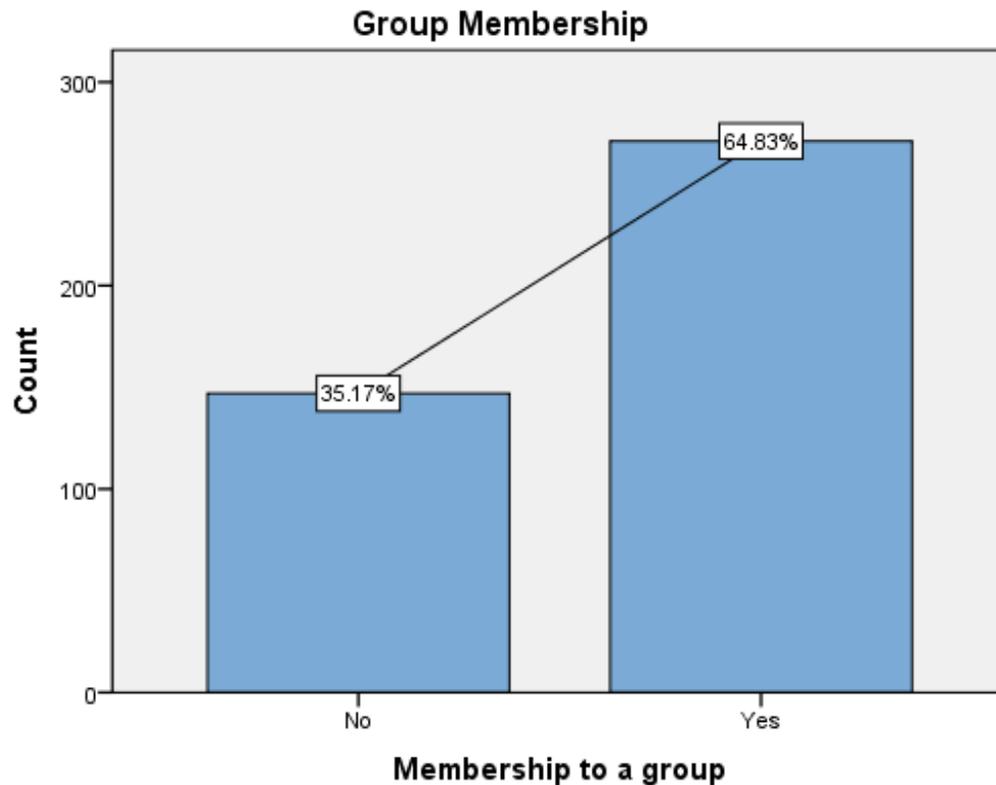


Figure 4.9: Group Membership

Group membership was found to be very popular among the youth. During focus group discussion, the youth indicated as a way of accessing the Youth Fund and Uwezo Fund, they have to be in groups as this money is lent to groups. It was also indicated that the youth have benefited from the groups in terms of business management skills, information about financial management and investments.

4.7.3 Cooperation and Social Cohesion

Working with others in the society and in the community is a key contributor to social capital. Those who work together in the society as group share information, help each other in hard times and help each other to overcome economic shocks. Much of the information of financial inclusion and available opportunities for investment are shared in networks. As such, the youth who work with others in the society are believed to have higher social capital than those who do not. In addition, people who have a big network of friends also tend to have higher social capital than those who are socially excluded. Organization that that impart knowledge to the community always target people who are working together, which could be formal or informal groups. Thus, the more a person collaborates with others in the community, the more the person is expected to have higher social capital than his /her peers do.

The other aspect of social capital was social cohesion and inclusion with peers and those of higher economic status, referred to as just social cohesion in this study. A person who interacts with people of higher capability also tends to move to higher levels to match the peers. Thus, the study wanted to establish the cooperation and social cohesion with people in the society. This was assessed by form of likert scale of 5 to 1, where 5 was highly involved while 1 was least involved. The results are shown in Table 4.22. The results indicated that, 54.5 percent worked with others in village or neighborhood in the past 12 months for at least five times and above in the last 12 months giving the highest involvement. This was followed by participating in the community activities at 39.6

percent. The parameter that indicated least number of people in involvement was number of associations a youth was involved in as it was 7.1 percent.

On the scoring, the parameter that scored least was participating in the trainings through groups that scored 0.937 of the possible score of five. Compared to other parameters, training required external persons to the group and could be the reason of scoring least. The parameter that scored highest score was close friends which was about 3.4 score. The study noted that, the parameters used to test for involvement were on average less than 50% as indicated in Table 4.22

Table 4.22: Cooperation and Social Cohesion of the Youth

	5	4	3	2	1	0	Mean	Std. Dev.
Number of associations you are involved in	7.1	7.6	14.0	22.1	15.7	32.9	1.69	1.58
Participated in a group/community activities in the last 12 months	39.3	3.3	9.5	8.1	4.0	35.2	2.59	2.21
Number of Trainings have you received about investment/business in the last 12 from the group	9.0	1.4	3.3	9.5	16.9	59.3	.97	1.55
Number of close friends	38.8	6.7	21.0	18.6	9.5	5.0	3.31	1.60
Number of people beyond immediate household who could you turn to for help	20.0	7.6	23.6	29.0	12.9	6.4	2.73	1.48
Of those people, number of those who can be able	13.6	6.4	17.9	29.5	21.0	11.2	2.28	1.50
Number of close friends who are of higher economic status	21.4	9.3	11.9	20.2	23.8	12.9	2.45	1.73
People who have come for help	15.0	11.0	17.6	21.2	22.6	12.1	2.38	1.60
Number of times worked with others in village/neighborhood in the past 12 months	54.5	3.3	5.2	2.6	6.2	27.6	3.14	2.23
Mean							2.44	0.248

The results in Table 4.22 show that the average score was 2.44 out of 5 maximum possible score of 5. The standard deviation of the responses is 0.248 indicating a spread of within one standard deviation from the mean. This indicates that social capital among the youth is below average. From the focus group discussion, youth indicated that since they live from hand to mouth, they are not able to fully participate in community activities. For them, they rely on what they earn on daily basis and a day without working means no meal and thus, they do not have time for social activities. Those who indicated that they participated were mostly those who have some source income like self-employed and those who were employed.

4.7.4 Test for Sampling Adequacy on Cooperation, and Social Cohesion

Collective action and Cooperation, and Social cohesion and inclusion data was collected in likert scale. To be able to undertake logistic regression, the data was to be reduced by use of Principal Component Analysis (PCA). Before PCA, the study tested for multicollinearity, where determinant from correlation matrix was 0.001 which was above the recommended of 0.00001. KMO and Bartlett's Test were done and a chi-square of 2,754.983 and 36 degree of freedom was extracted. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.741 as indicated in Table 4.23. Table 4.23 also gives Bartlett's Test of Sphericity which was highly significant as $p < 0.0001$.

Table 4.23: KMO and Bartlett's Test on Cooperation and Social cohesion

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.741
Bartlett's Test of	Approx. Chi-Square	2754.983
Sphericity	df	36
	Sig.	0.000

The KMO and Bartlett's Test of 0.741, which was above 0.5, that is acceptable for factors to be extracted and therefore factor analysis was appropriate. Bartlett's Test of Sphericity that was significant means that factor analysis was appropriate for this study.

4.7.5 Drivers of Cooperation and Social Cohesion

The data for Collective Action and Cooperation, and Social Cohesion and Inclusion had nine parameters. These parameters were correlated with each other as they were measuring the same construct. To improve construct reliability and to reduce a large number of items into factors, observed variables were reduced to a smaller number of factors. Principal component analysis variable reduction procedure was used. Varimax rotation was done to maximize loadings and minimize low item loadings, therefore producing a more interpretable and simplified solution. Varimax rotation is orthogonal rotation of factor axes to maximize the variance of squared loadings of a factor on all the variable in a factor matrix. Kaiser criteria of Eigen value greater than one rule in combination with Scree plot test were used to determine the data to retain. Any component that displayed an Eigen value greater than 1.00 was retained as it was accounting for a greater amount of variance than had been contributed by one variable. The data extracted is shown in Table 4.24.

Table 4.24: Component Analysis Results for Cooperation and Social Cohesion

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%
1	4.182	46.465	46.465	4.117	45.746	45.746
2	2.081	23.118	69.583	2.145	23.837	69.583
3	.815	9.055	78.638			
4	.634	7.042	85.679			
5	.467	5.193	90.872			
6	.399	4.431	95.303			
7	.264	2.936	98.239			
8	.104	1.159	99.398			
9	.054	.602	100.000			

Extraction Method: Principal Component Analysis.

The two factors extracted accounted for most of the variance in the observed variables at 69.583%.

The results of the rotated matrix are shown in Table 4.25. The values in the table represent the distribution of the variance after varimax rotation. Varimax rotation tried to maximize the variance of each of the factors and thus the variance accounted for is distributed over the extracted factors. Rotated Component Matrix table contains the rotated factor loadings, which represent both how the variables are weighted for each factor and the correlation between the variables and the factor. The factor loading were above acceptable minimum of 0.4 and thus they were all retained.

Table 4.25: Rotated Component Matrix on Cooperation and Social Cohesion

	Component	
	1	2
Number of associations you are involved in		.847
Participated in a group/community activities in the last 12 months		.858
Number of Trainings have you received about investment/business in the last 12 from the group		.801
Number of close friends	.825	
Number of people beyond immediate household who could you turn to for help	.869	
Of those people, number of those who can be able	.827	
Number of close friends who are of higher economic status than your self	.900	
People who have come for help	.885	
Number of times worked with others in village/neighborhood n the past 12 months	.623	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

By use of Principal Components analysis where Varimax rotation method with Kaiser Normalization were used, two factors were extracted. The factors extracted are then interpreted and named. Interpreting rotated solution usually involved determining what each of the retained components measures. This involved identifying the variables that demonstrated high loadings for a given component, and determining what these variables had in common. A brief name was assigned to each retained component that describes its

content. The naming ensured that the constructs reflected the theoretical and conceptual intent. In the Rotated Component table, the factors in first components were related to collective action and cooperation and thus they were named “Cooperation”. The factors in component two were more related to social cohesion and inclusion and they were named “Social Cohesion”.

The study then tested the degree of correlation social capital measures. All the social capital sub-variables displayed a weak correlation among themselves. Pearson Correlation of 0.8 and above is an indication of multicollinearity. The results are indicated in Table 4.26.

Table 4.26: Multicollinearity Results for Cooperation and Social Cohesion

			Involved in leadership	Membership to a group	and Cooperation	Social Cohesion
Involved in leadership	Pearson Correlati on	1	.389**	.282**	.489**	
	Sig. (2- tailed)		.000	.000	.000	
	N	418	417	416	416	
Membership to a group	Pearson Correlati on	.389**	1	-.049	.549**	
	Sig. (2- tailed)	.000		.317	.000	
	N	417	418	417	417	
Cooperation	Pearson Correlati on	.282**	-.049	1	.000	
	Sig. (2- tailed)	.000	.317		1.000	
	N	416	417	417	417	
Social Cohesion	Pearson Correlati on	.489**	.549**	.000	1	
	Sig. (2- tailed)	.000	.000	1.000		
	N	416	417	417	417	

The results indicate that there was no risk of multicollinearity between the variables as there was no Pearson Correlation that was equal to 0.8 or more. Multicollinearity between the variables leads to spurious results. High degree of multicollinearity may limit software packages from performing the matrix inversion required for computing the regression coefficients or it may make the results of that inversion inaccurate and unstable. With no multicollinearity, the variables were used for regression as they were.

4.7.6 Binary Logistic Regression between Social Capital and Investment

The null hypothesis tested was that, Social capital is not significant in determining investment on financially included youth in Kenya. There was need thus to test the null hypothesis that, change in social capital has no effect on investment on financially included youth. In testing the hypothesis, binary logistic regression equation 3.1 was used. The variables of the study were X_1 = Involvement in Leadership, X_2 = Group Membership, X_3 Cooperation and X_4 = Social Cohesion. To compute the probability of the overall significance statistics, equation 3.2 was used.

A binary logistic regression analysis was run where Involvement in Leadership, Group Membership, Cooperation, and Social Cohesion were tested whether they have any relationship with investment on financially included youth. Omnibus Tests of Model Coefficients was used to test whether there is a significant difference between the log-likelihoods of the baseline model and the new model. The results from the study are

shown in Table 4.27 indicating model chi square had 4 degrees of freedom, a value of 68.118 and a P value < 0.000

Table 4.27: Omnibus Tests of Model Coefficients of Social Capital and Investment

		Chi-square	df	Sig.
Step 1	Step	68.118	4	.000
	Block	68.118	4	.000
	Model	68.118	4	.000

The results shows that the test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably had effect on dependent variable (chi square =68.118, p =.000 with df =4). This was further confirmed by the fact there was an improvement from the baseline model that explained 52.6 percent of the cases compared model with predictor variables model which explained 64.5 percent of the cases.

The study also evaluated the strength of relationship between predictor variable and responsive variable and likelihood and pseudo-R² values were used. The results of the study are shown in Table 4.28 where -2 Log likelihood was 507.619^a, Cox & Snell R Square was 0.151 and Nagelkerke R Square was 0.202.

Table 4.28: Strength of Relationship between Social Capital and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	507.619 ^a	.151	.202

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

In this study, Nagelkerke R Square was considered to explain the relationship. This indicates that 20.2% of the variation was determined by the variables of the study. Hosmer and Lemeshow Test, was used to tests whether the model was a good fitting model. The results of the test indicated a chi-square of 10.457, with 8 degrees of freedom and P value of 0.234 as shown in Table 4.29

Table 4.29: Model Fit Test of Social Capital and Investment

Step	Chi-square	Df	Sig.
1	10.457	8	.234

A model is a good fit if H-L goodness-of-fit test statistic is greater than .05. The H-L statistic was 0.234 indicating that the model of the study is quite a good fit. This was further confirmed by prediction success overall which improved from 52.6 percent to 64.5 percent.

Wald statistic was used to test the significance of each predictor variables against the dependent variable. The binary logistic regression analysis results are shown in Table 4.30. This table provides regression coefficient (B), the Wald statistic to test the statistical significance and Odds Ratio (Exp (B) for each variable category. The B coefficients were 0.813 for Leadership, 0.738 for Membership to group, 0.259 for Cooperation and 0.261 for Social Cohesion. For Wald Statistics for testing Odds Ratio, it was 10.054 for Involvement in Leadership, 7.427 for Membership to Group, 4.956 for Cooperation and 3.674 for Social Cohesion. Involvement in Leadership, Membership to group and Cooperation were positively related to investment and statistically significant, but Social Cohesion though positively related to investment was not statistically significant.

Table 4.30: Binary Logistic Regression of Social Capital and Investment

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step	Leadership (1)	.813	.256	10.054	1	.002	2.255	1.364	3.728
1 ^a	Membership(1)	.738	.271	7.427	1	.006	2.092	1.230	3.557
	Cooperation	.259	.116	4.956	1	.026	1.295	1.031	1.626
	Social Cohesion	.261	.136	3.674	1	.055	1.298	.994	1.694
	Constant	-.910	.221	16.867	1	.000	.403		

a. Variable(s) entered on step 1: Leadership, Membership, Cooperation, Social Cohesion.

The logistic regression results showed that;

$$\text{Predicted Logit (Invest)} = -0.910 + (0.813) * \text{Involvement in Leadership} + (0.738) * \text{Membership to group} + (0.259) * \text{Cooperation} + (0.261) * \text{Social Cohesion}.$$

The log of the odds of a person investing was found to be positively related to predictor variables. The B coefficients for predictor variables were positive indicating that increasing predictor variables score is associated with increased odds of investing. The Odds ratio expressed as Exp(B) column indicate the overall effect on dependent variable of increasing the predictor variables.

From the results, Involvement in Leadership was statistically significant in predicting whether a youth will invest or not if provided with finances, the overall effect was Wald=10.054, df=1, p=.002. Thus, increase in Involvement in Leadership among the youth increases the probability of investing by 125%.

Group membership was also statistically significant in predicting whether a youth will invest or not if provided with finances with overall effect of Wald=7.427, df=1, p=.006. Cooperation was also statistically significant in predicting whether a youth will invest or not if provided with finances with overall effect of Wald=4.956, df=1, p=.026. Odds ratio for Cooperation was 1.295 indicating that a one-unit change in Cooperation changes the odds of investing by a multiplicative factor of 1.295.

Social Cohesion though positive was not statistically significant in predicting whether the youth invests or not. The overall score was Wald=3.674 df=1, p=.055. Involvement in leadership was found to have the most influence investment.

4.7.7 Overall Effect of Social Capital and Investment

The study tested whether total score of Social Capital had any significant effect on investment on financially included youth. The overall effect the strength of relationship between predictor variable and response variable was tested by use of the likelihood and pseudo-R² values. The results of the study are shown in Table 4.31 where -2 Log likelihood was 513.424^a, Cox & Snell R² was 0.139 and Nagelkerke R² was 0.186.

Table 4.31: Strength of Relationship between Overall Social Capital and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	513.424 ^a	.139	.186

Nagelkerke R Square which was considered to explain the relationship indicated that 18.6% of the variation was determined by the Social Capital. Hosmer and Lemeshow Test, was used to tests whether he model was a good fitting model. The results of the test

indicated a chi-square of 9.629, with 8 degrees of freedom and P value of 0.292 as shown in Table 4.32.

Table 4.32: Model Fit Test Overall Social Capital and Investment

Step	Chi-square	df	Sig.
1	11.232	8	.189

The H-L statistic was 0.189 indicating the model of the study is quite a good fit.

Wald statistic was used to test the significance of the predictor variable against the dependent variable. The binary logistic regression analysis results are shown in Table 4.33.

Table 4.33: Binary Logistic Regression of Overall Social Capital and Investment

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a Social Capital	.433	.060	51.776	1	.000	1.542
Constant	-.559	.124	20.159	1	.000	.572

a. Variable(s) entered on step 1: Social Capital.

The B coefficient was 0.433 while Wald Statistics for testing the significance of B, it was 51.776. The log of the odds of a person investing was found to be positively related to predictor variable. The positive B coefficient for predictor variables indicated that increasing predictor variable score is associated with increased odds of investing. The Odds ratio expressed as Exp(B) column indicate the overall effect on dependent variable of increasing the predictor variables.

From the results, Social Capital was statistically significant in predicting whether a youth will invest or not if provided with finances with the overall effect which was 51.776,

df=1, p=.000. Thus, increase in Social Capital among the youth increases the probability of investing by 54.2%. The study rejects the null hypothesis that, Social capital is not statistically significant in determining investment on financially included youth in Kenya.

4.8 Effect of ICT Capability on Investment of Financially Included Youth

The advancement in technology has enabled the financial service providers to differentiate products, which also includes other products such securities and insurance. Diversification of products and services has already resulted in rich, and complex, choices for consumers, especially compared to the early days of one-size-fits all working capital loans. Effective use is hampered by asymmetries of information and power between financial institutions and poor consumers, an imbalance which grows as customers are less experienced and products they can select are more complicated, an imbalance which holds actual potential for negative result due to institutional abuses or ill-informed client decision.

These financial products are channeled through the internet and sometimes, the customers are expected to access them online. Though the access to information has increased over the years globally, digital divide still exists between developed economies and developing economies and between the poor and the rich. This digital divide affects the usage of financial services and especially among poor people.

For the youth to leverage financial services offered through technology, they must have access to ICT technologies and have ability to use the ICT technologies to economic advantage. This study noted that, only 10.3% of the respondents indicated internet to be a

major source of financial services. This is a very low percentage compared to availability of the internet connectivity and also compared to the financial services channeled through the internet. Usage of innovative financial channels is also an indicator of people willingness to adopt new technologies. Any gap in access and usage will influence the youth in taking advantage of the financial inclusion and this may increase the inequality gap. When the poor are not able to use ICT to their economic benefit, they tend to stay aback and they are economically disadvantaged.

4.8.1 ICT Capability Descriptive Statistics among the Youth

This study evaluated ICT capability in relation to investment among financially included youth. The study evaluated ICT knowledge, ICT usage and access to financial services using ICT. The data was collected in likert scale of 5 to 1, where 5 was strongly agree while 1 was strongly disagree. The results are shown in Table 4.34. Majority of the respondents indicated that, it is easy to know about financial services from the internet as 57.9 percent agreed with this statement. However, only 12.4 percent indicated to have ever applied for financial services online. Majority of the youth, 49.3 percent, indicated that, they were aware or knew something about internet technology while only 16.5 percent had skills or training needed to use Internet technology.

On the rating by the youth, the results from indicated majority of the respondent were aware of ICT as the average score on ICT awareness was 3.18 of the possible 5. However, the skill to utilize the ICT was rated low at 2.08 out of the possible score of 5. This is an indication that, though majority of the youth were aware of the ICT, few had the skills to utilize the ICT. Ease of knowing about financial services from the internet

scored highly indicating the power of ICT in providing the youth with information. However, those who may have used ICT to get financial services was rated very low at 1.70 out of possible score of five.

Table 4.34: ICT Capability among the Youth

	SD	D	N	A	SA	Mean	Std. Dev
I am aware/know something about internet technology	20.7	19.5	9.0	26.4	22.9	3.1135	1.49224
I have the skills/training I need to use Internet technology	49.5	20.0	13.6	6.7	9.8	2.0670	1.33584
I find it easy to learn to use Internet technology.	17.9	28.3	12.6	22.4	17.4	2.9300	1.39436
I enjoy trying new things such as internet technology.	14.5	31.2	15.7	23.8	13.3	2.9010	1.29717
Using Internet technology worth efforts needed	16.7	21.9	11.7	26.0	22.4	3.1570	1.43190
I find using Internet technology interesting.	14.3	20.2	17.1	26.0	21.0	3.1932	1.36591
I have the resources necessary to use Internet technology.	36.0	10.7	11.2	9.3	32.4	2.9139	1.71668
I find using Internet technology to be very important.	36.2	9.3	11.0	6.7	36.4	2.9785	1.75666
I have learnt about a financial product from the internet	15.0	17.9	21.0	7.4	38.3	3.3636	1.50676
I find it easy to access financial products channeled through the internet	19.3	27.1	23.6	7.9	21.7	2.8541	1.40750
I access financial services institution information from the internet	28.1	23.6	21.9	10.7	15.2	2.6124	1.39304
I use internet to find out about financial products	36.2	18.3	12.6	9.8	22.6	2.6411	1.58846

	SD	D	N	A	SA	Mean	Std. Dev
When I want to know about financial services, I visit the website	35.5	18.8	16.9	11.7	16.7	2.5502	1.48489
It is easy to know about financial services from the internet	32.9	2.6	6.2	3.1	54.8	3.4450	1.84094
I have applied for financial services online	72.4	9.5	5.2	1.4	11.0	1.6842	1.31612
Mean						2.8269	0.4692

The results in Table 4.34 indicate the gap between awareness and access to information and usage of the information. Although many people were aware and could have access to ICT, very few are able to make use of it for an economic enhancing activity. The 0.4692 standard deviation infers that 68% of the responses were spread within one standard deviation of the overall mean. In focus group discussion, the study also noted that most of the youth who are using internet were using it for social media. On the usage of internet for bank services, there were fears about the security of the financial information and thus the youths were not willing to use the same for financial services. There are a number of financial services that are offered through the internet including loan applications for Uwezo and Youth fund. However, the youth, especially from rural area were found ignorant on how to access these services. Thus, though the use of internet has gone up, there was no indication that it was being used for economic benefits.

4.8.2 Test for Sampling Adequacy on ICT Capability

The data collected had many variables, which were correlated with one another because they measured the same construct. The observed variables were thus reduced into a smaller number of principal components (artificial variables) that was to account for most of the variance in the observed variables. The study tested for sampling adequacy to ensure that the data collected was adequate for factor analysis. Sampling test was done by use of SPSS software. First, the study tested for multicollinearity. Determinant from correlation matrix was computed and it was 0.013 which was above the recommended of 0.00001. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was computed as indicated in Table 4.35. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.803. Bartlett's Test of Sphericity was highly significant as $p < 0.0001$.

Table 4.35: KMO and Bartlett's Test on ICT Capability

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.803
Bartlett's Test of Sphericity	Approx. Chi-Square	4547.738
	Df	105
	Sig.	0.000

The determinant from correlation matrix of 0.000013 indicated that there was no multicollinearity between the variables. Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0.803, which was above 0.5, which was acceptable for factors to be extracted. Bartlett's Test of Sphericity which was highly significant ($P < 0.001$) means that factor analysis was appropriate for this study.

4.8.3 Factor Analysis for ICT Capability

The data for ICT capability had fifteen parameters. These parameters were correlated with each other as they were measuring the same construct. To improve construct reliability and to reduce a large number of items into factors, observed variables were reduced to a smaller number of factors. The data extracted is shown in Table 4.36

Table 4.36: Component Analysis of ICT capability

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.872	32.478	32.478	4.001	26.676	26.676
2	3.022	20.148	52.625	3.672	24.480	51.156
3	2.566	17.109	69.734	2.787	18.578	69.734
4	.814	5.425	75.160			
5	.753	5.020	80.180			
6	.577	3.849	84.029			
7	.508	3.387	87.416			
8	.413	2.753	90.169			
9	.343	2.287	92.456			
10	.335	2.235	94.691			
11	.288	1.922	96.613			
12	.229	1.525	98.138			
13	.153	1.017	99.156			
14	.067	.446	99.602			
15	.060	.398	100.000			

Extraction Method: Principal Component Analysis.

Principal component analysis indicated that, three factors had Eigen value of more than one and they accounted for most of the variance in the observed variables at 69.734%. The three factors were retained.

Rotated Component Matrix table contains the rotated factor loadings, which represent both how the variables are weighted for each factor and the correlation between the variables and the factor. The factor loading in the three components was above 0.4 and thus none was dropped.

Table 4.37: Rotated Component Matrix of ICT Capability

	Component		
	1	2	3
I am aware/know something about internet technology		.848	
I find it easy to learn to use Internet technology.		.840	
I enjoy trying new things such as internet technology.		.802	
Using Internet technology worth efforts needed		.886	
I find using Internet technology interesting.		.841	
I have the skills/training I need to use Internet technology			.731
I have the resources necessary to use Internet technology.			.915
I find using Internet technology to be very important.			.915
I have applied for financial services online			.709
I have learnt about a financial product from the internet	.814		
I find it easy to access financial products channeled through the internet	.881		
I access financial services institution information from the internet	.746		
I use internet to find out about financial products	.898		
When I want to know about financial services, I visit the website	.886		
It is easy to know about financial services from the internet	.568		

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

By use of Principal Components analysis where Varimax rotation method with Kaiser Normalization were used. The factors three factors extracted are then interpreted and named. Interpreting rotated solution usually involved determining what each of the retained components measures. This involved identifying the variables that demonstrated

high loadings for a given component and determining what these variables had in common. A brief name was assigned to each retained component that described its content. The naming ensured that the constructs reflected the theoretical and conceptual intent. In the Rotated Component table, the factors in first components were related to use of ICT in accessing Financial Services and thus they were named “ICT and Access to Financial Services”. The factors in component two were more related to Knowledge of information technology and they were named “ICT Knowledge”. The factors in component three were more related to Usage of ICT and they were named “ICT Usage”.

The study then tested the degree of correlation and levels of significance of ICT capability measures. All the ICT capability sub-variables displayed a weak correlation among themselves. The results are indicated in Table 4.38.

Table 4.38: Multicollinearity Test of ICT Capability

			ICT Access financial services	and to ICT	Knowledge of Usage of ICT
ICT Access financial services	Pearson	1		.000	.000
	Correlation Sig. (2-tailed)			1.000	1.000
	N	411	411	411	411
Knowledge of ICT	Pearson	.000		1	.000
	Correlation Sig. (2-tailed)	1.000			1.000
	N	411	411	411	411
Usage of ICT	Pearson	.000		.000	1
	Correlation Sig. (2-tailed)	1.000		1.000	
	N	411	411	411	411

It is indicated that there was no risk of multicollinearity between the variables.

4.8.4 Binary Logistic Regression between ICT Capability and Investment

The study was to test a null hypothesis H_{O3} that there is no relationship between ICT capability and investment. In testing the hypothesis, binary logistic regression equation 3.1 was used. The variables of the study were X_1 = ICT Usage, X_2 = ICT Knowledge, X_3 = ICT and Financial Access. To compute the probability of the overall significance statistics, equation 3.2 was used.

A binary logistic regression analysis was run where ICT Usage, ICT Knowledge and ICT and Financial Access, were tested whether they have any relationship with investment on financially included youth. Omnibus Tests of Model Coefficients was used to test whether there is a significant difference between the log-likelihoods of the baseline model and the new model. The results from the study are shown in Table 4.39 indicating model chi square has 3 degrees of freedom, a value of 21.855 and a $p < 0.000$.

Table 4.39: Log-likelihoods Tests of ICT Capability and Investment

		Chi-square	df	Sig.
Step 1	Step	21.855	3	.000
	Block	21.855	3	.000
	Model	21.855	3	.000

Results in Table 4.39 shows that the test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably had effect on dependent variable (chi square =21.855, $p =.000$ with $df =3$). This was further confirmed by the fact there was an improvement from the baseline model that explained 52.3 percent of the cases compared model with predictor variables model which explained 59.1 percent of the cases.

The strength of relationship between predictor variable and responsive variable was tested by use of the likelihood and pseudo- R^2 values. The results of the study are shown in

Table 4.40 where -2 Log likelihood was 547.033^a, Cox & Snell R Square was 0.052 and Nagelkerke R Square was 0.069.

Table 4.40: Strength of Relationship Test between ICT Capability and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	547.033 ^a	.052	.069

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Nagelkerke R Square was considered to explain the relationship and indicated that 6.9% of the variation was determined by the variables of the study. Hosmer and Lemeshow Test, was used to tests whether the model was a good fitting model. The results of the test indicated a chi-square of 4.527, with 8 degrees of freedom and P value of 0.807 as shown in Table 4.41.

Table 4.41: Model Fitting Test of ICT Capability and Investment

Step	Chi-square	df	Sig.
1	4.527	8	.807

The H-L statistic was 0.807 and therefore the model of the study is quite a good fit. This was further confirmed by prediction success overall which improved from 52.3 percent to 59.1 percent.

Wald statistic was used to test the significance of each predictor variables against the dependent variable. The binary logistic regression analysis results are shown in Table 4.42. This table provides regression coefficient (B), the Wald statistic to test the statistical significance and Odds Ratio (Exp (B)) for each variable category. The B coefficients were 0.384 for ICT and Access to Financial Services, 0.132 for ICT Knowledge and 0.251 for

ICT Usage. For Wald Statistics for testing Odds Ratio, it was 13.970 for ICT and Access to Financial Services, 1.674 for ICT Knowledge and 5.983 for ICT Usage. ICT and Access to Financial Services and ICT Usage were positively related to investment and statistically significant, but ICT Knowledge though positively related to investment was not statistically significant.

Table 4.42: Binary Logistic Regression Results of ICT Capability and Investment

		B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	ICT and Access to finance	.384	.103	13.97	1	.000	1.468	1.200	1.795
	ICT Knowledge	.132	.102	1.674	1	.196	1.141	.934	1.392
	ICTUsage	.251	.102	5.983	1	.014	1.285	1.051	1.571
	Constant	-.095	.101	.876	1	.349	.909		

a. Variable(s) entered on step 1: ICTandAccesstofinance, ICTKnowledge, ICTUsage.

The logistic regression results showed that;

$$\text{Predicted Logit of (Invest)} = -.0095 + (0.384) * \text{ICT and Access to Financial Services} + (0.132) * \text{ICT Knowledge} + (0.251) * \text{ICT Usage}.$$

The log of the odds of a person investing was found to be positively related to predictor variables. The B coefficients for predictor variables were positive indicating that increasing predictor variables score is associated with increased odds of investing. The Odds ratio expressed as Exp(B) column indicate the overall effect on dependent variable of increasing the predictor variables.

From the results, ICT and Access to Financial Services was statistically significant in predicting whether a youth will invest or not if provided with finances, the overall effect was Wald=13.970, df=1, p=.000. Thus, increase in ICT and Access to Financial Services among the youth increases the probability of investing by 47%. ICT Usage was also statistically significant in predicting whether a youth will invest or not if provided with finances with overall effect of Wald=5.983, df=1, p=.014. ICT Knowledge though positive was not statistically significant in predicting whether the youth invests or not. The overall score was Wald=13674, df=1, p=.196.

4.8.5 Overall Effect of ICT Capability and Investment

The study tested whether total score of ICT Capability had any significant effect on investment on financially included youth. The overall effect of the strength of relationship between predictor variable and responsive variable was tested by use of the likelihood and pseudo-R² values. The results of the study are shown in Table 4.43 where -2 Log likelihood was 550.173^a, Cox & Snell R Square was 0.045 and Nagelkerke R Square was 0.059.

Table 4.43: Strength of Relationship between Overall ICT Capability and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	550.173 ^a	.045	.059

Nagelkerke R Square was considered to explain the relationship. Nagelkerke R Square indicated that the ICT Capability determined 5.9% of the variation. Hosmer and

Lemeshow Test, was used to tests whether he model was a good fitting model. The results of the test indicated a chi-square of 3.546, with 8 degrees of freedom and P value of 0.896 as shown in Table 4.44.

Table 4.44: Model Fit Test of Overall ICT Capability and Investment

Step	Chi-square	df	Sig.
1	3.546	8	.896

The H-L statistic of 0.896 means that the model of the study is quite a good fit.

Wald statistic was used to test the significance of predictor variable against the dependent variable. The binary logistic regression analysis results are shown in Table 4.45

Table 4.45: Binary Logistic Regression of Overall ICT Capability and Investment

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	ICT Capability	.254	.061	17.640	1	.000	1.290
	Constant	-.096	.101	.899	1	.343	.909

a. Variable(s) entered on step 1: ICT Capability.

The B coefficients was 0.254 while Wald Statistics for testing Odds Ratio was 17.640. The log of the odds of a person investing was found to be positively related to predictor variable. The positive B coefficient for predictor variables indicated that increasing predictor variable score is associated with increased odds of investing. The Odds ratio expressed as Exp(B) column indicate the overall effect on dependent variable of increasing the predictor variables.

From the results, ICT capability was statistically significant in predicting whether a youth will invest or not if provided with finances with the overall effect of 17.640, df=1, p=.000. Thus, increase in ICT Capability among the youth increases the probability of

investing by 29.0%. The study rejects the null hypothesis that, ICT capability is not statistically significant determining investment on financially included youth in Kenya.

4.9 Effect of Business Environment on Investment on Financially Included Youth

Business environment has not been conducive for businesses in Kenya (AfDB, 2014). This could hinder the youth who would wish to undertake investment despite the availability of finances. Other youths could have started the business but fails at some point due to poor business environment. Thus, with poor business environment, the youth are not able to realize the impacts of financial inclusion as expected. For business environment, the parameters used by World Bank on ease of doing business were used. Two other parameters were incorporated in the study. These were security and corruption and they were added as they are a major concern to the economy.

4.9.1 Business Environment Descriptive Statistics

Business environment was measured in form of likert scale where youth were requested give a rating depending on how they perceive each parameter to be a challenge for them to invest. Descriptive statistics indicated that majority of the respondent rated the variables high. The average score was 3.0969 out of the possible five indicating a strong hindrance to investment. The overall standard deviation was 0.288 with a skewness of -0.26497. The descriptive statistics are as indicated in Table 4.46.

Table 4.46: Business Environment Rating by Respondents

	SD	D	N	A	SA	Mean	Std. Dev
Security in the county	6.9	17.1	14.3	31.4	29.3	3.5962	1.26506
Corruption in the government system	7.4	17.4	18.1	26.9	29.3	3.5385	1.28136
Cost of operations like electricity, water, transport etc.	10.5	24.3	10	32.4	21.4	3.3043	1.33463
Cost of finance	8.6	25	13.8	31.4	19.8	3.2923	1.28092
Cost of Business registration	14.5	23.1	11.4	23.3	26.2	3.2391	1.4391
Getting finances	11	25.2	13.6	27.9	21	3.2295	1.33603
Regulatory requirements like public health certificate, tax registration etc. /	9.8	25.7	17.4	24.8	21	3.2174	1.30971
Requirements for starting a business							
The high cost of living	11	24.5	17.1	26.2	19.8	3.1957	1.31406
County government licenses and permits	5.5	33.6	15.2	31.4	12.9	3.128	1.17913
Taxation Policy and procedure	11.4	21	22.6	31.9	11.7	3.1159	1.20976
Capital required to start a business	7.4	28.1	23.8	27.4	12.6	3.0983	1.16537
Introduced online services	10	33.6	19.3	23.1	12.6	2.9469	1.2221

	SD	D	N	A	SA	Mean	Std. Dev
Competition from existing business	6.4	36.9	22.1	22.1	11	2.942	1.14199
Business Registration Process	20.5	23.3	13.1	26.7	15	2.9227	1.39484
Getting electricity	25.2	24.8	21.4	18.1	10.5	2.6381	1.3154
Poor road network	24	30	16	19	10.7	2.6229	1.3219
Slow government services	25.5	31.2	13.6	15.5	14.3	2.619	1.38441
Average						3.0968	0.2882

The results indicate that many youth find business environment to be a challenge when it comes to investment. This was more so in getting government services as it was indicated during group discussion. The 0.2882 standard deviation infers that 68% of the responses were spread within one standard deviation of the overall mean. They indicated that the burden of many requirements was made worse by failure to get the needed service in the right time.

4.9.2 Test for Sampling Adequacy on Business Environment

The data for the study was collected using likert type scale. The observed variables were thus reduced into a smaller number of principal components. First, the study tested for multicollinearity and determinant from correlation matrix was 0.000017 which was above the recommended of 0.00001. KMO and Bartlett's Kaiser-Meyer-Olkin Measure of Sampling Adequacy was computed with a Chi-Square of 4,458.912, with 136 degree of freedom was extracted as indicated in Table 4.47. Kaiser-Meyer-Olkin Measure of

Sampling Adequacy was 0.894 Bartlett's Test of Sphericity was highly significant as $p < 0.0001$.

Table 4.47: KMO and Bartlett's Test on Business Environment

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.894
	Approx. Chi-Square	4458.912
	df	136
Bartlett's Test of Sphericity	Sig.	0.000

The determinant from correlation matrix of 0.000017 indicated there was no multicollinearity between the variables. The Kaiser-Meyer-Olkin measure of 0.894, which was above 0.5, indicates that data collected was acceptable for factors to be extracted. Bartlett's Test of Sphericity, which was significant means that factor analysis, was appropriate for this study.

4.9.3 Factor Analysis for Business Environment

The data for business environment had seventeen parameters. To improve construct reliability and to reduce a large number of items into factors, observed variables were reduced to a smaller number of factors. Varimax rotation is orthogonal rotation of factor axes to maximize the variance of squared loadings of a factor on all the variable in a factor matrix. The data extracted is shown in Table 4.48

Table 4.48: Component Analysis of Business Environment

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.703	45.312	45.312	5.447	32.039	32.039
2	1.884	11.083	56.395	2.845	16.733	48.773
3	1.127	6.632	63.027	2.071	12.182	60.954
4	1.121	6.593	69.619	1.473	8.665	69.619
5	0.748	4.4	74.019			
6	0.67	3.94	77.96			
7	0.611	3.593	81.553			
8	0.548	3.224	84.777			
9	0.471	2.772	87.549			
10	0.414	2.437	89.985			
11	0.382	2.248	92.233			
12	0.349	2.052	94.285			
13	0.304	1.786	96.07			
14	0.226	1.33	97.401			
15	0.167	0.984	98.385			
16	0.148	0.868	99.253			
17	0.127	0.747	100			

Extraction Method: Principal Component Analysis.

Principal component analysis indicated that, four factors had Eigen value of more than one and they accounted for most of the variance in the observed variables at 69.619%.

The four factors were retained.

The results of the rotated matrix are shown in Table 4.49. The values in the table represent the distribution of the variance after varimax rotation. Varimax rotation tried to

maximize the variance of each of the factors and thus the variance accounted is distributed over the extracted factors. Rotated Component Matrix table contains the rotated factor loadings, which represent both how the variables are weighted for each factor and the correlation between the variables and the factor. None of the factor that was dropped and the factor loadings were above 0.4.

Table 4.49: Business Environment Rotated Component Matrix^a

	Component			
	1	2	3	4
Business Registration Process	0.673			
Cost of Business registration	0.783			
Cost of operations like electricity, water, transport etc.	0.812			
Regulatory requirements like public health certificate, tax registration etc. /				
Requirements for starting a business	0.784			
Competition from existing business	0.488			
The high cost of living	0.769			
Cost of finance	0.805			
Getting finances	0.772			
Slow government services		0.734		
Poor road network		0.592		
Getting electricity		0.824		
Capital required to start a business		0.630		
Introduced online services		0.608		
Taxation Policy and procedure				0.579
County government licenses and permits				0.889
Security in the county			0.794	
Corruption in the government system			0.811	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 7 iterations.

By use of Principal Components analysis where Varimax rotation method with Kaiser Normalization were used four factors were extracted. The factors extracted are then

interpreted and named . Interpreting rotated solution usually involved determining what is measured by each of the retained components. This involved identifying the variables that demonstrated high loadings for a given component, and determining what these variables had in common.

A brief name was assigned to each retained component that describes its content. The naming ensured that the constructs reflected the theoretical and conceptual intent. In the Rotated Component table, the factors in first components were related to registration and set up of businesses and thus they were named “Business Registration”. The factors in component two were more related to provision of government services and thus they were named “Government Services”. The factors in component three were more related to taxation and government permits and were named “Taxation”. Finally, the factors in component four were more related to security management and corruption was named “Security and governance”.

The study then tested the degree of correlation of investment and business environment sub-variables. The sub-variables displayed a weak correlation among themselves. The results are indicated in Table 4.50.

Table 4.50: Multicollinearity Test of Business Environment Variables

		Business Registrati on	Governme nt Services	Taxation procedures	Governance, Corruption and Security issues
Business	Pearson	1	.0001	.000	.000
Registration	Correlation				
	Sig. (2- tailed)		1.000	1.000	1.000
	N	414	414	414	414
Government Services	Pearson	.000	1	.000	.000
	Correlation				
	Sig. (2- tailed)	1.000		1.000	1.000
	N	414	414	414	414
Taxation procedures	Pearson	.000	.000	1	.000
	Correlation				
	Sig. (2- tailed)	1.000	1.000		1.000
	N	414	414	414	414
Governance and Security	Pearson	.000	.000	.000	1
	Correlation				
	Sig. (2- tailed)	1.000	1.000	1.000	
	N	414	414	414	414

The results in Table 4.50 indicates that there was no risk of multicollinearity between the variables. Multicollinearity between the variables leads to spurious results. High degree of multicollinearity may limit software packages from performing the matrix

inversion required for computing the regression coefficients or it may make the results of that inversion inaccurate and unstable. With no multicollinearity, the variables were used for regression as they were.

4.9.4 Binary Logistic Regression between Business Environment and Investment

The study was to test a null hypothesis that there is no relationship between business environment and investment. In testing the hypothesis, binary logistic regression equation 3.1 was used. The variables of the study were X_1 = Business Registration, X_2 = Government Services, X_3 = Taxation and X_4 = Governance and Security. To compute the probability of the overall significance statistics, equation 3.2 was used.

A binary regression analysis was run where Business Registration, Government Services, Taxation, Governance and Security, were tested whether they have any relationship with financial inclusion on investment among the youth in Kenya. Omnibus Tests of Model Coefficients was used to test whether there is a significant difference between the log-likelihoods of the baseline model and the new model. The results from the study are shown in Table 4.51 indicating model chi square has 4 degrees of freedom, a value of 23.945 and a $p < 0.000$.

Table 4.51: Log-likelihoods Test for Business Environment and Investment

		Chi-square	df	Sig.
Step 1	Step	23.945	4	0.000
	Block	23.945	4	0.000
	Model	23.945	4	0.000

Results shows that the test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably had effect on dependent variable (chi square =23.945, p =.000 with df =4). This was further confirmed by the fact there was an improvement from the baseline model that explained 52.7 percent of the cases compared model with predictor variables model which explained 60.1 percent of the cases.

The strength of relationship between predictor variable and responsive variable was tested by use of the likelihood and pseudo-R² values. The results of the study are shown in Table 4.52 where -2 Log likelihood was 548.811^a, Cox & Snell R Square was 0.056 and Nagelkerke R Square was 0.075.

Table 4.52: Strength of relationship between Business Environment and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	548.811 ^a	0.056	0.075

Nagelkerke R Square was considered to explain the relationship. Nagelkerke R Square indicated that 7.5% of the variation was determined by the variables of the study.

Hosmer and Lemeshow Test, was used to tests whether he model was a good fitting model. The results of the test indicated a chi-square of 6.896, with 8 degrees of freedom and P value of 0.548 as shown in Table 4.53.

Table 4.53: Model Fit Test for Business Environment and Investment

Step	Chi-square	df	Sig.
1	6.896	8	0.548

A model is a good fit if H-L goodness-of-fit test statistic is greater than .05. The H-L statistic has a significance of 0.548 which means that it is not statistically significant and therefore the model of the study is quite a good fit. This was further confirmed by prediction success overall which improved from 52.7 percent to 60.1 percent.

Wald statistic was used to test the significance of each predictor variables against the dependent variable. The binary logistic regression analysis results are shown in Table 4.54. This table provides regression coefficient (B), the Wald statistic to test the statistical significance and Odds Ratio, Exp (B) for each variable category. The B coefficients were -0.037 for Business Registration, -0.438 for Government Services, -0.047 for Taxation and -0.233 for Governance and Security. For Wald Statistics for testing Odds Ratio, it was 0.135 for Business Registration, 17.54 for Government Services, 0.218 for Taxation and 5.53 for Governance and Security. Government Services and Governance and Security were negatively related to investment and statistically significant, but Business Registration and Tax Procedure though negatively related to investment, was not statistically significant.

Table 4.54: Binary Logistic Regression of Business Environment and Investment

1	B	S.E.	Wald	df	Sig.	Exp (B)	95% EXP(B)	C.I.for
							Lower	Upper
Step	Business	0.10						
1 ^a	Registration	-0.037	1	0.135	1	0.713	0.963	0.79 1.175
	Government	0.10						
	Services	-0.438	4	17.54	1	0.000	0.646	0.526 0.792
	Taxation	-0.047	1	0.218	1	0.641	0.954	0.783 1.162
	Governance	-0.233	3	5.153	1	0.023	0.792	0.647 0.969
	Constant	-0.115	1	1.275	1	0.259	0.892	

a. Variable(s) entered on step 1: Business Registration, Government Services, Taxation, Governance and Security.

The binary logistic regression results showed that Predicted;

Logit of (Invest) = $-0.112 + (-0.037) * \text{Business Registration} + (-0.438) * \text{Government Services} + (-0.047) * \text{Taxation} + (-0.233) * \text{Governance and Security}$. The log of the odds of a person investing was found to be negatively related to predictor variables. The B coefficients for predictor variables were negative indicating that increasing predictor variables score is associated with decreased odds of investing. The Odds ratio expressed as Exp(B) column indicate the overall effect on dependent variable of increasing the predictor variables.

From the results Government Services was statistically significant in predicting whether a youth will invest or not if provided with finances, the overall effect was Wald=17.54 df=1, p=.000. Odds ratio for Government Services is 0.646 indicating that a one unit change in Government Services changes the odds of investing a multiplicative factor of 0.646. Thus, increase in Government Services score rating among the youth decreases the probability of investing by 35.4%. Governance and Security was also statistically significant in predicting whether a youth will invest or not if provided with finances with overall effect of Wald=5.153, df=1, p=.023. Odds ratio for Governance and Security was 0.792 indicating that a one unit change in Governance and Security changes the odds of investing by a multiplicative factor of 0.792.

Business Registration though negative was not statistically significant in predicting whether the youth invests or not. The overall score was Wald=.135, df=1, p=.713. Odds ratio for Business Registration was 0.963 indicating that a one-unit change in Business Registration changes the odds of investing a multiplicative factor of 0.963 . Taxation was also negative but not significant.

4.9.5 Overall Effect of Business Environment and Investment

The study tested whether total score of business environment had any significant effect on investment on financially included youth. The overall effect between predictor variable and responsive variable was tested by use of the likelihood and pseudo-R² values. The results of the study are shown in Table 4.55 where -2 Log likelihood was 559.150^a, Cox & Snell R Square was 0.032 and Nagelkerke R Square was 0.043.

Table 4.55: Strength of Relationship between Overall Business Environment and Investment

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	559.150 ^a	.032	.043

Nagelkerke R Square was considered to explain the relationship and indicated that the Business Environment determined 4.3% of the variation. Hosmer and Lemeshow Test, was used to tests whether he model was a good fitting model. The results of the test indicated a chi-square of 53.434, with 8 degrees of freedom and P value of 0.341 as shown in Table 4.56.

Table 4.56: Model Fit Test for Business Environment and Investment

Step	Chi-square	df	Sig.
1	53.434	8	.341

The H-L statistic was 0.341 and therefore the model of the study is quite a good fit. Wald statistic was used to test the significance of each predictor variables against the dependent variable. The binary logistic regression analysis results are shown in Table 4.57.

Table 4.57: Binary Logistic Regression between Overall Business Environment and Investment

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Business Environment	-.185	.051	13.165	1	.000	.831
	Constant	-.108	.100	1.174	1	.279	.897

a. Variable(s) entered on step 1: B Environment.

The B coefficients was -0.185 while Wald Statistics for testing Odds Ratio, it was 13.165. The log of the odds of a person investing was found to be negatively related to predictor variable. The negative B coefficient for predictor variables indicated that increasing predictor variable score is associated with decreased odds of investing. The Odds ratio expressed as $\text{Exp}(B)$ column indicate the overall effect on dependent variable of increasing the predictor variable.

From the results, Business Environment was statistically significant in predicting whether a youth will invest or not if provided with finances, the overall effect was 13.165, $df=1$, $p=.000$. Odds ratio for Business Environment of 0.831 indicated that a one-unit change in Business Environment changes the odds of investing by a multiplicative factor of 0.831. Thus, increase in Business Environment score among the youth reduces the probability of investing by 16.9%. The study rejects the null hypothesis that, Business environment is not statistically significant in determining investment on financially included youth in Kenya.

4.10 Moderating Effects of Demographic Characteristics on Investment on Financially Included Youth

This study evaluated whether demographic characteristics had any moderating effect on financial inclusion and investment among the youth. Demographic characteristics have been found to have influence on usage of financial services. Demographic characteristics considered in the study included gender, age, marital status, place of residence and level of education.

For gender, male was coded as 1, female 0. Age was put into four categories which were category 1: 18 – 20 years, category 2: 21- 25 years, category 3: 26 -30 years and category 4: 31 – 35 years. Marital status was put into two categories; Married and not Married, coded 1 and 0 respectively.

Place of residence was either urban or rural where rural was coded 0 while urban was coded 1. Highest level of education was put in to four categories; No Formal Education, Primary Education, Secondary Education and Tertiary Education. They were coded 1 to 4 respectively.

The study wanted to evaluate whether demographic characteristics had any significant moderating effects on investments among the youth. To achieve this, the study first did a cross tabulation to see whether there were differences in characteristics of those who had invested and those who had not. A cross tabulation of investment and demographic characteristics shows differences between those who had invested and those had not. The results are as indicated in Table 4.58. The results in Table 4.58 indicate that out of those who had invested, 65.20 percent were male, while only 34.8 percent were female. From all the sampled youths, 30.71 male had invested while only 16.43 percent of female had undertaken investment. Age was also found to have influence on investment. The higher the age group, the higher the investment. The results indicates that 40.90 percent of all the investments were by age group between 31 to 35 years , followed by 26 to 30 years at 35.90 percent, 21 to 25 years at 18.20 percent while age group 18-20 years had 5.1 percent off all the investments.

Investment on marital status also exhibited a difference where out of all the investments, 64 percent were by married persons, while 36 percent were by persons who were not married. Most of the investment as indicated in this study was in the rural area at 73.20 percent. The level of education was also seen to have differences in the investment uptake where 43.40 of the investment were with persons who had tertiary education. This was followed by those with primary education at 27.30 percent, secondary education at 24.70 and finally, 4.5 percent was by the people without education.

Table 4.58: Demographic Characteristics and Youth Investment

		Invested or Not Within Investors as a Percentage		Invested or Not Within Sample as a Percentage	
		Yes	No	Yes	No
Gender	Female	34.80	59.50	16.43	31.43
	Male	65.20	40.50	30.71	21.43
Age	18 - 20 years	5.10	19.40	2.38	10.24
	21 to 25 years	18.20	43.70	8.57	23.10
	26 to 30 years	35.90	15.80	16.90	8.33
	31 to 35 years	40.90	21.20	19.29	11.19
Marital Status	Not Married	36.00	73.10	17.19	38.26
	Married	64.00	26.90	30.51	14.04
Place of Residence	Rural	73.20	74.50	34.69	39.23
	Urban	26.80	25.50	12.68	13.40
Highest Level of Education Achieved	No Formal Education	4.50	10.40	2.15	5.49
	Primary Education	27.30	25.80	12.89	13.60
	Secondary Education	24.70	31.20	11.69	16.47
	Tertiary education	43.40	32.60	20.53	17.18

The results in this study indicate that demographic characteristics were different between those who had invested and those who had not. The probability of a male youth investing was higher than a female as 65.20 percent of all the investments were by male. The higher the age of the youth, the higher the probability of investing. Age group of 18 to 20 years had the least investment of 5.1 percent while most of the investments, 40.90 percent were with the highest age group of 31 to 35 years. Probability of a married person investing was higher

than a person who is not married. The same applied to a person living in the rural area. On level of education, it was noted that those with tertiary education had a higher probability of investing compared to other groups. Table 4.59 indicates the chi-square of demographic characteristics and investment. Table 4.59 shows values of Pearson Chi-Square and Continuity Correction for 2x2 table, degree of freedom for each Characteristic and significance levels. The results indicate that Gender, Age, Marital Status and Level of Education P value was less than 0.05. For Place of residence, P value was more than 0.05.

Table 4.59: Chi- Square of Demographic Characteristics and Investment

Demographic Characteristic		Value	df	Asymp. Sig. (2-sided)
Gender	Pearson Chi-Square	25.403 ^a	1	.000
Gender	Continuity Correction ^b	24.426	1	.000
Age	Pearson Chi-Square	68.635 ^a	3	.000
Marital Status	Pearson Chi-Square	57.430 ^a	1	.000
Marital Status	Continuity Correction ^b	55.938	1	.000
Place of Residence	Pearson Chi-Square	.093 ^a	1	.760
Place of Residence	Continuity Correction ^b	.038	1	.846
Level of Education	Pearson Chi-Square	9.603 ^a	3	.022

a. 0 cells (0.0%) have expected count less than 5.

b. Computed only for a 2x2 table

The results in Table 4.59 indicate that Gender with Chi-square = 24.426, df= 1, p = 0.000. This means that the differences of gender between those who had invested and those who had not invested were statistically significant. For age, Chi-square = 68.635, df= 3, p = 0.000, indicates that was a statistically significant difference between the various age

groups and investment. The levels of education were statistically different between those who had invested and those who had not. For level of education, chi-square = 9.603, df = 3, p=0.022. This indicates that, change of level of education among the youth will influence the probability of whether the youth will invest or not. Being married also influenced the probability of a person investing as chi= 55.938, df = 1, P value=0.000. Place of residence was found not to be statistically significant in influencing probability to invest as chi= 0.38, df = 1, p=0.846.

Having confirmed that there were differences in demographic characteristics between those who had invested and those who had not, this study tested whether they had any moderating effects on investment. The overall model was used to test the moderating effect. This was achieved by adding the moderating variable to initial model and also introducing interactions between the various demographic characteristics. It has been indicated that, demographic characteristics have effect on financial decision making (Ellis, et al, 2012; Hsu, 2011; Johnson and Arnold, 2012; Kenichiro, & Hideki, 2012; Mwangi & Kihiu, 2012; World Bank, 2014).

To establish whether demographic characteristics have moderating effect between investment and the explanatory variables three models were to be estimated. First, moderation was estimated as the base model to determine the relationship between the dependent variable and the independent variables.

$$p = \frac{e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4}}{1 + e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4}}$$

Where

FC = Financial Capability

SC = Social Capital

ICTC = ICT Capability

BE = Business Environment

Second, moderation is captured by estimating multiple regressions models as specified where moderating variable is included as an explanatory variable.

$$p = \frac{e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4 + \beta_5 DC_5}}{1 + e^{\beta_0 + \beta_1 FC_1 + \beta_2 SC_2 + \beta_3 ICTC_3 + \beta_4 BE_4 + \beta_5 DC_5}}$$

Where

FC = Financial Capability

SC = Social Capital

ICTC = ICT Capability

BE = Business Environment

DC = Demographic Characteristics

Finally, moderation is estimated to give the direction and effect of the moderator on the independent variables and its total effect on the dependent variable. This is done by getting a product of explanatory variable and moderating variable.

$$p = \frac{e^{\beta_0 + \beta_1 FC_1 * DC + \beta_2 SC_2 * DC + \beta_3 ICTC_3 * DC + \beta_4 BE_4 * DC}}{1 + e^{\beta_0 + \beta_1 FC_1 * DC + \beta_2 SC_2 * DC + \beta_3 ICTC_3 * DC + \beta_4 BE_4 * DC}}$$

Where

FC*DC = Financial Capability * Demographic Characteristics

SC*DC = Social Capital * Demographic Characteristics

ICTC * DC= ICT Capability * Demographic Characteristics

BE*DC = Business Environment * Demographic Characteristics

The results of moderating effect are indicated in Table 4.60. The first model with independent variable only had -2 Log likelihood of 477.436, Cox & Snell R Square was 0.193 and Nagelkerke R Square was 0.257. With inclusion of demographic characteristic, age, as an explanatory variable, -2 Log likelihood changed to 414.683, Cox & Snell R Square was 0.308 and Nagelkerke R Square was 0.411. With education as moderating variable, the statistics changes to -2 Log likelihood of 474.328, Cox & Snell R Square was 0.197 and Nagelkerke R Square was 0.263. The study then introduced the interaction of each demographic characteristic with the explanatory variable. The demographic characteristic with interaction that had the highest moderating effect was Education,

when interacting with ICT Capability. The -2 Log likelihood was 460.387, Cox & Snell R Square was 0.224 and Nagelkerke R Square was 0.299.

Table 4.60: Moderating Effect of Demographic Characteristics on Investments

	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Hosmer and Lemeshow Test		
				Chi-square	df	Sig.
Overall Model	477.436 ^a	.193	.257	12.071	8	.148
Overall Model and Age	414.683 ^a	.308	.411	10.981	8	.203
Overall Model and Gender	462.158 ^a	.222	.297	21.551	8	.006
Overall Model and Education	474.328 ^a	.197	.263	6.781	8	.560
Overall Model and Marital Status	422.718 ^a	.282	.376	14.813	8	.063
Overall Model and Residence	475.538 ^a	.194	.259	14.920	8	.061
Overall Model, ICT Capability*Education	460.387 ^a	.224	.299	9.025	8	.340
Financial Capability and Age	490.206 ^a	.185	.247	14.149	8	.078
Financial Capability*Age	488.010 ^a	.190	.253	12.156	8	.144
ICT Capability and Age	478.378 ^a	.198	.264	9.863	8	.275
ICT Capability*Age	548.957 ^a	.047	.063	3.830	8	.872

^a Estimation terminated at iteration number 4 because parameter estimates changed by less than .001

The results shows that all the interacted independent variables are jointly significant and influence the dependent variable. The introduction of demographic characteristic in the

models changes the strength of relationship from 25.7 percent to a high of 41.1 percent. Similarly, introducing the interaction of individual demographic characteristic influenced the relationship positively. With interaction, Nagelkerke R Square changes from 0.257 to 0.299 for Education which had the highest influence. This means that 29.9 percent of the variation was determined by the variables of the study and improvement from 25.7 percent. There was an improvement in the relationship with the introduction of the various interactions in the model. Hosmer and Lemeshow Test indicated that the models were fitting except for moderating effect of gender on the overall model which was 0.006.

The study therefore rejects null hypothesis that, Demographic characteristics are not statistically significant in moderating investment on financially included youth in Kenya

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter discusses the findings of the study and relates them to studies by other researchers. It discusses the level of financial inclusion among the youth and the investment undertaken by the youth. The relationship between independent variables and dependent variable are then discussed as per each objective of the study. In this chapter, conclusion is provided as per for each hypothesis while recommendations are drawn in relation to the objectives of the study. Finally, a suggestions areas for further study has been provided.

5.2 Discussion of the Findings

The main objective of the study was to find out the determinants of investment of financially included youths in Nyeri and Kirinyaga Counties. To accomplish this objective, this study evaluated the level of financial inclusion of the youth and the investment they were undertaking. The study then tested the effects of the independent variables on investments by youth. This section thus starts by discussing the level of financial inclusion and investment among the youth. The study then discusses the effect of financial capability, social capital, ICT capability and business environment on investment among the youth. The section finally discusses the moderating effect of demographic characteristics on investment.

5.2.1 Financial Inclusion and Investment Among the Youth

The general objective of this study was to establish the determinant of investment on financially included youth in Kenya. To arrive at the results, this study first evaluated financial inclusion levels among the youth. This was to confirm whether the level of financial inclusion among the youth was in tandem with national financial inclusion levels that have been high. The study then evaluated investments among the youth to find out the level of investment among the youth and whether the increase in financial inclusion improves the levels of investment.

The results of this study found that 77.8 percent of the youth had an account with at least a commercial bank, cooperative society or microfinance. The study also found that 81 percent had access to financial services from formal institutions via mobile phone. On average, 92 percent had access to financial services from formal institutions via commercial bank, cooperative society, microfinance or mobile. The study noted that, for those who had access to financial services from formal institutions via mobile phone, at least 63 percent had used the mobile account for saving.

This study agreed with other studies that have shown that financial inclusion has been growing overtime. Ellis et al., (2010) in a study on financial inclusion noted that about 70% of the respondents had some savings of some sought. FSDK (2013) studied financial inclusion in Kenya and the study noted that at least 65% of the Kenyan population was using digital financial services. InterMedia survey (2014) also found that a survey that was carried out in September 2014 showed that about 74 percent were financially included.

To add to the debate on financial inclusion in Kenya, World Bank (2014) rated financial inclusion in Kenya at 75 percent that compared favorably with global average that was 44 percent. The same study indicated that Kenya was ahead of all other countries globally in terms of mobile money and this is what has been giving Kenya an edge in financial inclusion performance. The high levels of financial inclusion through mobile phone were also noted in this study.

More recent confirm that increase financial inclusion has continued to grow with agrees with the results of this study. Villasenor et al., (2015) in a study on measuring development on financial access and usage in 2015 indicated that 76% of the citizens were included. This study ranked Kenya position one out of twenty one countries that were included in the study. Kenya scored 89 points out of 99 possible points. Kenya was ranked higher above countries like South Africa, Brazil, Columbia, Chile, Mexico, and Turkey among others. FinAccess (2016) has indicated that 75.3% of Kenyan adults are now included and that those who had bank accounts had opened for savings purposes. The results of this study thus fully agrees with other studies on financial inclusion in Kenya and especially FinAccess (2016) study whose data was collected in early 2016, almost at the same period with this study.

The use of mobile to undertake savings was high in this study which noted that at least 63 percent have used the mobile account for saving. Mobile money have been seen a driver of savings which can later be used for investment purposes. Johnson and Arnold (2012) noted mobile money as an avenue of saving where it was indicated that as more and more people use mobile money to transact, at least 75% used the same to put some savings.

Another study by Demombynes and Thegeya (2012) have shown that enrollment in mobile money transfer, M-Pesa has seen the increase in likelihood of saving increase by 20 percent. The average savings by people who save through M-Pesa only is Kshs 1,305 per month, while those who save through bank accounts only is Kshs 2,282 per month. Among those who save through bank and through M-Pesa, the savings averages Kshs 2,959. With 63 percent of the respondents indicating that they have used mobile money to save, it clearly indicates that this study agrees with other studies on financial inclusion in Kenya.

Financial inclusion policy makers have articulated the objectives of financial inclusion in the belief that financial inclusion can assist poor households develop their lives and stimulate economic activity (Cull et al., 2014). The theory of income and inequality hold that access to finances is related to reduction in inequality gap among the citizens. Various studies have confirmed that financial inclusion has a positive effect on investment. Savings through formal financial institutions helps households manage cashflow imbalances and smooth consumption, as well as build working capital. According to researchers, it is more difficult for poor households without access to a savings mechanism to resist immediate spending temptations.

A number of researchers have confirmed the effect of financial inclusion on investment. To start with, commitment savings in Malawi that showed positive effects on business investment and this was in agreement with financial liberalization theory (Brune, Gine, Goldberg & Yang, 2013). Similarly, access to a commitment savings account had positive impacts on female empowerment in the Philippines. Due to the enhancement of

capacity in commitment savings, self-reported household decision-making increased, particularly for women with little decision-making power at the baseline. This resulted to a shift towards female-oriented durable goods purchases in the household (Ahsraf, Karlan & Yin, 2010).

This study then evaluated the level of investment of the youth. To assess the level of investment, this study requested the youth to indicate whether they had undertaken any investment among operating a business, farming project, investing in financial market or bought an asset with expectation of income from the asset. The questions allowed the youth to give all the investments he/she was undertaking or had undertaken if more than one type of investment. This study found that 47.1% had undertaken some kind of investment while 52.9% had not. It could be expected that more than 47.1% youth would have invested as they had access to finances.

If youth leverage on the potential of financial inclusion, they can be able to invest, create employment, and improve themselves economically. Where there is high financial inclusion, it would be expected that people will be able to involve themselves in income generating activities and move out of poverty. However, youth who were not in any employment were 53.7 percent, yet they are not taking advantage of financial inclusion to create employment for themselves.

To build further on the economic status of the youth, the study assessed the average income of the youth. It was noted that the average income of the youth was Kshs 9, 089 per month that translates to about Kshs 303 per day which is low. The results also

indicated that about 17.9% were not earning while 29% were earning less than two dollars a day. FSD (2013) noted that the average consumption of a rural household is about Kshs 6,000 per month. This means that about 46% of the youth sampled in this study cannot be able to meet their budgetary requirements and set aside some money for saving. It could be expected that these youth would look for way out of the economic disadvantage by investing. However, though financial inclusion was high among the youth and in tandem with national levels, usage of financial inclusion for investment was low.

The findings of this study are contrary to the theory and other studies that have indicated financial inclusion have had positive effect on investment and reduction in poverty in other countries. Finance and inequality theory indicates that access to finance helps in minimizing the income inequality gap. McKinnon and Shaw (1973) the liberalization theory indicated that, with liberalized financial market, poor people are able to access finances for investment purpose and this may minimize poverty and unemployment. The results of this study indicate that the objective of the financial inclusion towards investment has not been achieved fully in Kenya as per the theories.

Evidence has shown that increase in investment was related to increase in financial inclusion. World Bank (2014) found that access to credit was associated with a decline in observable measures of poverty. It was noted that a bank regulation in India required banks open four branches in unbanked locations for every new branch opened in an urban area (Burgess & Pande, 2005). An evaluation of impact of the regulation indicated that bank branching regulation had a substantial impact on poverty reduction. Bruhn and Love

(2013) noted that this regulation on increase in branch openings in India led to a 7.6 percent rise in the proportion of individuals who run informal businesses.

With financial inclusion, people are able to access credit. Access to credit has been indicated to help investments in assets that enable individuals to start or grow their businesses (Cull et al., 2014). Another study by Augsburg, de Haas, Harmgart, and Meghir (2012) noted that there is evidence that credit both spurred new business creation and benefitted existing micro businesses in Mongolia and Bosnia. World Bank (2014) found positive effects from access to credit on a variety of indicators, including the income of existing businesses (India, the Philippines, and Mongolia), business size (Mexico), and the scale of agricultural activities and the diversification of livestock (Morocco). This clearly indicates that providing saving and credit facilities can enhance investment among the youth (Cull et al, 2014). Ellis et al (2012) concluded that, there is a strong link between access to formal financial services and investment. The same would be expected from increase in financial inclusion in Kenya. However, there is no significant increase in household investment among the youth emanating from financial inclusion in Kenya.

Although the results of this study are contrary to theory and evidence from other countries, they compare favorably with other studies on usage of financial services towards investment in Kenya. Mwangi and Sichei (2011) on a study on access to credit noted that those who accessed financial institutions for investment from formal financial services were only 6.24%. Ellis et al., (2010) again indicated that, out of 44% who had borrowed loans from banks, only 24% had used the money for economic generating

activities. This is an indication that most of people do not take up loans for investment. World Bank (2008) had similar results where few people borrow for investment purposes. The research argued that entrepreneurs especially in developing countries might be reluctant to take up loans that require pledging personal assets as collateral. Ndi (2011) also argued that there was a significant rise in consumption-related credit at the expense of credit for investment purposes.

Beck et al., (2008) noted that there is limited evidence for a broad poverty-reducing effect of microcredit among the poor in Kenya. The study argued that this could be because a large proportion of microcredit was being used for consumption purposes. They further argued that credit to the poor is to meet day-to-day needs, emergency needs, education and consumption. This agrees with study done by Attanasio et al., (2011) who found about half of all microcredit business loans in Mongolia are used for purposes associated with the household, such as the purchase of domestic appliances. Ndi et al., (2011) also noted that not all that was borrowed that ended to income generating activities including money remitted from abroad.

Where people are not using formal financial services they result to using their own saving or other means to finance their investment. In this study, majority of the respondents who were undertaking investment indicated that the main source of capital was own savings. This is contrary to finance and inequality theory that indicates that where access to credit is not limited to initial wealth, people are expected to borrow for investment purposes. Similar findings were by Musau and Gakuu (2013) who also noted that, the main source of funds for investment among the youth was personal savings. They concluded that

despite there being sources of funds for youth, they mostly relied on their savings and loans from relatives. This limits their potential because their savings could be limited.

Despite financial inclusion being high, there is a missing link between financial inclusion and usage of all facilities provided by financial inclusion especially on borrowing. This missing link was also noted in other studies. This especially access to credit as indicated by finance and inequality theory, financial liberalization theory and financial intermediation theory. To start with, World Bank (2016b) noted that the low level of investment among the youth was due to high dependency ratio of the youth. It was noted in the same study that, in the developing economies where the level of financial inclusion was 44%, 34% of the citizens had loans from the banks.

World Bank (2016b) further noted that, for the developed economies where financial inclusion was 89%, those who had borrowed were 51%. Holding other factors constant, it would be expected that at least 57.9% of the youth would have some loan from bank from investment. However, this is different as the youths who had borrowed are half this figure as it was only 29% who had indicated to have borrowed from financial institutions. Similar findings on low borrowing was on a study by Ndii (2011) which also noted that, though there is much focus on lending especially to the youth and women, the loan uptake was still low.

Other comparison on culture of borrowing for investment purposes in Kenya indicate similar trend. World Bank (2014) indicated that Kenyans who had bank account were 42.9%, while the borrowing as a percentage of GDP was 30.1%. Comparing this with

South Africa, an African country whose levels of financial inclusion compares favorably with Kenya indicated that South African adults with banks were 53.6% while borrowing was at 72.4% of GDP. Similarly, countries that are at comparable level with Kenya in terms of financial inclusion, do better in terms of borrowing. Colombia where bank accounts were 30.4%, borrowing was 31.2% of GDP, Chile, bank accounts 42.2%, and borrowing 64.6% of GDP. This disparity between financial inclusion and usage of financial services for investment is seen from different perspectives and it is reflected among the youth.

FSDK (2013) noted that despite the increase in financial inclusion, the poorest have shown weaker gains. The question that arises from the finding of this study and the discussion there on is; what are the determinants of investment in a financially included population. The youth are not taking advantage of financial inclusion and take up investments the way it would be expected.

5.2.2 Effect of Financial Capability on Investment on Financially Included Youth

To test for financial capability, the first method relied on self-assessment where the respondents were requested to evaluate their financial capability skills as well as providing their attitudes toward financial decisions, knowledge and information. The second method relied on the objective tests that assessed the respondents' knowledge of financial terms, understanding of various financial concepts and ability to apply numerical skills in particular situations related to finance decision-making.

The first measure of financial capability was the youth awareness of the various financial products offered by financial institutions. The study found that most of the respondents

were aware of the various financial products with an average of 68 percent awareness. The product where the youth were least aware of the product was mortgage at 79.3 percent. Binary logistic regression analysis indicated that financial product awareness was positively related to investment and thus, as awareness increases, probability of investing increases.

The high levels of awareness of financial products were expected. The increase in marketing of financial products by both financial institutions and the government on the benefits of financial products has resulted to this increase (InterMedia, 2014). World Bank (2014) noted that reliance on advertising is more pronounced in rural settings, where consumers usually have less experience with financial services. The studies noted that in Azerbaijan and Romania for example, more than one-third of rural consumers rely on advertising for their financial product information. A study on education-entertainment programme in South Africa indicated that the media has a high power to capture the attention of individuals. This influences financial knowledge and behavior of the viewers. Education-entertainment programmes are employed by many banks in Kenya and this has contributed to high levels of financial products awareness.

In agreement to this study was Xu and Zia (2012) who also noted that there is a correlation on availability of information on financial products, the awareness and usage of the same in Kenya. This study by Xu and Zia (2012) further noted that radio was the most common source of financial information to the general population. The youth had greater access to television and other media. The reliance of the youth on radio, television

and other electronic media and the increased advertisement by financial institutions and the government may have had a big impact of financial knowledge among the youth.

The second measure of financial capability was objective test scores. The study used various financial concepts that included arithmetic, calculation of interest, inflation and risk diversification. The financial capability by use of this measure was poor as only 24.7 percent of the respondents could get all the questions correctly. The study was in agreement with other studies on financial inclusion using the four test parameters have indicated financial capability to be low (Xu & Zia, 2012). Respondents have been found to perform worse on calculations of compound interest and in testing of understanding of inflation. Lusardi and Mitchell (2011) found that only about 65 percent of respondents in the U.S. answered correctly the question on compound interest and inflation while only half were able to answer the question of risk diversification correctly. Similar pattern of the response were by Sekita (2011) for a study carried in Japan, Almenberg and Save-Soderbergh (2011) a study carried in Sweden.

The third measure of financial capability was by use of self-evaluation of the respondents' financial behavior. On overall, the results indicated that financial capability among the respondents was below average of 2.5 of the five possible score. This is in agreement with other studies that have indicated low level of financial capability in the country. Mwangi and Kihiu (2012) on their study on impact of financial literacy on access to financial services in Kenya noted that financial capability was low in Kenya and remains low in most countries. This study further established that financial inclusion

among people with low financial capability was low indicating that, this segment of the society is not able to leverage on the potentials of financial inclusion.

The results in this study were not exceptional as youth have been found to have low financial capability compared to other age groups. For instance, Van Rooij, Lusardi and Alessi, (2007) noted that the basic financial capability is negatively skewed with regards to age. For advanced financial capability, the study noted that it is low among the young, then increases and it is high among middle-age respondents between 40 to 60, and it declines at an advanced age of 61 and above.

Another which found the level of financial capability to be low was by Atkinson, McKay, Collard and Kempson (2007). The study was carried out to establish a baseline measure of financial capability where 5,328 respondents aged 18 years and above were used. The study used four domains that included managing money, planning, choosing products and staying informed. The study found that younger people, those on low incomes, those with children and those with poor levels of education, literacy and numeracy are most likely to have low levels of financial capability. Thus, low levels of financial capability among the youth were not an exceptional.

The objective of the study was to test whether the financial capability determines investment among the youth. For the sub-variables, Financial Measures, Financial Discipline and Financial Management Skills were found to be positively related to investment and statistically significant in determining the probability to invest. For the

combined effect, the study noted that financial capability was statistically significant in determining the probability to invest.

This study found that, financial capability is a key determinant in financial decision-making. Financial capability helps individuals to use financial services to their advantage. In support of this was World Bank (2008) where it was noted that financial capability helps individuals make good decisions from the expanding financial services. Thus with higher levels of financial capability, the individuals will be able to make good financial decisions. Individuals will be able to take advantage of financial services and undertake economic activities when they are provided with financial services (World Bank, 2014). However, without financial capability, the effects of financial inclusion as per financial intermediation theory will not be realized.

World Bank (2014) noted that financial capability is lacking in developed and developing countries while the low-income countries are affected more. The study indicated that, in some instances, people with lower level of financial capability are found to be borrowing to meet basic needs as compared with people with financial capability. This study found that financial capability was low among the youth. Xu and Zia (2012) on their study on financial literacy across the world noted that financial capability was low among the youth compared to older people. The low levels of financial capability could be the reason as to why those who have taken up investments are few despite the high levels of financial inclusion. With low levels of financial capability, financial inclusion may never achieve the intended objective.

The positive relationship between financial capability and decision making has also been found by other scholars. To start with, Cole, Sampson and Zia (2011) noted the higher the level of financial capability a person has, the more the person was able to use financial products for economic benefit. The findings further noted that financial capability intervention had a bigger impact on people without education and for those who started with lower levels of financial literacy. Another study by Mbarire and Ali (2014) on determinants of financial literacy in KPA employees noted that the level of financial literacy was low among the employees and positively related to decision making. The study was from the fact that there were many financial products in the market and the employees were not able to make sound financial decisions.

Further, a study by Githui and Ngare (2014) also confirmed the positive relationship between financial capability and financial decision-making. The scholars carried out a study on the effect of financial capability on retirement planning in Kenya a facet of investment. The study noted financial capability was low in Kenya. The study also noted that financial capability had a positive impact of financial decision-making. The results indicated that the probability of a financially illiterate person having no retirement plan was significantly high. Zakaria and Sabiri (2013) on a review of financial capability studies noted that young people lack financial understanding and they are unable to make adequate financial decisions. The youth are thus not confident enough to take full advantage of the financial sector. Those who lack financial capability find themselves in risky situations as they are not able to budget effectively and they get into unattainable debts.

The findings of this study clearly indicate that, low financial capability may lead to suboptimal decisions. This was a view held by World Bank (2014) where it was noted that lack of financial capability leads to poor decision making. Consumers are ignorant of the features of various financial products and they leave the financial institutions to exploit them. The study further noted that financial capability leads to inefficient consumer credit market outcomes and over-indebtedness. This has made the poor to shy away from financial institutions for credit. Another study with similar finding on poor usage of credit was by Agarwal, Driscoll, Gabaix and Laibson (2009). The study was on 128,000 credit card holders and it was found that 28 percent of individuals make mistakes and they pay extra penalties. Further, Ellis et al., (2010) noted lack of financial capability was impeding the usage of financial services by Kenyans towards usage of financial products as they make poor credit decisions.

Lusardi and Mitchell (2011) also indicated that financial capability had an effect on decision-making. The study showed that those who display low financial literacy are less likely to plan for retirement and as a result accumulate much less wealth. Thus, individuals are not able to take advantage of financial inclusion when financial capability is low. In some situations, financial service providers exploit the low level of financial capability and sometimes individuals pay higher interest rates than they should.

A number of other studies have also confirmed that financial capability among individuals really made an impact on financial behavior. The studies have indicated that, low levels of financial capability have been the reason for portfolio under-diversification and inadequate stock participation (Van Rooij et al., 2007). It also results to

unpreparedness for post-retirement retirement plans, poor investment decisions (Al-Tamimi & Bin Kalli, 2009), irresponsible financial management behavior (Memdani, & Rajyalakshmi, 2013; Perry & Morris, 2005).

Low levels of financial capability also results to poor financial practice behavior (Robb & Woodyard, 2011), irresponsible credit card usage (Hsu, 2011), inability to make informed financial decisions (Chen & Volpe, 1998) and unimproved household financial management behavior (Hilgerth, Hogarth, & Beverly, 2003).

Without financial capability, the youth may not be able to realize the effects of financial inclusion. The prospects of financial and inequality theory may not be realized. This even with the fact that the market has been liberalized and the financial intermediation is high due to use of ICT. Actually, financial liberalization theory indicates that when the market is liberalized and left to the forces of supply and demand, the financial market will grow and this will enable individuals access finances whenever they want.

Finance and intermediation theory also indicates that, financial intermediaries are able to link lenders and borrowers and this will enhance borrowing and lending in the economy. With the prospects of these theories achieved, it would be expected that individuals would have borrowed and this would have minimized the poverty levels. However, due to low levels of financial capability, youths are not able to borrow and invest as expected.

5.2.3 The Relationship between Social Capital and Investment on Financially Included Youth

Social capital can be viewed to constitute six dimensions which includes; groups and networks; trust; collective action and cooperation; social cohesion and inclusion;

information and communication; and empowerment and political action (Hamdan et al., 2014). This research focused on four dimensions of social capital that link to development on quality of life. The four dimensions considered in this study are groups and networks, empowerment and political action, collective action and cooperation, and social cohesion and inclusion.

As a way of evaluating empowerment and political action among the youth, the study used leadership roles. The low leadership among the youth is attributable to a number of reasons. First, youth are usually in the development stage of their lives (Paaskesen & Angelow, 2015; Schaefer-McDaniel, 2004). At this time, they have not developed enough trust from the members of the community and their peers (Paaskesen & Angelow, 2015) and thus, they are less likely to be entrusted with responsibilities. People have more trust with those who are mature and this disadvantages the youths, and hence they are less involved in leadership. It has also been noted that to assume some leadership positions requires finances. The youth are relatively poor compared to adults and in that case, the youth are disadvantaged. Another contributor to assuming leadership is individual network. The network of the youth is low and this again disadvantages the youth (Paaskesen & Angelow, 2015).

Involvement in leadership role increases the social capital of a youth. Mahinda (2004) further noted that those who are in leadership have an advantage of interacting with people who add value to their social network. During decision making in the meetings, people share ideas that help in improving decision-making capability. Kangogo et al., (2013) noted that participation in meeting helped the youth gain knowledge in finance

matters and thus the social capital increases. Ayamaga, Sarpong and Brempong (2006) also argued that leaders have a chance of networking with other leaders and this increases the social capital.

Mahinda (2004) noted that access to opportunities depends with social capital. The study noted that, it is not about what one knows but who he or she knows. The youth have few resourceful networks. Most of persons in their network are their friends whom are also at the development stage of their lives. The study concluded that social capital play a key role in accessing resources and employment and creates unequal opportunity among the youth. It was noted that the youth who have network early enough in their live are able to work to their economic benefit.

On group membership, the youth who are in groups was high. The number of group membership was found to be in agreement with similar study by Kangogo et al., (2013) who found group membership to be between 1 group and a maximum of three (3) groups and an average of two (2) groups, and 72.7% were members of a group. The number of high groups' membership is attributed to a number of factors. First, the government has provided funds that can be lent to vulnerable persons in the society (Gacharu & Mwirigi, 2014; Kaane, 2014). This includes youth, women and people with disabilities. To access these funds requires that people be in a group. This has seen majority of youth joining groups so that they can access these funds (Kimando, Njogu & Kihoro, 2012).

Second contributor of high membership was due to a number of microfinance that targets the women and youth in the society. The microfinance institutions practice group lending

in the society and thus for the youth to access the funds, they are required to form groups. This is because the youth and women lack collaterals and they cannot secure loans on their own. Ayamaga et al., (2006) noted that a female joining a group was 28.1 percent higher than male. The reason for this was that since female household do not have/own the collaterals required to borrow from formal financial institutions such as title deeds, they are forced to join borrowing groups. The same applies to the youth who are not endowed with collaterals and thus for them to access credit, they are forced to join groups. Kangogo et al., (2013) again in their study found that the financial institution structure has been found to influence group membership in a country. Some institutions requires members to be in a group for them to access credit and thus many members join groups in order to benefit.

In support of high number of membership in groups, Nguyen (2007) found that younger household who often lack capital join micro-credit groups to access formal credit as compared to older households who often have more assets, reputation and meet the requirement for getting formal credit. Actually, as age increases the probability of being in group decreases as one continues accumulating more wealth and social network and thus the person is able to access credit and other economic opportunities on their own.

The third reason for high membership is from government initiative to help the youth. Government realized that the youth are disadvantaged due to lack of capital and thus they are not able to compete with already established companies in the government and other public entities for contracts. The government thus provided business opportunities for the special groups; youth, women and persons with disabilities. The government reserves

procurement opportunities for these groups where each public entity is required to reserve at least 30% of its annual procurements to the special groups (The Public Procurement and Asset Disposal Act, 2015). This has seen youth forming groups in order to enhance their capacity and be able to take advantage of the available opportunities, and thus the high membership of youth in the groups (Kimando et al., 2012).

The study then evaluated collective action and cooperation, and social cohesion and inclusion. This noted that social capital by use of these two parameters was low among the youth. In agreement with this was a study by Miller (2001) who noted that most of the youth are disadvantaged in working with others in the community since at this time, they have not joined the already established community organizations. The trust in organization increases with interaction with people for a reasonable period. However, the youth are considered not stable as at this time, they are trying to look for job and trying other means of starting their lives. Due to this, they are not accommodated in the community association with ease (Mwangi & Ouma, 2012).

It was further noted that, at early stages of life, the youth usually interact with people of their age who belong to almost similar economic status. Thus, those youth who are economically advantaged, interact with people of higher economic status. Since majority of the youth are disadvantaged economically, their social networking was similarly low. Persons who are poor but able to network with people of higher economic status are able to improve their social capital and in the long run move out of poverty (Mwangi & Ouma, 2012).

On the relationship between social capital and investment, the results of the study indicated that all variables of social capital were positively related to investment. An increase in the level of social capital increases the probability of investing. The level of social capital has been related to economic decision-making, the higher the social capital the sound the decisions that are made.

Empowerment and political action were found to be positively related to investment and statistically significant. This indicates that those youth who are in leadership roles have higher chances of investing compared to those who are not in any leadership position. The study were in agreement with Mahinda (2004) who noted that those in leadership position had higher levels of social capital which was helping them make better decision in life. Ayamaga et al., (2006) also noted that, when one joins leadership position, they are able to increase networks and leverage on the network for the economic benefits.

Group membership was also positively related and statistically significant in determining investment. Youth who are in groups had a higher probability of investing compared to their peers who were not in groups. Nguyen (2007) noted group participation increased economic decision-making capability. Those in groups are better placed to undertake economic activities compared to their peers who are not in groups. Several activities occur during the scheduled meetings, including loan payments, group cash contribution, issuing new loans, training in group operations and the importance of group solidarity, and monitoring of loan repayment by all members. This information has been found to have a positive effect on decision making of the group members. Thus those youth who

belong to group benefits from this kind of information and they perform better in financial decision making including investment (Kangogo et al., 2013).

During group meetings, members share ideas in the group, evaluate options and come up with investment decisions as a group. The decision-making skill gained from the group is again used for individual decision-making. Tabi (2009) as cited by Kangogo et al., (2013) noted that, efficient and equitable groups are those that allow participation of members in the decision-making processes, as well as the sharing of benefits and costs. The decision making process has benefits to the members in the group and even on their individual capacity.

Collective action and cooperation was also positive and statistically significant in determining whether a youth will invest or not. This agrees the Marshall and Oliver (2005) study which noted that working with others in the community increased social capital and economic wellbeing of the person. Similar results were by Mwangi and Ouma (2012) that indicated social capital was related to economic welfare of a person.

Collective action and cooperation with others in the community and at family level has been found to positively influence the success of individual economically. Chrisman, Chua, and Steier (2002) suggested that understanding the effects of family on new venture creation have proved more important than any other cultural factor. Davidsson and Honig (2002) also found strong correlation between being an entrepreneur and having relatives who were also in business for themselves. Within the same study, it was

also found that having encouraging, close friends or neighbors in business for themselves also had a positive effect on an individual participating in the entrepreneurial process.

Finally, social cohesion and inclusion was found to be positively related to investment. Marshall and Oliver (2005) noted that the people and close friends influence decisions of a person. People tend to follow what their close friends are doing and thus those who have friends undertaking investments end up investing too. However, social cohesion and inclusion was not significant. This could be to the fact that not all social interactions that influence positive behavior (Marshall & Oliver, 2005). There is the aspect of negative peer pressure, which may influence people to undertake actions that do not add economic benefit to their lives.

The overall effect of social capital on investment was positive and statistically significant. Thus, as social capital increase, the probability to invest also increases. The positive relationship between social capital and investment has been confirmed by a number of studies. FSD (2014) on their study on indigenous financial concepts and practices and their implications for financial inclusion indicated that people become 'real friends' when they provide support to each other. In the study, banks loans were noted to catapult to the center of the respondent's social network. The study also noted that joining of savings groups and merry-go-rounds were also perceived to be uplifting members' economic status and thus they were placed at the heart of respondents' social network.

According to FSD (2014), members indicated that saving in a group context was much more effective than on an individual basis because of the social control that is there in a group setting. The members believed that they were expected to look after each other and to boost the well-being of all members. This kind of setup ensures that the members encourage each other to save and they check each other's financial requirement. Thus, due to the social network, the members of a group on average tend to perform better economically compared to those who do not belong to any group. This demonstrates the relationship between social capital and investment which was also established by this study.

Another study that supports the results of this study were by Kimando et al., (2012). The scholars carried a study on factors affecting the success of youth enterprise development funded projects in Kenya; a survey of Kigumo district, Muranga county. The study noted youth network plays a critical role in youth success in economic matters. While the National Youth Programme and other programmes, such as Youth Enterprise Development Fund (YEDF) and Kenya Youth Empowerment Project (KYEP), encourage youth to network and form groups, the new law could lead to more members joining groups. The regulation in these funds has supported the increase in group membership. In fact, lending the funds reserved for the youth by the government requires the youth to be in groups (Kimando et al., 2012). For the members to access the funds they have to be in a group due to recognition of the roles played by social capital. Even where the funding is on best –first principal in lending as per finance and inequality theory theory, repayment has to be guaranteed and group lending comes in handy.

In support of economic wellbeing, social capital seemed to play an integral role in the success of the entrepreneur than did human capital according to Marshall and Oliver (2005). The two studied the effects of human, financial, and social capital on the entrepreneurial process for entrepreneurs in Indiana. This was in support of a study by Davidsson and Honig (2003) who had similar results also observed that social capital plays a critical role in the success of investment. It was indicated that social capital at times plays more important role than human capital. This supports the finding of this study where social capital was positively related to investment and statistically significant.

Another indication of social capital and growth which agrees with this study was by Kangogo et al., (2013). Their study noted a positive relationship between experiences in group borrowing which was measured by the number of years one has been participating in the group. The relationship was found to be significant at 1 percent level with a positive coefficient. This implies that the more a person participates in a group, the probability of the person borrowing for investment increases. The person is then able to benefit from credit facilities for economic benefits. The increase of social capital in this case increases the probability of investing.

How active is involved with others in the community determines how one will be economically as it was demonstrated the results of this study. It is not just belonging to a group but being active in the group. Kangogo et al., (2013) noted that attendance to meetings was significant and positively influenced the loan repayment performance. The paper noted that all factors remaining constant, a unit increase in the group meeting

attendance index increased member loan repayment performance by 0.5 percent. The high repayment was indicated was because those who attended meetings increases networks, gain skills and acquired better farming and business skills leading to higher productivity and hence improve their repayment performance. It was also noted that, group meetings fosters commitment and trust among members.

Bruhn, Leao, Legovini, Marchetti and Zia (2013) as cited by World Bank (2014) also noted a positive relationship between social capital and financial behavior among young people. They carried out a study where they used parents in a student's savings programme in Brazil. Parents were selected at random where the parents and students were taught on health issues and financial matters. The study noted that, where the parents participated in the training, and encouraged their children on importance of savings, the savings increased by 2.5 percent. These finding are in agreement with the findings of this study.

This study noted that those who were in groups had quality life. Hamdan et al., (2014) noted the same on a study carried on social capital and quality of life in urban neighborhoods high density housing. The objective was to assess social capital pattern among urban households in Klang Valley, Malaysia. This research was undertaken through a questionnaire as data collection tool where 797 respondents were surveyed. The study noted that social capital in these neighborhoods enhanced positive social values towards a good living that contributes to quality of life. This clearly indicated that social capital had an impact on the economic wellbeing. In conclusion, the study indicated that social capital plays a role in improving the quality of life.

Finally, Balogun, Yusuf, Omonona and Okoruwa (2011) found a positive relationship between social capital and economic welfare. The study was to find out effects of social capital on poverty among households in South West States, Nigeria. The scholars carried out a multistage sampling technique. Two states, Ekiti and Osun were randomly selected from the six states in Southwestern Nigeria. Data was collected by use of structured questionnaire and analyzed using descriptive statistics, Foster-Greer-Thorbecke (FGT) weighted poverty indices and Tobit regression. The study noted that social capital significantly influenced the amount of credit available from different sources. The study concluded that social capital had a positive impact on the wellbeing of the household. They recommended that policy makers interested in improving the living conditions of households should consider promoting social capital in order to achieve the Millennium development goals of reducing poverty by half.

For financial inclusion to achieve its objective, the level of social capital has to be improved. Studies from other countries have indicated that increase in social capital have had a positive effects on investments that leads to employment creation and poverty alleviation. These studies have also confirmed that when the assumptions of the theories this study is anchored on are fulfilled, there is increase in investment. When people can access financial services with ease, they are able to enter investment as per income and inequality theory. However, when social capital is low, they are not able to achieve this.

The finance and inequality theory again holds that where access to credit is not limited to initial wealth, even the poor are expected that they can borrow and invest. Lenders require assurance that the money will be repaid and be provided with security of the

same. Social capital becomes key in such situation where group lending is an option. However, in instances where the social capital is low for the youth, they may not be able to borrow. They may then remain unemployed and poor despite the high levels of financial inclusion as it was noted in this study.

5.2.4 Effect of ICT Capability on Investment among Financially Included Youth

The use of Information Communication and Technology (ICT) has been championed as a key driver in economic development of any economy. ICT has had a revolutionary role in financial sector and most of the financial services that are technologically driven (Cohen & Nelson, 2011). Theory has it with ICT, majority of citizens will be financially included. The effect is increased micro investments, poverty reduction and increased employment. Through ICT, Kenya has achieved high levels of financial inclusion, making Kenya among the cited cases of successful ICT driven financial empowerment (Kalunda, 2014).

Technological innovation is bringing out potential of million users of financial services including unbanked cell phone users. The use of technology has again given room to diversification to different products and there is a rich array of financial products. However, Cohen and Nelson (2011) further noted that increased access to financial services does not automatically result to use. They noted that the path from uptake to usage is an uncharted path. For the youth to leverage on financial services offered through technology, they must have access to ICT technologies and have ability to use the ICT technologies for economic benefit. The level of usage is usually affected by asymmetries on information and power between financial institutions and poor

consumers. The financial services and products are more complicated and sophisticated and this has a negative outcome due to institutional abuses and ill-informed client decisions.

The study indicated that ICT awareness was high. This was not exceptional as it has been noted that Kenya has been noted to be doing well in ICT awareness and internet usage (Cabral, Moodley & Amankwah, 2015). It was noted that around 25 percent of Africa's urban population goes online daily where Kenyans lead at 47 percent and Senegalese at 34 percent. Thus if Kenyan can leverage fully on usage of internet, there can be a big impact on GDP.

This study noted low usage of ICT in access to financial services. This was not unique as it has been indicated that the usage of technologically driven financial channels is low in Kenya (Ng'ang'a & Mwachofi, 2013). Effective use is hampered by asymmetries of information and power between financial institutions and poor consumers, an imbalance that grows, as customers are less experienced and products they can select are becoming more complicated. This imbalance holds actual potential for negative results due to institutional abuses or ill-informed client decisions. Though the access to information has increased over the years globally, digital divide still exists between developed economies and developing economies and between the poor and the rich. This digital divide affects the usage of financial services and especially among poor people (Cohen & Nelson, 2011).

This study noted very small percentage indicated internet to be a major source of financial services. This a very low percentage compared to availability of the internet connectivity. Compared to the financial services channeled through the internet, the percentage is also very low. Usage of innovative financial channels is also an indicator of people ICT capability and willingness to adopt new technologies (Ng'ang'a & Mwachofi, 2013). They further noted that any gap in access and usage will affect the youth in taking advantage of the financial inclusion and this may increase the inequality gap. When the poor are not able to use ICT to their economic benefit, they tend to stay aback and they are economically disadvantaged.

This study noted that internet can have a positive impact on the growth of the youth if well harnessed. However, those with low access to internet especially the poor do not benefits from the advantages of improved ICT. Internet exerts substantial influence on economic growth and enables transformations in both the public and the private sector (Cabral et al., 2015). The study by Cabral et al., (2015) evaluated small enterprises and noted that businesses have benefited from the higher productivity that the internet enables. Companies utilizing the internet grew more than twice as fast as those not using internet. The study noted that in the developed economies, the Internet contributes more than 20 percent of GDP growth. The impact was clear in China, India, and Brazil, where the Internet has accounted for more than 10 percent of total GDP growth over the past five years in Kenya.

This study indicated low usage of ICT on access to financial services. Cabral et al., (2015) similarly indicated that Africa was lagging behind in utilizing the internet due to

low ICT capability. Cabral et al., (2015) observed that internet amounted to just 1.1 percent of GDP for Africa. They observed that if Africa could close this gap, the impact on GDP, business growth, and social outcomes would be massive. The growth of the Internet could result in massive economic impact in Africa. Though Kenya has been found to have the highest internet connectivity in Africa, its usage for economic benefits is limited due to low ICT capability.

Rural dwellers were found to be lagging behind in usage of ICT in this study. Indian Banks' Association (2007) also noted that despite the increase in technology majority of people living in rural area actually remain excluded from the advantages of technological advancements that have taken place, even after 60 years of independence. They noted that there exists an acute digital divide, which describes the fact that certain sections of the society do not have access to, and capability to use, modern technology to drive individual economic development. They recommended the need to bridge the digital divide for all people to benefit from ICT.

Wambua and Datche (2013) on case study of Equity Bank, Mombasa county, on innovative factors that affect financial inclusion in banking industry further noted low usage of ICT. The study sampled 2000 customers out of a target population of 20,585 equity customers operating in five branches within Mombasa County. The study revealed that innovated channels of distribution are underutilized. The banks that had rolled out new channels such as E-Banking, M-banking and Agency banking. However, the bank branches were still experiencing long queues in the banking halls and particularly in

enquiry and customer service sections despite these innovated channels. The low usage of the innovated channels were also indicated in this study.

This results of this study on relationship between investment and predictor variables indicated a relationship between explanatory variables and responsive variable. The results of this thus found that use of ICT for economic benefits depended on skills not only access. Hashim (2007) on a study on ICT adoption among SME owners in Malaysia had similar findings. Hashim (2007) indicated that the main barriers to ICT adoption included lack of knowledge about the potential of ICT, shortage of resources such financial and expertise, and lack of skills. The results from this study indicated that ICT skill, ICT use, innovation characteristics, and adopters' category all were significantly related to each other. Specifically the study noted that ICT skill is positively correlated to ICT use, and ICT skill is highly correlated to innovation characteristics. At the same time, ICT use is also correlated to innovation characteristics. Results showed that there is strong relationship between innovation characteristics and adopter categories. Thus, the introduction of technology-enabled services requires ability to use devices.

According to Henry (2003), the ICT capability was a factor that separate rich countries from poor. He argued that the poor countries could not continue bridging the gap of other issues like health, education and infrastructure and ignore the digital divide. There is need for commitments by governments to make telecommunications cost cheaper by fostering more competitions. Governments should continue investing in training a large number of the youths in ICT related skills. The argument they were advancing is that although the link between technology, growth and poverty reduction has not been strongly indicated

through empirical findings, technologically advanced countries have higher incomes; low-income countries can only ignore to their peril. Again, this study noted differences in usage of ICT platform depending on demographic characteristics.

In addition to the debate on ICT capability, Fuchs and Horak (2008) indicated that there are different types of the digital divide such as the global divide, the gender divide, the ethical divide, the age divide, the income divide, the educational divide, and the abilities divide. In their paper, they noted that African countries in terms of income, education, and health have very low Internet access and usage rates. They indicated that the global digital divide means unequal material, usage, skills, benefit, and institutional access to new information and communication technologies by different world regions. Further, global digital divide is a face of the uneven geography of global capitalism. This study was based on income divide.

Further analysis on poverty and ICT was by Torero and von Braun (2006). They noted that there is no convincing evidence of their direct impact of ICT on economic wellbeing. The study concluded and indicated that ICTs offer an opportunity but not a solution. Access to information through ICTs is not only about connection but also of capacity to utilize the new tools and provision of relevant content in accessible and useful forms. The potential impacts of ICTs to be effective in reducing poverty, there are a number of pre-requisites that needs to be put in place, which includes reducing the access gap and innovative institutional arrangements to increase use. The regulatory frameworks, choice of technologies, and public action related to ICT investment should be more pro-poor.

Himma and Bottis (2013) indicated that, someone who finds information that can be used for economic activity, but does not have the ability or opportunity to put it to use would suffer from an information gap relative to someone who is succeeding in the information enabled society. Poor people who cannot afford basic needs can also not afford the ICT access or training to prepare them to take advantage of access. Not being able to afford such training and access can perpetuate poverty in a global economy increasingly requiring the ability to access, process, and evaluate information. To close the digital divide and consequently close the inequality gap, countries have to provide meaningful access to ICTs and ensure that the more basic needs are met. A person not able to meet his basic needs may not be able to take advantage of ICT as he will be concerned with the basic needs.

According to Himma and Bottis (2013) ICT capability variances includes the differences in access to information, access to appropriate ICT hardware and software; literacy levels; and ICT skill-sets. The differences can be exhibited between developed and developing nations and between rich and poor in developed nations. These inequalities in technology have and have-nots have a bearing on distribution of resources and contribute to the perpetuation of absolute and relative poverty. They further concluded that the segment of the society of have-nots continues to be excluded and remains trapped in poverty. They indicated that the meaningful access to information and communication technologies requires availability of the technology and ability to use it to economic and cultural advantage. In this case, a person should be able to use the ICT for economic

benefit, otherwise, the person will be considered to be on the lower side of digital divide. It not about access, but access and capability to use.

Ng'ang'a and Mwachofi (2013) noted that technology adoption is still limited among the poor. Many agents banking are located in the rural areas and majority of Kenyans have mobile phones. However, many people still travel long distances to carry out transactions over the counter. Even when some of the people have adopted technology, it was noted that they do that to a certain level but they still go to the bank branch for services they can access form the phone or from agent. This study noted that competition, lack of resources, inadequate training, skills and knowledge of available technological services, compatibility with existing services and technologies and culture tends to affect the adoption of mobile and agency banking technology. Though most of the people are aware of the available technologies, the adoption is lower than what would be expected.

According to Himma and Bottis (2013), it is not only about access, but access and ability to produce ICTs and that are marketable to the market economy. This indicates that ICT availability will not eliminate or reduce global poverty; however, it is a component of any comprehensive effort to address it. As the world information economy continues to develop, meaningful access to ICTs is necessary to enable people, communities and nations to achieve significant economic progress.

Gigler (2011) argued that ICTs can significantly enhance poor peoples' human and social capabilities and thus have a positive impact on their well-being. The purpose of introducing ICT to the rural poor is from understanding that it can enhance poor peoples'

individual and collective agencies; strengthen their existing individual and/or community assets; enhance their informational capabilities. It was also noted the literacy and the acquired informational capabilities could act as an agent for change for individuals and communities enhancing their ability to engage with formal institutions in the economic, social, political and cultural spheres of their life. It has been confirmed that there are differences in terms of the extent to which informational capabilities expand people's human and collective capabilities depending on the different dimensions of people's lives, such as the political, economic and social dimension.

In addition to Gigler (2011) argument, Adera, Waema, Mascarenhas and Diga (2014) indicated ICT has a major impact on marginalized people, whereby the newly acquired ICT capabilities provide people with a sense of achievement and pride, thus significantly increasing their self-esteem. The results further indicated that poor people perceive the Internet to play a critical role in enhancing the social capabilities of their communities, while they consider its positive impact on individual human capabilities as less significant. However, in terms of political and economic dimensions, a major finding has indicated that there exists a limited association between enhancement in a person's informational capabilities and his or her human capabilities. The role ICT plays in enhancing people's well-being was significantly limited broadly by socio-economic factors. It was recommended that human development of people should be the center of the design and evaluation of ICT programs rather than technology itself.

Dodgson, Gann, Irving, Wladawsky-Berger and George (2013) recognized the importance of technology and the poor. They noted that digital money would liberate the

poor from the constraints of the cash economy. They argued that digital money would alleviate the poor from the struggle of dealing with bureaucracy, which includes queuing for paying utility bills, and the need to transact face-to-face, providing the great resource of time. This time can be used in activities that are more productive. These incentives encourage investment in developing the skills and capabilities needed to effectively use the new access to technology and capital. Thus, technology adoption helps in creating investment among the adopters.

Kaguara and Wanjiru (2015) also observed that the dominance of physical cash in the lives of poor households imposes a number of costs, which includes storage, transport costs and psychological barriers to saving. Actually, savings is only possible when money is sent direct to our accounts from payments. This helps the poor overcome temptations to spend cash in hand. In contrast, when poor receive their money in physical cash, they are faced with a challenge of saving the money and they find themselves spending it. Emerging evidence indicated that poor find it harder to save, especially when there is no access of digital platform near them.

Adera et al., (2014) noted that evidence linking ICT and poverty reduction is less well developed compared to economic growth. The study looked at the methodological approaches used in doing research on ICTs and poverty. Their review found that poor still do not have adequate access to ICTs, but that there are efforts being made to address this gap, some more successful than others. The study noted that ICTs have the potential to minimize poverty and problems faced by the poor; however, there are many challenges such as inadequate access, high costs, lack of funding, and low human skills.

Another study on household level was by Ndung'u and Waema (2011) which found that use of mobile phones and internet led to both negative and positive development outcomes. The household decisions were based on perceptions of the role that the new technologies played in enhancing their quality of life. This was in support of other studies which had indicated that access to ICTs depends on income, education, and resources.

Deloitte (2014) noted that improved internet access can promote economic growth and move large numbers of people out of poverty. The study argued that extending internet access to levels seen in developed countries means that long run productivity could be enhanced by as much as 25% in developing countries. The resulting economic activity due to increase in internet could see a 72% increase in the GDP growth rate, and more than 140 million new jobs.

Kituyi-Kwake and Adigun (2008) while analyzing ICT use and access amongst rural women in Kenya noted that the benefit of ICT are hard to gauge in African Countries. This is particularly so in the time of poverty, hunger and disease. The social implications of ICTs are also highly regarded. There are positive effects from ICTs in development and improving the standard of living and poverty alleviation at various community levels. Some of the areas where ICT have been found to have an impact include health, agriculture, community mobilization, education and training. However, the main principle problems underlying ICTs and rural development in African countries are access and exclusion issues. The real access to technology is one of the key elements necessary for integrating technology into society. This begs the question as to whether technology is available, physically accessible and affordable.

Kaguara and Wanjiru (2015) indicated that ICT Capability gap varies with the utilization of technology from one country to the next depending on variables like education, gender, governance, age, economy and distribution. The utility is significant and varies from rural to urban centers all over the world. The differences are attributed to gap of lack of utilization of computers and the internet due to stereotypes, myths and misconceptions about ICT's. Further, those who live below the minimum wage find internet costly and unaffordable. Though many strategies have been put by the government and private sector towards this, a lot more can still be planned to prepare Kenyans in the ever evolving digital world. If this is not done the benefit of technology may not be felt among the youth.

Cohen and Nelson (2011) noted that despite the great potential, the introduction of the electronic cards and mobile banking without information, orientation, and education assumes experience and knowledge that many low-income families many not have. This is a reason why the usage of the financial products offered through information technology is limited to money transfers and adding year time.

From this discussion, it is clear that, unless the ICT capability among the poor is enhanced, the poor may not be able to take the advantage of financial inclusion. ICT has been found to support the theory on financial intermediation, which is based on a transaction cost approach. Benston and Smith Jr. (1976) and by Fama (1980) argued that, financial intermediaries are there to help in minimizing transaction costs. They argued that, use of technology could help financial intermediaries achieve their objectives with minimal transaction cost. In Kenya, financial intermediaries have adopted technology and

many financial services are technologically driven. Many people who could not access financial services due to a number of barriers including the transaction costs can now do so with ease. Financial intermediation has seen financial inclusion level increase in Kenya. However, the effects of high levels of financial inclusion have not been realized among the poor in poverty reduction and employment creation. This study has noted that the levels of financial capability are low among the youth and as a result, the youth remain unemployed.

In respect to finance and inequality theory, access to finances determines how different household will be able to develop themselves economically. People are able to undertake investment, create employment and move out of poverty (Piketty, 1997; 2000). Due to enhanced financial intermediation through ICT, it is expected that individuals will take advantage of financial inclusion and undertake investment. Again, this has not been achieved due to low levels of ICT capability.

5.2.5 Influence of Business Environment and Investment on Financially Included Youth

For successful investments in an economy, conducive business environment is a requirement that has to be met. Conducive business environment consists of a network of interconnected and interdependent players, whose actions help businesses succeed, generate impact and grow to a larger scale. Studies have indicated that, poor business environment may affect success of financial inclusion especially on taking up investments (UNDP, 2013).

Kenya has recognized the importance of business environment and it is making great strides in integrating its low-income citizens to the mainstream commercial activity. This is through acknowledgment of the importance of the informal sector. Kenya's Vision 2030 has put an integrated policy programme which aims at aligning economic and human development, other initiatives such as the Financial Sector Deepening Initiative to create inclusive business environment (UNDP, 2013). However, the effects of the government efforts are yet to be realized.

The results of this study found that business environment was rated as un-conducive by the youth. The results of this study agree with other studies relating to business environment. The World Bank (2015) annual ease of doing business survey, Kenya was ranked lowly at position 129 out of 189. The study noted that this compared poorly to countries that compete with Kenya like Rwanda which was ranked position 34. Compared to Rwanda, Kenya performed poorly on access to energy, ease of paying taxes, registering property, and backlogs in the judiciary which make it difficult to enforce contracts and support commerce. This makes it difficult for the poor to participate in the harsh economy their risk appetite is low.

The policy behind financial inclusion is affording formal financial services to the poor so that they can undertake investments (Ellis et al., 2012). With improved business environment, financial inclusion is enhanced and it connects people to banks with the consequential benefits. Access to a well-functioning financial system due to conducive business environment, enables socially and economically excluded people to integrate into the economy and actively contribute to economic development through household

investment. The conducive business environment translates to inclusive growth that reduces the income inequality gap (Kama & Adigun, 2013).

When business registration processes, government service delivery and taxation process are not efficient and there are issues of insecurity and corruption, business are negatively affected. The business environment becomes un-conducive and it has effects on probability to invest. The public sector that is supposed to offer services to the citizen must be efficient for there to be conducive business environment. According to World Bank (2014), there are many important links between the public sector and financial inclusion and consequently investment. It noted that weak public sector institutions are detrimental to financial inclusion and investment. Improving the public sector governance can have a positive impact on the use of and the access to financial services to the public. With strong public institutions, this will improve in other factors including electronic payments and online services. This improves the efficiency of public sector programs and the performance of the economy as a whole (World Bank, 2014).

African Development Bank Group Kenya, (ADBGK, 2014) indicated that the government has to create a conducive business environment for it to create employment. This was in recognition that business environment plays critical role in investment. The bank argued that there was a need for establishment of a conducive business environment across the country. This way, the private sector will be motivated, there will be more investment and more employment opportunities will be created especially among the youth. According to Policy Forum (2010) conducive business environment offers opportunities for income growth, rewards productive activity, fosters innovation, risk

taking and the ability to invest, and move out of poverty. On the other hand a non-conducive business environment puts has an implication on transactions cost which effects the business negatively. The high cost of operations discourages people from investing and this slows down poverty reduction. This was also noted by the results of this study.

This study noted that poor legal system affects the business environment and as a result, it has influence on investment. Similarly, Kama and Adigun (2013) argued that if the legal environment is favorable to lending, this may enable banks to operate more profitably. This will eventually lead to expansion of banking services and investment. They noted that the role of government is to create enabling environment for the citizens to operate and interact with consumers in a mutually beneficial way. It is the role of government through the regulatory organs to strengthen land and property registries as well as enhance the transparency and efficiency of court systems. It should also play role in promoting of investment in communications, physical infrastructure, and services and power. Government regulation played a key role in the transformation of financial sector. Through Central Bank of Kenya, a number of regulations were put into place which saw the success of M-pesa. The granting of M-Pesa money transfer service license after liberalization of the telecommunication sector showed clearly government commitment towards regulation that was in support of business environment. The greater access to deposit facilities enhanced the ability of financial intermediaries in mobilizing savings, while at the same time, it helps citizens in economic growth by increasing the capability of households in undertaking investments (Andrianaivo & Kpodar, 2011).

In addition to good legal system, KPMG (2014) noted the business leaders have indicated that, for the business environment to be conducive, the government has to put in place measures to simplify business regulations and encourage entrepreneurship. It also requires government to enhance innovation and digitization of systems and processes, focus on free trade agreements and double tax treaties and encourage investment.

In support of improvement of business environment, some of the measures over time have been by reducing bureaucracy in government through liberalization and improving infrastructure. Kibet et al., (2009) noted that adoption of liberalization measures in Kenya brought about change in the performance of the economy. A study was done to evaluate factors that influence savings among households of teachers, entrepreneurs and farmers in rural parts of Nakuru District. A sample of 359 teachers, entrepreneurs, and farmers were selected from seven rural administrative units. The study noted that among other factors, service charge, transport costs and credit access had an influence on usage of financial services. The study argued that for the government to see the development of its people, it has to look at the infrastructure, which has impacts on service charge and transport cost. When this is addressed, usage of financial services and the expected investment can be achieved.

Due to poor infrastructure in rural areas, Kibet et al., (2009) further noted that, usage of financial services is low in rural areas. To improve this, there was need for the policy makers to improve transport and communication in those areas. The government should also increase its involvement in services that support economic activities in the rural areas such as electricity, water, extension services and marketing channel. This will

improve business environment, motivate household increase their production, income, saving and investments. Actually (AfDB, 2014) noted that Kenya has a very high potential for investments, but business environment is challenging. Kenya's main source of poor business environment that affects competitiveness is poor infrastructure (AfDB, 2014). Kenya's un-competitiveness due to infrastructure affects investment more among the rural poor. In that case, the poor are not able to take advantage of financial inclusion and invest as indicated in this study.

Poor infrastructure or lack of it has an effect on cost of living. On the other hand, KPMG (2014) noted that the high cost of living does not spare the business community. It was noted that most of the businesses are affected by high cost of living where cited rising costs and inflation are a concern to any business. The high cost of living has been attributed to the cost of electricity, high costs due to deplorable state of the roads that contributes significantly to the cost of production and government taxation. If the businesses have to thrive and poor people create employment for themselves, government has to look into business environment.

In recognition of the status of the business environment in Kenya and the effect business environment has on investment among the poor household, Africa Development Bank stepped in to help (AfDB, 2014). The Bank tried to create job opportunities by establishing a more conducive environment for investors through investments in physical infrastructure. It focused on improving energy, transport and water which was to increase the access to more affordable and reliable electricity, improve transport connectivity, decrease transport cost and time, and enhance access to more reliable water supply. This

was expected to have an impact in private-sector activity, increase productivity, stimulate structural transformation, and generate employment, help in reducing poverty. Failure to do this leaves the Kenya economy uncompetitive and unemployment and poverty persist.

The other contributor to business environment is service delivery by governments that was also noted in this study (KPMG, 2014). Most of the businesses require services from the national government or the county government. The efficiency on the offer of the services determines a great deal the success of the business. Business community expressed their concern on the rate of offering the services by the government. They indicated that the operations especially during transitions from national government to county governments were implemented haphazardly and never took into consideration the needs of business. There was need for the government to improve on how it offers its services to enhance the operations of the business sector where it needs the services of the governments (KPMG, 2014).

Payment of tax to the government should not be cumbersome as this may discourage payment of the same (KPMG, 2014). Study in 2014 indicated that 27 percent of respondents were of the opinion that simplifying and making tax and other monetary incentives more relevant would give countries a competitive edge. When sectors of the economy are not performing well, the public always falls back to the government for the improvement of the business environment for the existing business to thrive. When the tea proceeds in 2014 reduced considerably, business leaders asked the government to intervene with key areas being the provision of tax and monetary incentives to spur

growth, investments in infrastructure specifically transport and energy and reduction in government bureaucracy (KPMG, 2014).

After the global financial crisis, investment was weak in India. Tokuoka (2012) carried out a study to analyze the reasons that could have caused the slow down investment and how the investment can be boosted. The study analyzed macro and micro data. The data analysis indicated that macroeconomic factors could largely explain investment but that they were not accounting fully for weak performance. The study suggested that business environment played a key role in reviving investment. On the other hand, the analysis of micro panel data suggested that improving the business environment through reducing costs of doing business, improving financial access, and developing infrastructure, could stimulate investment. This study also noted that increase in macroeconomic uncertainty which includes high inflation and the weaker global economic outlook may be weighing on to investments. Still structural factors, such as unfavorable business environment could be depressing investment. The results implied that improving the business environment could boost investment substantially. Specifically, these results indicated that reducing the average of each cost of doing business to the lowest among Indian cities surveyed could boost aggregate demand by 0.25 to 1.5 percent of GDP, raising investment by 3 to 13.5 percent.

This study noted security was a major issue that had an effect on whether there will be investments. Security threats have far-reaching effects in form of increased cost of business and opportunity lost. Bowen et al., (2009) study found that security threats are great challenge to businesses and this affects the business environment. Many business

managers and owners employ different means in preventing or deterring criminals. It was noted that 37.5 percent make use of security firms or guards to safeguard their businesses, which increases their cost of operation. Another 22.2 percent of them close early to avoid thugs which means losing the opportunity for the hours closed. Thus, security affects businesses negatively due to increased cost or lost opportunity.

Poor business environment becomes a stabling block towards achievement the potentials of financial inclusion. With availability of financial services where members of the public can save money, it would be expected that members will be able to accumulate savings. According to financial liberalization theory, investment in a typical economy depends on the availability of funds in form of savings and thus when the real deposit rate increases, investment also increases. This has however not been achieved as it has been indicated in other studies. Business environment in this case affects the utilization of savings for investment as per financial liberalization theory.

In financial intermediation theory, the aspect of liquidity provision plays a key role in the investment cycle through resource (Claus & Grimes, 2003). Those who do not have the current use of their liquid cash usually deposits with the banks in form of savings. This money is lent out to those with investment needs at the current period (Diamond & Dybvig, 1983). However, even if financial intermediaries are there and vibrant in resource allocation, the expected investment may not be realized when the business environment is not conducive.

5.2.6 Moderating Effects of Demographic Characteristics on Investment on Financially Included Youth

Many studies have indicated that the demographic characteristics have a high influence on financial decision making which includes investment (Ellis, et al, 2012; Hsu, 2011; Johnson and Arnold, 2012; Kenichiro, & Hideki, 2012; Mwangi & Kihui, 2012; World Bank, 2014). The first demographic characteristic that was evaluated was gender of respondents. Majority of the respondents were men at 52.1% while female were 47.9%. The study went further to evaluate whether gender had any moderating effect on investment.

The demographic characteristics were added to logit model to find out whether they had any moderating effect on investment. The study noted that gender had a moderating effect as inclusion of gender improved the relationship between dependent variable from 25.7 to 29.7 percent and the moderation was significant. This was in agreement with other studies that have indicated that gender has influence in access to finance where being a woman was significantly associated with a high likelihood of exclusion from financial services and thus not able to use financial services for investment (Ellis, et al., 2012). More men than women are more likely to use formal and informal financial services. On the other hand, the women are more likely to use semi-formal financial services. Women have been found to lag significantly behind men on the rate of saving and borrowing from formal institutions, even after accounting for personal characteristics such as education, age, income, and urban or rural residence (World Bank, 2014). This study concluded that gender had enhancing moderating effects on determinant of investment on financially included youths.

The youth belong to different age groups with a minimum of 18 years to a maximum of 35 years. The category with the least respondents was 18-20 years, which was 13%. This corresponds with other studies that have indicated majority of the youth at this stage are in school (Kaane, 2014) and thus few youths were sampled in this category. The other age categories were relatively well distributed with 21 -25 years, 32 %, 26- 30 years, 25% and 31 to 36 years, 30%. Age was indicated to have enhancing moderating effects as the relationship between predictor variables and responsive variable improved from 25.7 to 41.1 percent.

The enhancing moderating effects of age agrees with a number of studies that have shown age and financial inclusion have an inverted U shaped relationship. When people are at early stages of their youth they tend to be excluded. The level of inclusion increases with age but then declines at old ages. Mwangi and Kihui (2012) noted that as banks try to determine credit worthiness of potential borrowers, age exhibited a quadratic relationship in the formal, semi formal and informal strands, rising fast initially before starting to increase at a decreasing rate and finally the slope turning negative. Beck (2009) in his study noted that older Kenyans are more likely to use financial services, with the exception of M-Pesa which was more popular among the young people. Further, the study noted that there is a non-linear relationship between age and the likelihood of using financial services with the maximum point in most cases being between 50 and 60 years. The study concluded that older Kenyans are likely to use financial services more than young people. Similar findings were by Malkamaki (2009) who observed that

citizens who were 25-44 years were more likely to use financial services compared to 18-24 years and older people above 44 years.

Johnson and Arnold (2012) also noted age had important influence of financial inclusion, as older people were much more likely to use a bank account than younger people were. Ndi (2011) noted that Kenyans below 25 and above 55 years of age are least likely to use financial services while between 35 and 44 years are the age group that had the highest users of formal financial services. World Bank (2014) had similar studies that indicated older people globally use formal financial services than younger people.

Married persons have been found to have higher chances of being included, as they are considered more responsible compared to single persons. Single people are sometimes considered less reliable or stable without family or relations to assure for them (Mwangi & Sichei, 2011). This study thus tested whether marital status had any moderating effects on investment. Majority of the respondents, 54.5% were single while 45.5% were married. This compares favorably by Millennium Development Goals report (MDG, 2013a) which indicates almost half of the youth are single.

On the moderating effects of marital status, this study noted an improvement of the relationship between predictor variable and response variables from 25.7 to 37.6 percent. The study found that, there was an enhancing moderating effect of marital status. This is supported by other studies that have indicated marital status to have an influence on decision making. Johnson and Arnold (2012) noted being single in Kenya can have a strong influence on exclusion from financial services. The study found that married

persons have higher chances of being included, as they are considered more responsible. Single people are sometimes considered less reliable or stable without family or relations to assure for them. Mwangi and Kihiu (2012) had similar findings and argued that service providers believe that married persons appears to have higher levels of responsibility hence are more trusted. The study indicated that, a married person had a 3.48% higher probability of accessing financial services than a non-married person while probability of remaining financially excluded reduces by 4.40%.

The financial behaviors of citizens are influenced by their geographic location and thus the place of residence of the respondents was evaluated whether it had any moderating effects on investment. The study found that majority of the respondents, 74% were rural dwellers while 26% were urban dwellers. The high response rate of rural dwellers was by the fact that majority of the Kenyan citizens live in rural areas (MDP, 2013a). Similarly, the bigger part of Nyeri and Kirinyaga Counties is rural area (KCG, 2013; NCG, 2013). The study noted that, the place of residence had a moderating effect on investment. Other scholars have found this effect. Ellis et al., (2009) noted significant differences in usage of financial services between rural and urban households. Urban households were around 4% more likely to use formal savings compared to rural households. The rural also have different challenges when it came to the use of financial services. Malkamaki (2009) also noted that rural dwellers use more of informal finances at 30.4% compared to urban dwellers at 26.5%.

World Bank (2014) had similar results which indicated that the use of bank accounts in the rural areas is at minimal levels, lagging far behind urban areas especially in

developing countries. The situation is not in any way different for the mobile accounts as per study by Villasenor et al., (2015). The study noted that approximately 70 percent of urban respondents were active registered users of mobile money, in contrast to about 51 percent of rural respondents. FinAccess (2016) has also concluded that place of residence has influence on financial inclusion.

Education is usually positively related to the usage of financial services, the higher the level of education the higher the usage of financial services (Johnson & Arnold, 2012). Education was also found to have a moderating effect though minimal as the relationship between predictor variables and responsive variable changed from 25.7 to 26.3 percent. Education has been found to be positively related to the usage of financial services, the higher the level of education the higher the usage of financial services. Johnson and Arnold (2012) noted that education was strongly associated with the likelihood of bank use. In particular, 39% of persons with secondary education had a bank account, which was higher compared to those with primary or no education. The same relationship was found in SACCOs where 18.4% were those with secondary education as compared to those without education at 8%.

Ndii (2011) found that use of financial services increases with level of education. The use of formal financial services is higher for Kenyans with primary, secondary and/or tertiary education compared with Kenyans without any formal education. The use of mobile financial services follows the same trend as in bank accounts. FinAccess (2016) on their study on access to financial services noted it varied with the education level. The study noted that only 37.3 percent of Kenyans without formal education were using formal

financial services, while 73.1 percent of Kenyans with a primary education, 88.6 percent of Kenyans with a secondary school education, and 97.9 percent of Kenyans with some post-secondary education using formal financial services.

World Bank (2014) also observed that only 37 percent of adults with primary or lower educational attainment had accounts at formal financial institutions compared with 63 percent among adults with secondary educational attainment and 83 percent among adults with tertiary or higher educational attainment. An in-depth analysis by Allen et al., (2012) found that the probability of owning a bank account is twelve percent lower for adults who had 0–8 years of education compared to other adults. Similarly, Cole, Paulson, and Shastry (2012) showed that the level of general educational attainment had a strong effect on financial market participation. Highly educated people perform better along a number of dimensions including budgeting, living within means, attitudes toward the future, and impulse control (Kempson, Perotti & Scott, 2013).

Mwangi and Sichei (2011) came with similar results where they noted that increase in education level by one level higher raises access to semi-formal services by 14.1% and 0.9% for formal. The study also noted that increase in education by one level lowers the probability of remaining excluded by 8.5%. The study argued that education serves to enlighten people on the various financial services available while at the same time creating awareness on how best to manage the available services. Latest study by FinAccess (2016) have indicated similar results where the higher the level of education the higher the probability of being included financially.

People who are in formal employment due to their levels of education have been found to be doing better in terms of usage of formal financial services. Johnson and Arnold (2012) noted that approximately 64% of government employees used bank account and they were five times more likely to be associated with bank use than those whose main income was farming or fishing. Citizens employed in private companies were twice as likely to be associated with having a bank account, while those employed on domestic chores were ten times less likely and those who were farm employees or who relied on pensions or transfers from others were three times less likely.

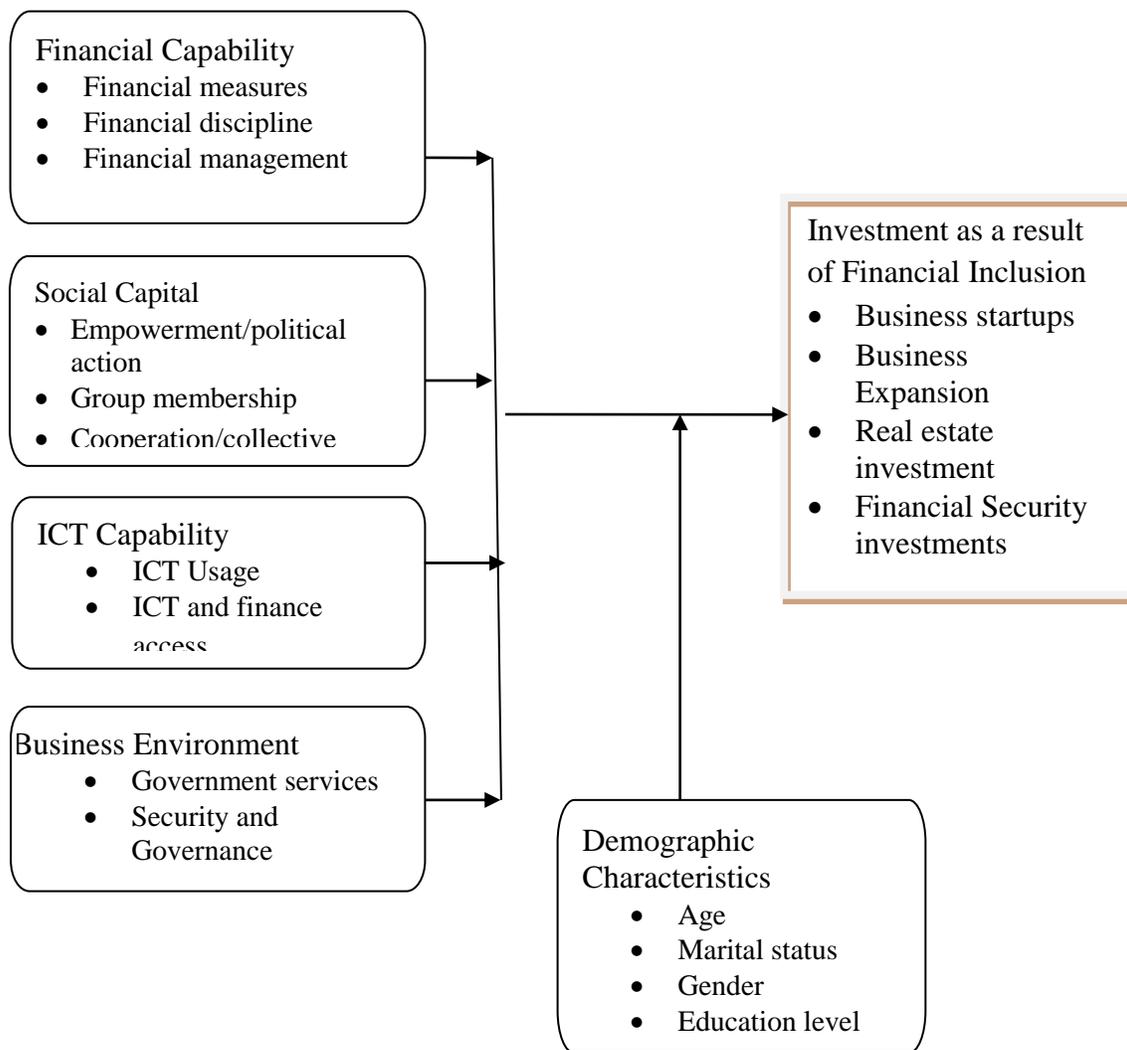
World Bank (2014) also noted that having a job in the formal sector was positively associated with the use of bank accounts. FinAccess (2016) on a study on levels of financial inclusion in Kenya concluded that the type of occupation had an influence on financial inclusion. People in formal employment were found to be using formal financial services than people in informal sector.

With different demographic characteristics having an implication on access to finances, income inequality may not be reduced as per income and inequality theory. The theory holds that access to finances determines whether one can undertake investment and improve himself economically (Banerjee & Newman, 1993). With differentials in access, some to the individuals may not be able to take advantage of financial inclusion.

5.3 Revised conceptual framework

From the study, it has been noted that, not all the variables were significant in determining investment among the youth. However, not all sub-variables that were

statistically significant in predicting whether a youth will invest or not. On Financial Capability, Financial Products Awareness was not statistically significant while in Social Capital, Social Cohesion and Inclusion was not statistically significant. ICT Knowledge sub-variable was not statistically significant in ICT Capability while Taxation and Business registration were not statistically significant in Business Environment variable. On demographic Characteristics, place of residence did not have statistically significant moderation effect on other variables. The revised Conceptual Framework is as indicated in Figure 5.1



Independent Variables

Moderating Variable

Dependent Variable

Figure 5.1: Revised Conceptual Framework

Figure 2.1 conceptualizes that, financial capability, social capital, ICT capability and business environment influences investment among financial included youth. It also indicates that, demographic characteristics have moderating effect on investment among the youth.

5.4 Conclusion

This section gives a conclusion of the study which are based on the hypothesis of the study.

5.4.1 Financial Inclusion and Investment

The main objective was to establish the determinant of financial inclusion on investment among the youth in Kenya. To achieve this, the study first evaluated the level of financial inclusion among the youth. This was to confirm whether the financial inclusion among the youth is in tandem with national financial inclusion levels. This study found that majority of the youth are financially included. However, services like insurance and borrowing were at minimal level. This study also found that the usage of financial services in terms of borrowing and insurance was very low. This study therefore concludes that, though the financial inclusion among the youth has gone up, it is not coupled with an increase in investment. Thus, though Kenya has achieved the objective of improving financial inclusion, financial inclusion has not had the expected effect enhancing investment.

5.4.2 Financial Capability Determines Investments on Financially Included Youth in Kenya

The first hypothesis financial capability is not statistically significant in determining investment on financially included youth in Kenya. The results indicated that financial management skills were statistically significant in predicting whether a youth will invest or not if provided with finances. This means that increase in financial management skills

among the youth increases the probability of investing. Financial discipline and financial measures were also statistically significant in predicting whether a youth will invest or not if provided with finances. Financial awareness though positive was not statistically significant in predicting whether the youth invests or not. In overall, Financial Capability was statistically significant in predicting whether a youth will invest or not if provided with finance. The investment among the youth was low despite the high financial inclusion levels among the youth. Financial capability was also found to be low among the youth. This study has also indicated that financial capability is positively related to investment. This study therefore concludes that, financial capability is a determinant of investment on financially included population. Second conclusion from the study on first variable is that, since financial capability was low among the youth, it is the reason why youth have not invested despite high levels of financial inclusion.

5.4.3 Social Capital Determines Investment on Financially Included Youth in Kenya

The second hypothesis was that social capital is not statistically significant in determining investment on financially included youth in Kenya. The results of the study found that empowerment and political action, group membership and collective action and cooperation were statistically significant in determining the probability of investment by youth. On overall, Social Capital was statistically significant in predicting whether a youth will invest or not if provided with finances. This study therefore concludes that social capital is statistically significant in determining investment on financially included youth. From the four sub-variables of social capital, empowerment and political action,

collective action and cooperation, and social cohesion and inclusion were found to be low. This study therefore concludes that the low level of social capital impedes investment by the youth despite high levels of financial inclusion.

5.4.4 ICT Capability Determines Investment on Financially Included Youth in Kenya

The third hypothesis of the study was ICT capability is not statistically significant determining investment on financially included youth in Kenya. The results of this study indicated that ICT and Access to Financial Services was statistically significant in predicting whether a youth will invest or not if provided with finances. ICT Usage was also statistically significant in predicting whether a youth will invest or not if provided with finances. ICT Knowledge though positive was not statistically significant in predicting whether the youth invests or not. On overall, ICT capability was statistically significant in predicting whether a youth will invest or not if provided with finances. The study noted that though there was high knowledge on financial inclusion, the usage of the same was low. Similarly, the usage of ICT to access financial services was low. This study thus concludes that ICT capability is a determinant of investment among the financially included. This study further concludes that the youth were not able to take full advantage of financial inclusion due to their low levels of ICT Capability.

5.4.5 Business Environment Determines Investment on Financially Included Youth in Kenya

The fourth hypothesis was that business environment is not statistically significant in determining investment on financially included youth in Kenya. The study noted that Government Services was statistically significant in predicting whether a youth will invest or not if provided with finances. Secondly, Governance was also statistically significant in predicting whether a youth will invest or not if provided with finances. On the other hand, Business Registration and Taxation Procedure though negative were not statistically significant in predicting whether the youth invests or not. On overall, business environment was statistically significant in predicting whether a youth will invest or not if provided with finances. The study therefore concludes that business environment is a determinant of investment on financial inclusion. Business environment was rated poor by respondents also noted to be negatively related to investment. This study therefore concludes that poor business environment is the reason why the youth are not undertaking investment despite the high levels of financial inclusion.

5.4.6 Moderating Effects of Demographic Characteristics on Investment on Financially Included Youth in Kenya

The fifth hypothesis was demographic characteristics do not have a moderating effect on investment among financially included youth in Kenya. The study noted that introduction of demographic characteristic in the models changes the strength of relationship between the predictor variable and response variable. With interaction of demographic

characteristics, the percent of the variation improves. This study therefore concluded that demographic characteristics had an enhancing moderating effect on probability to invest.

5.5 Recommendation

This section gives recommendations, which are based on the conclusion and the objectives of the study.

5.5.1 Financial Capability and Investment

This study has confirmed that financial capability is a determinant of investment among financially included youth. Unfortunately, financial capability is low among the youth. For financial inclusion to achieve its objective of inclusive growth, this study recommends enhancement of financial capability among the youth through financial education at different levels. Delivering financial education through school curricula, youth-focused organisations and financial service providers can offer important platforms for passing on financial knowledge. A tiered and targeted approach that develops financial education by adopting an understanding of financial risks and helps to develop life skills focused on financial rights and responsibilities is critical in enhancing financial capability.

Passing of financial knowledge through local communities can also play a critical role in enhancing financial knowledge. National and county governments have a role in replicating and scaling up financial education. This can also be done through partnerships across the public and private sectors such as civil society, financial service providers and mobile network operators. The inclusion of financial literacy in the proposed new

curriculum in Kenya education is a step in the right direction. With improvement of financial capability, youth will be able to make financial decisions and take advantage of financial inclusion for investment purposes.

5.5.2 Social Capital and Investment

For financial inclusion to achieve its objectives, this study recommends that the government and other stakeholders should try to improve social capital among the youth. The government has been advocating having high levels of financial inclusion with the view that the poor will be able to use financial services for investment. Studies have indicated that social capital is a determinant on whether the youth will be able to use financial services and invest. This study also indicated a positive relationship between social capital and investment. This study however noted that social capital level was low among the youth. The low levels of social capital thus affect investment negatively.

To enhance social capital, there is need for concerted efforts by stakeholders, as building social capital has to start at early stages of life. This can also be achieved by having active clubs in schools where pupils should belong to at least one group. When youth leave school, they should be encouraged to join groups. The government should also provided necessary infrastructure through legislation in order to encourage greater networking among the citizens including enhancing national youth service. The education institutions should support alumni associations. With increase in social capital, the youth will be able to make use of high financial inclusion and invest. This will see creation of employment and reduced poverty.

5.5.3 ICT Capability and Investment

This study recommends that government and other stakeholders should improve ICT capability of the citizens. This is from the fact that this study concluded that ICT capability is a determinant of investment on financially included youth. The study further noted that, the levels of ICT capability was low among the youth. Enhancing ICT capability should be done by ensuring that school curriculum includes ICT studies. The current programme by the government of providing ICT equipments to primary school children is in the right direction towards enhancing ICT capability. The cost of offering ICT education should be brought down so that many poor people can be able to access ICT education. The study also recommends that financial service providers should ensure services offered through ICT platform are in a simple to use technologies and easy to understand language.

To improve digital access for the poor requires education regarding the value of online services. This study recommends showing people the value of diverse digital content and having consumers expand their usage of basic services that can propel digital activities in a variety of other areas. This has worked in India where instructional classes train adults how to use the Internet (West, 2015). With increase in the level of ICT capability, the youth will be able to use ICT to access formal financial services and make informed decisions. The youth will be in a position to utilize formal financial services for investment purposes. In the end, unemployment and poverty levels will go down.

5.5.4 Business Environment and Investment

The business environment was found to be poor in this study as per the rating given by the youth. This study also clearly indicated that business environment has influence on investment. This study recommends that the government should put mechanisms in place that will improve business environment. The government needs to shorten the business registration process, time taken to get access to electricity and water, reduce the number of permits required for business startups. This study further recommends that the government should improve on security as this hampers the youth from starting business. There is need to have special terms for doing business by the youth as this will shield the youth from competition. The reservation of 30 percent of public procurement to the youth is a step in the right direction. However, special conditions should be extended to other areas like export and manufacturing. With improvement of business environment, the youth will be able to take advantage of financial inclusion and undertake investment. The expected effects of financial inclusion will be realized.

5.5.5 Demographic Characteristics and Investment

The results of the study indicates that, demographic characteristics had moderating effect on investment among financially included. It may not be easy or even not possible to change demographic characteristics of the youth. This study therefore recommends that financial service providers and advocates of financial inclusion should put into consideration age, marital status, and level of education and place of residence while designing financial products or advocating for the same. For example, financial service

and products information should not only be communicated in English. Financial service providers should provide the same information in Swahili and local languages for more people to understand the information. With such consideration by the banks, it will be possible for the youth to undertake investment as a result of increased financial inclusion. This will see increase in employment and reduction of poverty among the youth.

5.6 Areas for Further Research

- This study noted that financial capability and ICT capability influenced the probability to invest. However, the study noted that financial capability and ICT capability were low among the youth and the study recommends that there is need to enhance the capabilities. There is need for a study to be carried out to establish the most effective way of enhancing the capabilities.
- Social capital was also found to have effect on probability to invest among the youth and it was recommended that there is need to enhance social capital. It would be important to establish the best way of enhancing social capital among the youth through a study.
- The nexus between financial inclusion, investment and people living with disability.
- A national survey in all the counties should be carried out.
- A study where the target population is beyond the youth.

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APPENDICES

Appendix I: Letter of Authorization/Permit

Date.....

To

County Commissioner
Nyeri County

Dear Sir,

RE: RESEARCH DATA ON “DETERMINANTS OF FINANCIAL INCLUSION ON INVESTMENT AMONG THE YOUTH IN KENYA”.

I am a student pursuing a Doctorate Degree in Business Administration- Finance Option at Karatina University. I am required to undertake a research thesis as partial fulfillment for the award of this higher degree. My research topic is stated above and kindly request for your assistance in making my research a success.

This purpose of this letter is therefore to request you to grant permission to collect relevant data from the public, specifically the youth, in county under your jurisdiction. The information collected will be treated with utmost confidentiality and will be used for the purposes on this research only. The output of this research will add value to youth in Kenya in terms of enhancing the financial inclusion and using financial products for their economic development.

Yours Sincerely

Richard M Kiai
Student Reg No. B300/2135/P/13

Appendix II: Letter of Introduction

Date.....
To.....
.....
Dear Sir/Madam,

RE: COLLECTION OF RESEARCH DATA

My name is Richard M Kiai and a PhD student in Business Administration – Finance option at Karatina University. Currently, I am carrying out a research on the “Determinants of financial inclusion on investment among the youth in Kenya”. I am in the process of gathering relevant data for this study. You have been identified as one of the collaborators and respondents in this study and kindly request for your assistance towards making this study a success.

I therefore kindly request you to take some time to respond to the attached questionnaire as guided by the research assistant. I wish to assure you that your responses will be treated with confidentiality and will be used solely for the purpose of this study.

I thank you in advance for your time and responses. It will be appreciated if you give time to the research assistant and also provide accurate responses to enable finalization of the study.

Yours Sincerely

Richard M Kiai
Student Reg No. B300/2135/P/13

Appendix III: Questionnaire

This questionnaire is a meant to collect data regarding the *determinants of financial inclusion on investment among the youth in Kenya*

Part A: Demographic Characteristics

Please tick **ONLY ONE** answer that best describes your situation for the following questions.

1. Gender
 Male Female
2. Age in years _____ or tick the age bracket where the respondent is not willing to give exact number of years.
 18 – 20 21- 25 26 -30 31 - 35
3. Marital status
 Married Not married
4. Place of residence
 i). Urban ii). Rural
5. What is the **highest level** of education achieved? (*Tick only one*)

Level	Tick
i). No Education	
ii). Primary Education	
iii). Secondary Education School	
iv). Post Secondary Education	

Part B: Personal Economic Status

6. What is your **main** current occupation?

Occupation	Tick
i). Self employed	
ii). Employed	
iii). Casual labour	
iv). Working in the family farm/ business	
v). Not working	

7. What is your current average income per month?

<input type="checkbox"/> Not earning	<input type="checkbox"/> Between Kshs 20,001 and Kshs 25,000
<input type="checkbox"/> Less than Kshs 5,000	<input type="checkbox"/> Between Kshs 25, 001 and Kshs 35,000
<input type="checkbox"/> Between Kshs 5,001 and Kshs 10,000	<input type="checkbox"/> Between Kshs 35,001 and Kshs 50,000
<input type="checkbox"/> Between Kshs 10,001 and Kshs 15,000	<input type="checkbox"/> Between Kshs 50,001 and Kshs 100,000
<input type="checkbox"/> Between Kshs 15,001 and Kshs 20,000	<input type="checkbox"/> Over Kshs 100,000

Part C: Financial Capability

8. In your own opinion, how would you rate/agree yourself against the following statements?

SA - Strongly Agree

DA – Disagree

DK- Don't Know

A – Agree

SDA- Strongly

R- Refused

N - Neutral

Disagree

Statement	SA	A	N	DA	SDA
Before I buy something I carefully consider whether I can afford it					
I tend to live for today and let tomorrow take care of itself					
I find it more satisfying to spend money than to save it for the long term					
I pay my bills on time					
I am prepared to risk some of my own money when saving or making an investment					
I keep a close personal watch on my financial affairs					
I set long term financial goals and strive to achieve them					
Money is there to be spent					
I have been trained on financial services					
I consider several options before I spend I spend my money in any investment					

9. Who is responsible for day-to-day decisions about money in your household? (*Tick only one*)

i). You

iii). You and another family member

ii). You and your partner

iv). Your partner

10. Does your household have a budget?

Yes

No

11. Kindly provide answers on to the following questions on finance services

Statement	Please can you tell me whether you have heard of any of these types of financial products?
A savings bank account	
Micro finance	
A pension fund	
Youth fund	
Uwezo fund	
Women fund	
Insurance	
A mortgage	
Mobile phone payment account	
Agency banking	
Mobile phone savings account like Mswari	
Mobile phone loans	

12. What was the main source of information about the above products (**Tick only one**)
- | | |
|-----------------|-----------------------|
| i). Newspaper | v). Friends |
| ii). Internet | vi). Social media |
| iii). Radio | vii). Church |
| iv). Television | viii). Public meeting |

13. Kindly indicate the correct answer in each of the following questions

Imagine that five friends are given a gift of Kshs 1,000. If the friends have to share the money equally how much does each one get?	150	
	200	
	250	
Now imagine that the friends have to wait for one year to get their share of the Kshs 1,000 and inflation stays at 10% percent. In one year's time will they be able to buy	More items than they could buy today	
	Same quantity they could today	
	Less than they could buy today	
Do you think that the following statement is true or false? "Having a business selling same type of goods usually provides a safer return than a business selling different types of goods."	True	
	False	
You lend Kshs 1,000 to a friend one evening and he gives you Kshs 1,000 back the next day. How much interest has he paid on this loan?	1,000	
	0	
	100	

Part D: Social Capital

14. Are you involved in any leadership roles like political, corporate, groups, and church or community associations?
- | | |
|---------|---------|
| i). Yes | ii). No |
|---------|---------|
15. Do you or a household member belong to groups or organizations, networks, associations, *shama*? Yes ____ No ____ (***If no, don't ask question 18,19 and 25***)
16. Kindly give the frequency in each of the questions.

	Question	5 or more	4	3	2	1	0
i).	Of how many groups are you actively involved in the group activity						
ii).	How many times in the past 12 months did anyone in this household participate in a group's activities, e.g. by attending meetings or doing group work?						

	Question	5 or more	4	3	2	1	0
iii).	In the last 12 months how much training have you received about investment/business from a group?						
iv).	How many times in the past 12 months, have you worked with others in your village/neighborhood to do something for the benefit of the community?						
v).	About how many close friends do you have these days? These are people you feel at ease with, can talk to about private matters, or call on for help						
vi).	If you suddenly needed a small amount of money, enough to pay for expenses for your household for one week or equal to about one week's wages, how many people beyond your immediate household could you turn to who would be willing to provide this money?						
vii).	Of those people, how many do you think are currently able to provide this money?						
viii).	How many of your close friends are of higher economic status than your self						
ix).	In the past 12 months, how many people with a personal problem have turned to you for assistance?						

Part E: Information Communication Technology Capacity

17. Kindly rate yourself against the following statements.

Statement	S A	A	N	D A	S DA
I am aware know something about internet technology					
I have the skills/training I need to use Internet technology.					
I find it difficult to learn to use Internet technology.					
Using Internet technology is more trouble than it is worth.					
I find using Internet technology interesting.					
I enjoy trying new things such as internet technology.					
I have the resources necessary to use Internet technology.					
I find Internet technology is very important.					
I access financial services institution information from the internet					
I use internet to find out about financial products					
I find it difficult to access financial products channeled through the internet					
I prefer personal attention while looking for financial services					
I have applied for financial services online					
I have learnt about a financial product from the internet					
When I want to know about financial services, I visit the website					
It is easy to know about financial services from the internet					

Part F: Business Environment

18. In your own opinion, how would you rate each of the following in relation to doing business in your county?

SA - Strongly Agree N - Neutral SDA- Strongly Disagree DK- Don't Know
 A - Agree DA - Disagree
 R- Refused

I find the following as a challenge in starting my own business;

Statement	S A	A	N	D A	S D A
Business Registration Process					
Cost of Business registration					
Cost of operations like electricity, water, transport etc					
Regulatory requirements like public health certificate, tax registration etc / Requirements for starting a business					
Competition from existing business					
The high cost of living					
Cost of finance					
Getting finances					
Slow government services					
Poor road network					
Getting electricity					
Capital required to start a business					
Introduced online services					
Taxation Policy and procedure					
County government licenses and permits					
Security in the county					
Corruption in the government system					

Part G: Financial inclusion and investment

19. In the last 12 months, which of the following activities have undertaken for personal development? **Tick all applicable.**

	Activity	Tick
i).	Bought a property like land	
ii).	Invested in the financial market like buying shares	
iii).	Started a business	
iv).	Started a farming project	
v).	None of the above	

20. Do you have a savings account with a bank, a cooperative society or microfinance?

Yes No

21. Which is the **main** mode of access of the savings account? (**Tick only one**)

- i). Over the counter
 ii). Through ATM
 iii). Through an agent
 iv). Through mobile phone
22. Do you have a saving account through mobile phone?
 Yes
 No
23. Why did you open account in either 39 or 41 above ?
 i). To receive payment from employer
 ii). Receive payment from government
 iii). Needed to make savings
 iv). My friends had accounts, so I also opened.
24. Have you ever borrowed money- from a financial institution?
 Yes No
25. Have ever bought any insurance product?
 Yes No
26. Are you a member of any retirement pension scheme?
 Yes No
27. If yes, why
 i). Required by the employer
 ii). Wanted to make some savings for retirement
 iii). My friends were in the scheme, so I also joined
28. If undertaking any income generating activity, what was the **main** source of capital?
 My own savings from income Loan
 Donation from parents /relatives Sale of an asset
 Donation from friends Didn't require capital
29. If loan in above, which was the **main** source
 Commercial Bank Uwezo funds
 Friends/Relatives Women fund
 Co-operative Society Micro-finance
 Youth fund Self-help group

Thank you for participating

Appendix IV: Bartlett, Kotrlik, & Higgins Table

Population size	Sample size					
	Continuous data (margin of error = .03)			Categorical data (margin of error = .05)		
	alpha = .10 t = 1.65	alpha = .05 t = 1.96	alpha = .01 t = 2.58	p = .50 t = 1.65	p = .50 t = 1.96	p = .50 t = 2.58
100	46	55	68	74	80	87
200	59	75	102	116	132	154
300	65	85	123	143	169	207
400	69	92	137	162	196	250
500	72	96	147	176	218	286
600	73	100	155	187	235	316
700	75	102	161	196	249	341
800	76	104	166	203	260	363
900	76	105	170	209	270	382
1,000	77	106	173	213	278	399
1,500	79	110	183	230	306	461
2,000	83	112	189	239	323	499
4,000	83	119	198	254	351	570
6,000	83	119	209	259	362	598
8,000	83	119	209	262	367	613
10,000	83	119	209	264	370	623

Appendix V: Operationalisation of Variables

Objective	Variable	Sub variables	Operational-ization	Operational definition of variable	Measure	Hypothesized direction
General Objective	Investment	None	This is taken as expenditure incurred with expectation of return in the long-run	A youth has invested or not	Indirect Measure	Increase with increase in financial inclusion
1	Financial Capability	Financial measures Awareness of Financial Products Financial management skills Financial discipline	individual's financial knowledge, skills, attitudes, and behaviors towards finance and financial products	Level of financial capability	Direct Direct Indirect Measure Indirect Measure	Increase influences investment positively
2	Social Capital	Empowerment and political action	This is taken as the value of the social networks	The level of social capital	Indirect Measure	Increase influences investment positively

Objective	Variable	Sub variables	Operational-ization	Operational definition of variable	Measure	Hypothesized direction
		Groups and networks			Indirect Measure	
		Collective action and cooperation			Indirect Measure	
		Social cohesion and inclusion			Indirect Measure	
3	Information communication technology adoption	ICT knowledge	Adoption and usage of technology in the financial services	Level use of technology	Indirect Measure	Increase influences investment positively
		ICT usage			Indirect Measure	
		Access to financial services through ICT			Indirect Measure	
4	Business environment	Business Registration and startup	Taken as the environment which	Conduciveness of the business environment	Indirect Measure	Increase influences investment negatively

Objective	Variable	Sub variables	Operational-ization	Operational definition of variable	Measure	Hypothesized direction
		requirements	business operates			
		Access to government services			Indirect Measure	
		Taxation Process			Indirect Measure	
		Security and governance			Indirect Measure	
5	Demographic Characteristics	Age, gender, marital status, place of residence, level of education and level of income	Taken as individual characteristics	Personal Characteristics	Direct	Demographic characteristics have moderating effect on Investments

Appendix VI: Published Articles