Research Journal of Finance and Accounting
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.5, No.18, 2014

Analysis of Micro-Financing on Youth Empowerment: Case of Micro-Finance Institutions in Murang'a County, Kenya

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Abstract

Over the past several decades, youth population in Murang'a County has been faced by grave mass unemployment challenge characterized by limited participation; colossal drugs, alcohol and substance abuse; severe crime and deviant behaviour; health related problems; limited and/or poor housing among others. While the number of youth serving organizations in the area has increased over the years, this problem continues to deteriorate. Various past studies have investigated impacts of massive youth unemployment. However, few studies have investigated effective ways of empowering the youth. Therefore, this survey study aims to find out an all-inclusive, practical and sustainable way of empowering youth population in Murang'a County through micro-financing. The study focus is development and implementation of a model of sustainable micro-entrepreneurship enabled by "social-conscious-driven" micro-financing without bearing detrimental externalities on the beneficiaries or the environment. The study objective is to analyze the four fundamental micro-financing facets: micro-credit, micro-entrepreneurship, micro-savings and entrepreneurial training on youth empowerment through participation, engagement and productivity in the economy. The study is significant as both the county and national government will be able to devise informed, effective and long term strategies of dealing with the massive youth unemployment. The researcher will also develop a need for further studies on effective youth empowerment programs in Kenya. The research design that was employed was descriptive research. The population of the study was 25% of youth population in Murang'a County that represents young micro-entrepreneurs. A sample size of 72 young micro-entrepreneurs was used. Single stage proportionate cluster sampling was used to select the 72 micro-entrepreneurs where each cluster represented a Sub-county in Murang'a County. Simple random sampling was thereafter used to select the required sample size. A series of self-administered questionnaires were distributed to the sampled micro-entrepreneurs. Descriptive data analysis was done using SPSS (Statistical Package for the Social Sciences) data analysis software version 17.0. The data was presented in graphs, charts, tables and figures.
Key Words: Micro- Financing Institutions, Youth Empowerment, Murang'a County

1.0 Background Information

The meaning of youth, and the way society regards youth, varies across time, place as well as societies. For developing nations and most particularly for African countries, the definition of youth poses a persistent challenge given the socio-economic and political realities within which youth are defined and characterized in policy formulation and design (Jennings, 2011). The Africa Youth Charter (2011) defined youth as individuals aged 15 to 35 years. According to Kenya National Youth Policy (2006), youth are defined as persons resident in Kenya in the age bracket 15 to 30 years, taking into account physical, psychological, cultural, social, biological and political definitions of the term.

Young people represent an important statistical grouping globally. According to United Nations Program on Youth (2012), young people between the ages 15 to 35 represent approximately 34% of the global population, nearly 2.4 billion people. In Africa, youth population represents 30%, while in Kenya the youth number is about 9.1 million and account for 32% of the population (World Bank, 2006; AYC, 2011 & AU, 2008). Youth population therefore forms the largest source of human resource (Kirby & Bryson, 2008) However, they have been placed on the periphery and not fully utilized for social, economic and political development (Anderson & Sandman, 2009; Jennings, 2006; Oliver, *et al.*, 2006; Roth & Brooks, 2004). Many of the youth who are productive and energetic remain unemployed or underemployed, continues to suffer from poor health, drugs and substance abuse and lack sufficient support. As a result, they are tapped in a "low productivity-low income-low wealth" vicious cycle of poverty (Gilead, *et al.*, 2008).

To address the diverse youth challenges, youth empowerment has been promoted internationally. The African Union, European Union, united Nations, World Bank, numerous national governments and philanthropic community are only a few examples of prominent institutions to have explicitly endorsed strategies to increase

youth participation in policy making and socio-economic development (AU, 2006; EU, 2009; UN, 2005; World Bank, 2006; UNCRC, 2005; Rosen & Maureen, 2001). To some extent, the argument for youth empowerment is based on rights (Freeman, 2005).

The United Nations Convention on the Rights of the Child (UNCRC) which assures children the right to be heard from their own views commonly encapsulates the "rights approach". This view emphasizes redistribution of power given a perceived injustice embedded in inabilities of young people to exercise their own voice and influence in matters that affect them. Another approach espouses an instrumental argument. This perspective frames youth empowerment not as a right to be protected, but as a modality for improving youth developmental outcomes and strengthening institutions and communities by way of young people's contributions (Altman & Feighery, 2004; Jennings, 2006; Suleiman, *et al.*, 2006). The Heads of States and Governments in the United Nations' Declaration at the beginning of new Millennium resolved, among other things, "to develop and implement strategies that give young people everywhere a real chance to find decent and productive work." The Secretary General of the United Nations, in his report to the Millennium Assembly, highlighted the need to "explore imaginative approaches to this difficult challenge (UN, 2000)

In the Kenyan context back in sixties, the government and other voluntary youth agencies did little to involve youth in the development agenda. National Youth Policy, (2006) highlights that, except the National Youth Service that was started in 1964, most other youth programmes that existed were largely social and recreational in nature. In addition, they were urban based. They included: the ILO/University of Nairobi sponsored Kericho conference on "Education Employment and Rural Development" and; the publication by the NCCK of the "After School - What?" Report in 1966. The problem of youth employment has since then continued to occupy the minds of policy planners in Government and private sector. The third National Development Plan 1974-78 while acknowledging the efforts made in addressing the youth unemployment predicted that in future it would loom large unless urgently addressed (Parliamentary Budget Committee, 2011). According to that report, efforts towards youth development programmes have ever since been made in other subsequent policy documents such as: the Sessional Paper No. 2 of 1992, on Small Scale and *Jua Kali* Enterprises; the 1997-2001, Development Plan; the National Poverty Eradication Plans 1999-2015; the 2002, Kenya National Youth Policy; the 2006, Youth Enterprise Development Fund; the 2009, Kazi Kwa Vijana and the 2013, Uwezo Fund. Youth organizations in Kenya have also come up with innovative programmes to address the youth's socio-economic needs. These includes health intervention programmes especially those aimed at promoting reproductive health and alleviating the spread of HIV/AIDS among the youth, environmental programmes, character building, literacy, vocational training, sports, recreational programmes as well as social-cultural programmes (NGO Coordination Board, 2010)

However, youth unemployment problem has been worsening in spite of remarkable increase in the number of programmes adopted to address it mainly because of lack of a comprehensive, long term and practical approach; charitable nature of the available youth programmes that have created dependency and taken away individuals' initiative to break the poverty cycle; pressure from the high population growth rate currently standing at 2.6% (Kenya National Bureau of Statistics, 2009); resources constraints; lack of appropriate skills and unclear and uncoordinated policies and programmes. According to Parliamentary Budget Committee's Report (2012), the creation of jobs for unemployed Kenyans, especially the youth is more urgent than at any other time in the country's history and needs to be the focus of the new growth plan. It is against this background, that the research problem is argued in the next section.

1.1 Statement of the Problem

The Youth in Murang'a County account for about 32% of the population or approximately 300,000. This forms 60% of the total labour force out of which, 75% are unemployed. 82% of the unemployed youth have no job training other than formal schooling. Enrolment in secondary schools is less than 45%.The economic growth rate has not been sufficient enough to create productive employment opportunities to absorb the increasing labour force of about 10,000 annually. Most of these are youth and only about 25% are absorbed, leaving 75% to bear the burden of massive unemployment and/or underemployment and subsequent poverty (Kenya National Bureau of Statistics, 2009). Poverty on the other hand has lured youth into anti-social, risky and deviant behaviours leading to high HIV/AIDS infection, immense drugs and substance abuse and crime. According to NACADA (2012), Murang'a County tops in alcoholism countrywide with 9,000 bars against 3,000 learning institutions. Mass unemployment has also led to emergence of illegal groupings that survives through merciless extortions, undue coercion and brutal crime posing colossal security threat to the civilians, county as well as the national government. This is evidenced by regular cases of abduction, robbery with violence and brutal murder in the area (Rugut, 2010). The county therefore remains under-developed, economically unexploited and insecure to work and live in despite its strategic proximity to Kenya's capital city. To mitigate the above challenges, massive jobs creation for the huge, energetic and unemployed youth in Murang'a County is more urgent than at any other time in the county's history and needs to be the focus of the new growth plan. It is on this premise that this study was

conducted to critically analyse if micro-financing through micro-financing institutions empowered youth in Murang'a County.

LITERATURE REVIEW

2.0 Youth empowerment

A youth is any person resident in Kenya in the age bracket 15 to 30 years, taking into account physical, psychological, cultural, social, biological and political definitions of the term (Kenya National Youth Policy, 2006). Efforts to support youths' healthy development and integration into the community have experienced several shifts in focus over the past few decades (Small, 2004). Historically, a primary function of youth development programs was rehabilitation or containment (e.g., keeping youth off the streets). An initial shift from these risk-based preventive approaches was in the direction of fostering healthy youth development and capacity building through active community participation (Kim, 1998; Small, 2004). More recently, positive youth development approaches have been expanded to incorporate a focus on youth empowerment. Empowerment is a multi-level construct consisting of practical approaches and applications, social action processes, and individual and collective outcomes. In the broadest sense, empowerment refers to individuals, families, organizations, and communities gaining control and mastery, within the social, economic, and political contexts of their lives, in order to improve equity and quality of life (Rappaport, 1984; Rappaport, 1987; Zimmerman, 2000). The concept of empowerment has been addressed at both theoretical and practice levels in specific reference to youth.

2.1 Micro-finance and Poverty Eradication

The word micro-finance is being used repeatedly in today's development vocabulary. Khandker (1993) underscored that, the word is literally comprised of two words: micro and finance which mean small credit; the concept of microfinance goes beyond the provision of small credit to the poor. Christen (1997) on the other hand defined micro-finance as "the means of providing a variety of financial services to the poor based on market-driven and commercial approaches". According to Brown (2009), this definition encompasses provision of other financial services like micro-savings; money transfers payments, remittances, and insurance, among others. However many microfinance practices today still focus on micro-credit: providing the poor with small credit with the hope of improving their labour productivity and thereby lead to increment in household incomes (Leonard, 2001)

Rutherford (2000) argued that, there is already the impression in the global arena that microfinance is successful poverty reduction tool. Many policy makers are therefore engaged on how to make micro-finance sustainable and available to many poor households in the future. Rigorous empirical analysis in the issue of statistical impact of micro-finance began in the1990s. The studies so far remain few and the results of these studies are highly provocative. The first school of thought questions the relevance of microfinance as a poverty reducing tool in the first place. (Adam, 1992) argued that "debt is not an effective tool for helping most poor people to enhance their economic condition be they operators of small farms or micro entrepreneurs". The main argument is that there are other more important constraints that face small agricultural households and they include product prices, land tenure, technology, market access and risk. Also in support of the same view is Gulli (1998) who argued that credit is not always the main constraint for micro enterprises´ growth and development, and that poor people demand a wide range of financial, business development and social services for different business and household purposes. In a close rejoinder Mayoux (2002) argued that the logical assumption of virtuous spiral of economic empowerment to the household due to microfinance does not in reality exist. This is particularly so given that there exists gender relations in society in relation to loan uses; a scenario that more often than not leaves poor women borrowers highly indebted, and not much wealth to show for it.

Apparently the thinking that rural poverty is a consequent of liquidity constraints has not changed much. Brian and Janette (2002) reasoned that to break the vicious cycle of poverty, there needs to be an outside force that will intervene at some point of the cycle to improve demand for goods and services. This could be done by injecting some liquidity that is believed to unleash the productivity of household labour. Micro-finance promises not only to break the vicious chain of poverty by injecting liquidity in to the vicious chain, but also it promises to initiate a whole new cycle of virtuous spirals of self-enforcing economic empowerment that lead to increased household well-being. Such is the theory that has promoted the microfinance institution and given it the "polite and respectable" image it currently enjoys. There are several assumptions that go with this theory; first it is assumed that poor people can become micro-entrepreneurs if only they were given a chance through credit. In essence this implies that the level of entrepreneurship and managerial skills required is already given or can be easily be obtained, unlocking the household labour that had been locked up due to liquidity constraints by the poor. The

theory further assumes that there is a vibrant market for goods and services and that it is possible for micro-entrepreneurs to get linked up to markets for their products.

Lastly some proponents of the model also assume that the fact that the poor can repay at market interest rates or slightly above market rates is a good indication that they are improving their financial status; and therefore it is a sign of good impact of microfinance (Anderson & Sandman, 2009; Jennings, 2006; Oliver, et al., 2006 Roth & Brooks, 2003; Sind air, 2000). The irony of the this assumption being that even before the micro-finance revolution many governments and non-governmental organizations believed that informal money lenders were exploiting the poor by charging high interest rates; and that is why it was justified to bring to the poor a cheaper alternative; yet the poor were still paying for the money lender services. The above-mentioned are the assumptions upon which the "micro-finance promise" of poverty reduction and economic empowerment stands. A key research and policy question is whether the availability of credit for the more disadvantaged in a given society can really reduce poverty (Gulli, 1998).

2.2 Micro-credit and Youth Empowerment

Robert (2004) defined micro-credit as the extension of very small loans (micro-loans) to impoverished borrowers who typically lack collateral, steady employment and a verifiable credit history. It is designed to support entrepreneurship and alleviate poverty. Richard (2004) is of the view that, micro-credit is part of micro-finance, which provides a wider range of financial services, especially savings accounts, to the poor. A substantial part of the world's poor has limited, if any, access to formal sources of credit. Instead, they depend on informal credit from moneylenders, often unreliable and expensive (Collins *et al*., 2009), or have to borrow from families and friends. Such credit rationing may constrain entrepreneurship and keep people trapped in poverty. Microfinance pioneered by the Bangladeshi Grameen Bank in 1983, aimed to deal with this issue in a substantial fashion.

Ideas relating to microcredit can be found at various times in modern history. Jonathan Swift inspired the Irish Loan Funds of the 18th and 19th centuries. In the mid-19th century, anarchist Lysander wrote about the benefits of numerous small loans for entrepreneurial activities to the poor as a way to alleviate poverty. At about the same time, but independently to Spooner, Friedrich Wilhelm Raiffeisen founded the first cooperative lending banks to support farmers in rural Germany. In the 1950s, Akhtar Hameed Khan began distributing group-oriented credit in East Pakistan. Khan used the Comilla Model, in which credit is distributed through community-based initiatives. The project failed due to the over-involvement of the Pakistani government, and the hierarchies created within communities as certain members began to exert more control over loans than others.

Yunus (2008) argued that, micro-credit is ideally based on a unique set of principles that are readily distinguished from trends in the wider credit market. Microcredit organizations were initially created as alternatives to the "loan-sharks" known to take advantage of clients. Indeed, many micro lenders began as non-profit organizations and operated with government funds or private subsidies. By the 1980s, however the "financial systems approach," influenced by neoliberalism and propagated by the Harvard Institute for International Development, became the dominant ideology among micro-credit organizations. The commercialization of microcredit officially began in 1984 with the formation of Unit Desa (BRI-UD) within the Bank Rakyat Indonesia. Unit Desa offered 'kupedes' microloans based on market interest rates. Though lending to groups has long been a key part of microcredit, microcredit initially began with the principle of lending to individuals.

Despite the use of solidarity circles in 1970s Jobra, Grameen Bank and other early microcredit institutions initially focused on individual lending. Indeed, Muhammad Yunus propagated the notion that every person has the potential to become an entrepreneur. The use of group-lending was motivated by economics of scale, as the costs associated with monitoring loans and enforcing repayment are significantly lower when credit is distributed to groups rather than individuals. Many times the loan to one participant in group-lending depends upon the successful repayment from another member, thus transferring repayment responsibility off of microcredit institutions to loan recipients.

Vrajlal (2006) stated that, micro-finance reduces poverty through higher employment and higher incomes. This is expected to lead to improved nutrition and improved education of the borrowers' children. Some argue that microcredit empowers women. In the US and Canada, it is argued that micro-credit helps recipients to graduate from welfare programs. Critics say that microcredit has not increased incomes, but has driven poor households

into a debt trap, in some cases even leading to suicide. They add that the money from loans is often used for durable consumer goods or consumption instead of being used for productive investments, that it fails to empower women, and that it has not improved health or education. Victoria (2006) indicated that, in many cases microcredit has facilitated the creation and the growth of businesses. It has often generated self-employment, but it has not necessarily increased incomes after interest payments. Microcredit is just one factor influencing the success of a small businesses, whose success is influenced to a much larger extent by how much an economy or a particular market grows. Yunus (2008) suggested an integrated package of services ('a credit-plus' approach) rather than just providing credits. When access to credit is combined with savings facilities, non-productive loan facilities, insurance, enterprise development (production-oriented and management training, marketing support) and welfare-related services (literacy and health services, gender and social awareness training), the adverse effects discussed above can be diminished.

2.3 The Role of Entrepreneurial Training on Sustainable Entrepreneurship

Adams (2004) was of the view that, entrepreneurship is a key economic driver. According to Khandker (2001)**,** high majority of jobs are created by small businesses started by entrepreneurially minded individuals, many of whom go on to create big businesses. People exposed to entrepreneurship frequently express that they have more opportunity to exercise creative freedoms, higher self-esteem, and an overall greater sense of control over their own lives. As a result, many experienced business people political leaders, economists, and educators believe that fostering a robust entrepreneurial culture will maximize individual and collective economic and social success on a local, national, and global scale. Feigenberg *et al*., (2011) underscored that, entrepreneurship education is a lifelong learning process, starting as early as elementary school and progressing through all levels of education, including adult education.

Robinson (2001) drew a boundary around entrepreneurship education as comprising the following three components: First, personal development: entrepreneurship education should build confidence, motivate progress, strengthen the entrepreneurial mind-set, foster a desire to achieve and inspire action. Second, business development: Technical, financial literacy and skills to engage in self-employment, and entrepreneurship that can lead to self-improvement. This would include the expected business and functional curricula. Finally, entrepreneurial skills development: entrepreneurship education should provide training in social skills, networking, creative problem solving, opportunity seeking, selling, interviewing, presentations, group leadership, community co-operation, dealing with bureaucracy, local cultural norms and how they affect business, etc. There is a growing body of literature that entrepreneurial learning needs should focus as much on personal development and social skills as on business development. This would argue for a blended learning experience where business knowledge and skills are combined with the best of tools and approaches taken from training events. However, we need to draw on sound platforms of knowledge and understanding about personal development (Nelson, 2011)

Brian and Jannette (2002) argued that, beyond development of individuals we also need to work towards getting society and the "supply side" fit for enterprise. In seeking to create awareness and social acceptance of entrepreneurship, careful thought needs to be given to the role of media. Television and radio can present cases, news, information and engaging programs to deliver a more positive message about enterprise and entrepreneurship. This is quite important to help overcome negativity that might exist in society and where low trusts in free markets persist. In addition to mass media, NGOs and other grass roots agencies might be brought together to help engage people more directly through schools, community centers, village halls, church and other religious organizations. Anderson (1998) suggested that stakeholders, such as not-for-profit organizations', large local and multinational companies, well established entrepreneurs and others need to come together in networks to create an ecosystem in which entrepreneurship can flourish. Rutherford (2000) added that, multilateral Organizations such as the UN ought to create Web-based resources, knowledge-sharing platforms and networks of educators. The world is full of teaching materials, but finding them is a challenge. Governments and stakeholders need to provide resources (sponsorship) for access to world-class journals and publications so that educators and trainers can be encouraged to read what is cutting edge and current. Many of these journals and publications are simply not available to educators and trainers in poor countries and so they risk being stuck with old materials, ideas and methods. According to Khandker (1993), educators, trainers and institutions should adapt their curricula, to ensure that it is relevant, cutting edge, fresh and dynamic. They also need to be embedded in the context and provide access to resources, markets and opportunities, not just "training." Policy-makers, educators, entrepreneurs and sponsors need to come together in conferences on a sufficiently large scale to raise standards, increase the volumes of participation and find appropriate local, regional and national

solutions so that entrepreneurship education can have a positive impact at the grass roots. Television must not be ignored as it has a major reach across society and can be influential in transmitting ideas and raising aspirations. Adams (2011) emphasized that, while economic and political reforms play an important role in setting the scene, people need the knowledge, skills and mindset to take advantage of opportunities.

2.4 Micro-entrepreneurship and Wealth Accumulation

The term "micro-enterprise" refers to a very small-scale, informally organized business activity undertaken by poor people. Micro-enterprises are tiny businesses with most of them having one employee, the owner (Schreiner, 2003). Schreiner and Leon (2001) defined micro-enterprise as "Firms owned by the self-employed poor that use microfinance". These definitions are the simplest definition for micro-enterprise. According to Schreiner and Leon (2001) complex definition of microenterprise should have three components i.e. type of activity, investment limits and number of employee. Hence, for the purpose of this study, micro-enterprise can be defined as an informal activity run by poor with an investment limit of less than 0.1 million and employing less than ten workers.

In many developing countries micro-enterprise in its various forms are the major sources of livelihood in rural as well as urban areas. It contributes to a large proportion of employment generation in developing as well as developed countries. Micro-enterprises are considered to be the source of equitable distribution. Otero and Rhyne (1994) stated that "For increasing number of poor people, micro-enterprise is a source of income and employment where no other alternatives are available. In urban areas, a growing percentage of the working population is engaged in micro-enterprise activity. In rural settings, most families combine microenterprise with the farming and many depend on it as the main source of family income". Describing the potential and importance of microenterprise and microfinance as poverty eradication tools, Rangarajan (2005) stated that "If a serious impact on the economic conditions of the rural poor has to be made, a much larger flow of credit to support a much broader production base is required. Though micro-enterprises are not a panacea for the complex problems and chronic unemployment and poverty in rural and urban areas, yet promotion of micro enterprises is a viable and. Effective strategy for achieving significant gains in income and assets for poor and marginalized people"(Rangarajan, 2005). This contribution of micro-enterprise is not uniform across the world. It depends on several factors within the country i.e. Internal and external environment and their support to these micro-enterprises. Khanka (1990) rightly argued that the role of entrepreneurship in economic development varies from economy to economy and it depends on several factors like availability of material resources, industrial climate and responsiveness of the political system to the entrepreneurial function. India has a good potential to promote microenterprise because it has got enough material resources with favourable industrial climate. But there is a need to promote responsiveness of the political system to the entrepreneurial function.

In a study on the role of micro-finance, entrepreneurship and sustainability in poverty alleviation in LDCs Vincent (2004) concluded that microfinance and sustainable micro-entrepreneurship in LDC's have economic benefits and it affect the quality of life for the micro-entrepreneurs. Schreiner (2004) has defined support for micro-enterprise in terms of asset-building. He believes that micro-enterprise programs attempt to help people to build human, financial, and social capital for the development of very small businesses that will improve people's well-being. This "asset-development" paradigm highlights the usefulness not only of loans for financial capital and training for human capital but also savings services for financial capital and networks for social capital. Other than economic benefit there are some social benefits of micro-enterprise and microfinance development. Singh (2002) mentioned that "The social development approach of micro-finance is based on the premise that people should earn money by investing in viable micro-enterprises. They should earn profit from their enterprises. Major share of the profit should be reinvested in enterprises for their growth. The other share of the profit should be spent on social development that is, health, education, housing, sanitation etc. By earning profit from the viable micro-enterprises, people will increase their paying ability for services delivered to them". And finally this will lead to the development of the overall society. It has been clearly discussed in the above section that micro-enterprise can play an important role in various aspects of social and economic development of the society. Increasing income opportunities and finally leading to empowering the poor is the basic objective of the microenterprise. Empowerment of the poor community is the way to development of society.

2.5 Micro-saving and Wealth Accumulation

Douglas (2004) defined micro-saving as consisting of a small deposit account offered to lower income families or individuals as an incentive to store funds for future use. Micro-savings accounts work similar to a normal

savings account, however, are designed around smaller amounts of money. The minimum balance requirements are often waived or very low, allowing users to save small amounts of money and not be charged for the service. Micro-saving is an integral component of microfinance. Since long it was a misconception that poor cannot save. Emergence of microfinance has proved that poor also has the ability to save. In fact it is their saving capacity which determines their lending capacity. Stemper (1996) stated that savings are an important means of establishing client history which is considered when evaluating the loan applications. These savings can also be used as a substitute for collateral.

Buckley (1997) viewed savings as the basis to achieve financial independence and self-sufficiency for the microenterprise. Capital is a constraint in the expansion of business. Majority of these microenterprises fail to graduate from micro to small or medium enterprise due to lack of access to capital. Grosh and Somolekae (1996) considered lack of access to capital as one of the major constraint in expansion. For capital he emphasized more on the role of accumulated capital i.e. savings and stated that "The main factor that constrains entrepreneurs from accumulating capital that successive generations could use to enter business on a larger scale is the dearth of attractive saving vehicles". In a study in Africa it was found that principal source of finance for start-up funds for any entrepreneur was self-generated funds. In most cases this generation of fund was through savings. These savings were supplemented with the loan from friends and relatives. Once after establishing only entrepreneurs become integrated with the informal financial intermediaries but self-generated funds played a predominant role (Buckley, 1997). Quoting the importance of savings for microenterprise Schreiner and Woller (2003) stated that "For new microenterprises savings has some advantages over loans. Savings screen for skills and entrepreneurship where information is the least asymmetric- the self. The dilemma is that most microenterprise needs savings more than loans but microenterprise programs have no clear role to facilitate savings". Using their own savings for start-up of business reduces the risk of bankruptcy and helps them to avoid the debt trap. So it can be concluded from that savings should be an integral part of microenterprise development programmes.

2.6 Research Gap

Aghion and Morduch (2005), observed that microfinance can make a real difference in the lives of those served, but microfinance is neither a panacea nor a magic bullet against poverty, and it cannot be expected to work everywhere and for everyone. Much as there have been mixed statistical impacts of microfinance, there also has been no widely acclaimed study that robustly shows strong impacts, but many studies suggest the possibility of good welfare impact. More research should therefore be directed towards not just specific results but also the context within which particular results are expected. What worked in a particular socio-cultural and economic context may not necessarily work the same if the socio-cultural and economic conditions are changed in another context. This kind of focus for future research will contribute more to knowledge, for the purposes application and policy. It is within this background that this study is conducted. Specifically the study focuses on the impact of microfinance on youth population's income, and future vulnerability to poverty.

2.7 Summary of Literature Review`

According to Ritherford (2000), Microfinance has been successful in reducing poverty. Morduch (2006) reasoned that, to break the "low productivity-low income-low wealth" poverty cycle, there need to be an outside force that will intervene at some point of the cycle to improve demand for goods and services. This could be done by injecting some liquidity (micro-credit) that is believed to unleash the productivity of household labour through sustainable micro-entrepreneurship (Brian & Janette, 2002).Unleashing labour productivity leads to income generation and consequent savings. To enhance entrepreneurship, Brian (2000) recommended entrepreneurial training that covers the following vital components: personal development; business development and entrepreneurial skills. Vrajlal (2006) concluded that microfinance promises not only to break the vicious chain of poverty by injecting some liquidity into the chain but also promises to initiate a whole new cycle of virtuous spiral of self-enforcing economic empowerment that leads to increased savings, increased wealth and consequently increased well-being: improved nutrition; better health care; better education, better housing etc.

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

This is the conceptual structure within which research is conducted and constitutes the blue print for the collection, measurement and analysis of data and also facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximum information with minimal expenditure of effort, time and money (Kothari, 2004). The design of the study defines the study type. Researcher will use cross-sectional approach incorporating descriptive and correlation statistics. Descriptive research is mostly preferred as the data sought will be described without affecting the profile on the ground, it determines and reports the way things are and describes such things as possible behavior, attitudes, values and characteristics. A descriptive research design is inclusive and extensively focuses attention on the objectiveness of the study, designing the methods of data collection, selecting sample, collecting data, processing and analysis and reporting of the findings.

3.2 Target population

Population refers to the entire group of individuals, objects or things that share common attributes or characteristics and may or may not be found within the same geographical location (Mugenda, 2008). Target population refers to total population that the researcher species in his or her research while accessible population is that part of the target population that the researcher can practically reach to select a representative sample (Mugenda & Mugenda, 2003). The population of the study composed of 25% of youth population in Murang'a County that represents micro-entrepreneurs.

3.3 Sampling procedures and techniques

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the population from where they were selected. The degree to which the sample represents the population is the degree to which results from it can be generalized on the population (Persons, 2008). Since the purpose of sampling is to gain information about the population from where the sample has been selected, the procedures and techniques used to select the sample are vital to the accuracy of our inference. The researcher used single-stage proportionate cluster sampling technique. Each of the 7 Sub-counties in Murang'a County represented a heterogeneous cluster designed in such a way that the diversity of the working population was reflected within each cluster. Within each of the selected clusters, the researcher studied the sampled youth micro-entrepreneurs to acquire the needed information.

3.5 Sample Size

A sample is a subset of a particular population (Mugenda, 2008). Sampling is the process of selecting a sample from a population. The ideal sample is large enough to serve as an adequate representation of the population about which the researcher wishes to generalize, and small enough to be selected economically in terms of subject availability, expense in both time and money, and the complexity of data analysis (Mugenda & Mugenda, 2003). In determining the sample size, the researcher considered the confidence level to be used, the allowable sampling error, and the reasonable estimate of the standard deviation of the population parameter.

The researcher sampled 72 young entrepreneurs that formed the sample population of the study. Single stage proportionate cluster sampling was used to select the 72 cases where each cluster represented a Sub-county in Murang'a County. Simple random sampling was thereafter used to select the young micro-entrepreneurs. Random sampling has the advantage of cancelling out biases and providing a statistical means for estimating sampling errors. The sample size of 72 youth was calculated as follows:

$$n = (Z/E)^2 (p) (1-p)$$

Where:

n = the required sample size

Z = the standard score corresponding to a given confidence level

E = the proportion of sampling error in a given situation

P = the estimated proportion of cases in the population

Since the proportion of young entrepreneurs in Murang'a County is 25% of the total youth population, $p = 0.25$ for the whole population. The researcher wants a confidence level of 95% with a tolerable amount of error of not greater than 0.10; the sample size is therefore calculated as follows:

$$n = (1.96/0.10)^2 (0.25) (0.75)$$

$$n = (19.6)^2 (0.25) (0.75)$$

$$n = 72$$

Table 1 Sampling Frame

Sampling unit (Cluster)	Population (N) in %	Percentage Sampled	Sample (n)
Gatanga Sub-county	4.25%	16.7%	12
Kandara Sub-county	4.25%	16.7%	12
Kigumo Sub-county	3.25%	12.5%	9
Maragua Sub-county	3.5%	13.8%	10
Kiharu Sub-county	5.0%	19.4%	14
Kangema Sub-county	2.25%	9.7%	7
Mathioya Sub-county	2.5%	11.1%	8
Total	**25%**	**100%**	**72**

Source: Author (2014)

3.6 Data analysis techniques and procedures

Data analysis is a process that brings order, structure and meaning to the mass of information collected in the study (Mugenda, 2008). Once the researcher had taken observation on his subjects and obtained relevant information, he was in a position to carry out analysis. This enabled him to determine the extent to which the information that he obtained could assist in providing answers to the relevant questions raised in the research problems. The data collected was analyzed using descriptive statistics. This permitted the researcher to meaningfully describe large number of scores with a small number or indices calculated for a sample drawn from the population. The major types of descriptive statistics that the researcher used are measure of central tendency, measure of dispersion or variability and measure of relationships. Measure of central tendency was used to summarize large sets of data in the distribution of scores and determine the typical score of the four independent variables i.e. Amount of micro-credit, level of entrepreneurial training, size of micro-enterprise and amount of micro-savings. Measure of dispersion was used to measure the degree of variability or how spread out the scores are about the average while measure of relationships was used to indicate the degree to which micro-credits, level of entrepreneurial training, size of micro-enterprise and micro-savings relate to an individual's size of investment. Correlation and regression was used to describe the nature of relationship between independent and dependent variables while product moment coefficient of correlation (r) and coefficient of determination (r^2) were used to measure the strength of the relationships between variables.

4.0 RESEARCH FINDINGS AND DISCUSSION

4.1 Summary of the Variables

Table 2 Statistical summary of the Variables

		Amount of Micro-credit	Amount of Micro-savings	Amount of Capital employed	Amount of Investment
N	**Valid**	25	30	70	70
	Missing	0	0	0	0
Mean		45	80.3	74.8	159.1
Median		32	65	63.5	155
Mode		40	60	70	150
Standard Deviation		32.03	30.9	65.17	57.47
Coefficient of Skewness		0.156	0.657	0.0737	0.158

4.3 Inferential Analysis

The researcher carried out correlation analysis to determine the nature and strength of the relationship between amount of investment and the independent variables i.e. amount of micro-credit, amount of savings, level of education, and the size of micro-enterprise. Regression analysis was carried out on the independent variables (predictors) and the dependent variable.

4.4 Correlation Analysis for Amount of Micro-credit

The researcher used correlation analysis to establish the nature of relationship between the amount of micro-credits awarded to the respondents and the amount of investment. Table 3 shows the correlation model.

Table 3 Correlation Analysis for Amount of Micro-credit

Amount of Micro-credit (X) in Ksh "000"	Amount of Investment (Y) in Ksh "000"	X^2 "000,000"	Y^2 "000,000"	XY "000,000"
5	20	25	400	100
5	20	25	400	100
10	25	100	625	250
10	30	100	900	300
10	35	100	1225	350
15	50	225	2500	750
15	70	225	4900	1050
20	60	400	3600	1200
25	65	625	4225	1620
30	70	900	4900	2100
30	80	900	6400	2400
35	90	1225	8100	3150
35	100	1225	10000	3500
40	120	1600	14400	4800
45	100	2025	10000	4500
50	130	2500	16900	6500
60	150	3600	22500	9000
60	180	3600	32400	10800
70	200	4900	40000	14000
70	250	4900	62500	17500
80	200	6400	40000	16000
80	180	6400	32400	14400
100	300	10000	90000	30000
110	350	12100	122500	38500
120	200	14400	40000	24000
1125	**3055**	**78475**	**571375**	**206770**
ΣX	ΣY	ΣX^2	ΣY^2	ΣXY

4.5 Product Moment Coefficient of Correlation (r)

The researcher used product moment coefficient of correlation (r) to find out the strength of the linear relationship between the amount of micro-credit awarded to the respondents and the level of investment.

$$r = \frac{n\Sigma xy - \Sigma x\Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\, X\, \sqrt{n\Sigma y^2 - (\Sigma y)^2}}$$

$r = 0.9330$

The correlation coefficient is 0.9330 which indicates a strong positive linear association between the amount of micro-credit given to the respondents and the level of investment.

4.6 Testing the Significance of *r*

After getting the value of *r*, the researcher was able to make an estimate of ρ, the population co-efficient of correlation and test whether the value of ρ is sufficiently different from zero for him to decide whether the amount of micro-credit awarded and the amount of investment are correlated.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

The researcher carried out t test for which the best statistic is given by:

$$|t| = \left| \frac{r-\rho}{\sqrt{1-r^2}} \text{X} \sqrt{n-2} \right|$$

Using the values of r = -0.9330 and n = 25;

$|t| = 12.43$

The tabulated value for n – 2 for 8 degrees of freedom using 5% level of significance is 2.306. Since 12.43 is greater than 2.306 the numerical evidence is strong enough to reject the null hypothesis and conclude that the value of ρ is not zero. This confirms that the amount of micro-credit awarded and the amount of investment are correlated.

4.7 Regression Analysis on Amount of Micro-credit

The researcher used this statistical technique to establish the line of best fit to the observed data.
In the general form, the equation for a straight line is given by:

$$Y = a + bx$$

The values of a and b are obtained as follows:

$$a = \frac{\Sigma y - b\Sigma x}{n}$$

$$b = \frac{n\Sigma xy - \Sigma x\Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$$

Substituting, we get:

a = 18.7
b = 2.3

Therefore, the line of best fit is given by:

Y = 18.7 + 2.3x

4.8 Coefficient of Determination

The researcher used this measure denoted by r^2 (because it is the square of the square of the correlation coefficient, r) to calculates what proportion of the variation in the actual values of y may be predicted by changes in the values of x

$$r^2 = \frac{(n\Sigma xy - \Sigma x\Sigma y)^2}{(n\Sigma x^2 - (\Sigma x)^2 \text{X} (n\Sigma y^2 - (\Sigma y)^2)}$$

= 0.8705

From the above results, r^2 (0.8705) is high implying that there is a perfect linear relationship between the amount of micro-credit awarded and the amount of investment.

4.9 Standard Error of Regression

As with means and proportions, the researcher considered the sampling errors associated with the estimates a & b.

Standard error of regression= $\mathbf{S_e} = \sqrt{\frac{\Sigma y^2 - a\Sigma y - b\Sigma xy}{n-2}}$

= 41.00

The standard error of regression obtained above can be used in setting confidence limits for the calculated regression line *Y=18.7-2.3x*

4.10 Standard Error of the Intercept (a)

Since the values of a & b were calculated from a sample, then they are estimates of the population intercept and gradient α and β. Both of these distributions have standard errors.

The intercept $S_a = S_e \sqrt{\frac{\Sigma X^2}{n\Sigma X^2 - (\Sigma X)^2}}$

= 4.62

The confidence interval for the intercept is given by:

$\alpha = a \pm t \times S_a$

The 95% confidence interval of the intercept is given by:

= 18.7±2.306×4.62

= 18.7±10.66

This gives the upper limit of 29.36 and a lower limit of 8.04

Significant test for the intercept

H_0: $\alpha = 0$

H_1: $\alpha \neq 0$

$t = (a - \alpha) \div S_a$

= 4.047

Since 4.047 is much greater than 2.306 (the value from t tables) H_0 can be rejected.

4.11 Standard Error of the Gradient (b)

The researcher calculated the standard error of the gradient as follows:

The gradient $S_b = \frac{S_e}{\sqrt{\Sigma X^2 - \frac{(\Sigma X)^2}{n}}}$

= 0.2457

The 95% confidence interval for the slope is

$\beta = 2.3 \pm 2.306 \times 0.2457$

$= 2.3 \pm 0.5666$

Giving an upper limit of 2.8666 and a lower limit of 1.7334

Significant test for the slope

H_0: $\beta = 0$

H_1: $\beta \neq 0$

$t = (b - \beta) \div S_b$

= 9.36

Since 9.36 is much greater than 2.306 (the value from t tables) H_0 can be rejected.

Conclusion: On the basis of this evidence, there exist a strong linear relationship between the amount of micro-credit awarded and the amount of investment and the regression equation ***Y=18.7+2.3x*** could be used as a basis of prediction.

4.12 Correlation Analysis for Amount of Micro-savings

The researcher used correlation analysis to establish the nature of relationship between respondents' amount of micro-savings and the amount of investment. The table below shows the correlation model.

Table4. Correlation Analysis for Amount of Micro-savings

Amount of Micro-savings (X) in Ksh "000"	Amount of Investment (Y) in Ksh "000"	X^2 "000,000"	Y^2 "000,000"	XY "000,000"
12	20	144	400	240
15	20	225	400	300
18	25	324	625	450
20	30	400	900	600
20	35	400	1225	700
30	50	900	2500	1500
30	70	900	4900	2100
40	100	1600	10000	4000
45	70	2025	4900	3150
48	60	2304	3600	2880
50	65	2500	4225	3250
50	70	2500	4900	3500
50	80	2500	6400	4000
60	80	3600	6400	4800
60	90	3600	8100	5400
60	150	3600	22500	9000
70	100	4900	10000	7000
70	160	4900	25600	11200
80	120	6400	14400	9600
80	170	6400	28900	13600
100	130	10000	16900	13000
100	180	10000	32400	18000
120	150	14400	22500	18000
120	200	14400	40000	24000
130	200	16900	40000	26000
150	250	22500	62500	37500
150	180	22500	32400	27000
180	300	32400	90000	54000
200	350	40000	122500	70000
250	400	62500	160000	100000
2408	**3905**	**295722**	**780075**	**474770**
ΣX	ΣY	ΣX^2	ΣY^2	ΣXY

4. 13 Product Moment Coefficient of Correlation (r)

The researcher used product moment coefficient of correlation to find out the strength of the linear relationship between the amount micro-savings and the respondents' level of investment.

$$r = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\, X \sqrt{n\Sigma y^2 - (\Sigma y)^2}}$$

$r = 0.515$

The correlation coefficient is 0.515 which indicates a weak linear relationship between the amount of micro-savings and the amount of investment.

4. 14 Test of the Significance of *r*

After getting the value of *r*, the researcher was able to make an estimate of ρ, the population co-efficient of correlation and test whether the value of ρ is sufficiently different from zero for him to decide whether the amount of micro-credit awarded and the amount of investment are correlated.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

The researcher carried out t test for which the best statistic is given by:

$$|t| = \left| \frac{r - \rho}{\sqrt{1 - r^2}} \text{ X } \sqrt{n - 2} \right|$$

Using the values of $r = 0.515$ and $n = 30$;

$|t| = 3.708$

The tabulated value for n – 2 for 8 degrees of freedom using 5% level of significance is 2.306. Since 3.708 is greater than 2.306 the numerical evidence is strong enough to reject the null hypothesis and conclude that the value of ρ is not zero.

4.15 Regression Analysis on Amount of Micro-credit

The researcher used this statistical technique to establish the line of best fit to the observed data.
Using the general equation for a straight line:

$$Y = a + bx$$

The values of a and b are obtained as follows:

$$a = \frac{\Sigma y - b\Sigma x}{n}$$

$$b = \frac{n\Sigma xy - \Sigma x\Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$$

Substituting, we get:

a = 1.7

b = 1.6

Therefore, the line of best fit is given by:

Y = 1.7+ 1.6x

4.16 Coefficient of determination

The researcher used this measure denoted by r^2 (because it is the square of the square of the correlation coefficient, r) to calculates what proportion of the variation in the actual values of y may be predicted by changes in the values of x

$$r^2 = \frac{(n\Sigma xy - \Sigma x\Sigma y)^2}{(n\Sigma x^2 - (\Sigma x)^2 \text{X} (n\Sigma y^2 - (\Sigma y)^2)}$$

= 0.2652

From the above results, r^2 (0.2652) is high implying that there is a weak linear relationship between the amount of micro-savings and the amount of investment.

4.17 Standard error of regression

As with means and proportions, the researcher considered the sampling errors associated with the estimates a & b.

Standard error of regression= $\mathbf{S_e} = \sqrt{\frac{\Sigma y^2 - a\Sigma y - b\Sigma xy}{n - 2}}$

= 4.9

The standard error of regression obtained above can be used in setting confidence limits for the calculated regression line *Y=18.7-2.3x*

4.18 Standard Error of the Intercept (a)

Since the values of a and b were calculated from a sample, then they are estimates of the population intercept and gradient α and β. Both of these distributions have standard deviations known as standard errors.

$$\text{The intercept } S_a = S_e \sqrt{\frac{\Sigma X^2}{n\Sigma X^2 - (\Sigma X)^2}}$$

$$= 0.0962$$

The confidence interval for the intercept is given by:

$$\alpha = a \pm t \times S_a$$

The 95% confidence interval of the intercept is given by:

$$= 1.7 \pm 2.306 \times 0.0962$$

$$= 1.7 \pm 0.223$$

This gives the upper limit of 1.923 and a lower limit of 1.477

Significant test for the intercept

H_0: $\alpha = 0$

H_1: $\alpha \neq 0$

$t = (a - \propto) \div S_a$

= 17.67

Since 17.67 is much greater than 2.306 (the value from t tables) H_0 can be rejected.

4.19 Standard Error of the gradient (b)

The researcher calculated the standard error of the gradient as follows:

$$\text{The gradient } S_b = \frac{S_e}{\sqrt{\Sigma X^2 - \frac{(\Sigma X)^2}{n}}}$$

$$= 0.0478$$

The 95% confidence interval for the slope is

$$\beta = 1.6 \pm 2.306 \times 0.0478$$

$$= 1.6 \pm 0.1102$$

Giving an upper limit of 1.710 and a lower limit of 1.4898

Significant test for the slope

H_0: $\beta = 0$

H_1: $\beta \neq 0$

$t = (b - \beta) \div S_b$

= 33.47

Since 33.47 is much greater than 2.306 (the value from t tables) H_0 can be rejected.

Conclusion: On the basis of this evidence, there exist a strong linear relationship between the amount of micro-savings and the amount of investment and the regression equation ***Y=1.7+1.6x*** could be used as a basis of prediction.

4.20 Correlation Analysis for Amount of Capital Employed

The researcher used correlation analysis to establish the nature of relationship between respondents' amount of capital employed and the amount of investment. The table below shows the correlation model.

Table 5 Correlation Analysis for Amount of Capital Employed

Amount of Capital Employed (X) in Ksh "000"	Amount of Investment (Y) in Ksh "000"	X^2 "000,000"	Y^2 "000,000"	XY "000,000"
12	20	144	400	240
15	20	225	400	300
18	25	324	625	450
20	30	400	900	600
20	35	400	1225	700
25	70	625	4900	1750
30	50	900	2500	1500
30	70	900	4900	2100
30	60	900	3600	1800
30	70	900	4900	2100
35	75	1225	5625	2625
40	90	1600	8100	3600
40	85	1600	7225	3400
40	95	1600	9025	3800
45	90	2025	8100	4050
45	85	2025	7225	3825
45	80	2025	6400	3600
48	60	2304	3600	2880
50	65	2500	4225	3250
50	70	2500	4900	3500
50	80	2500	6400	4000
55	150	3025	22500	8250
55	200	3025	40000	11000
55	120	3025	14400	6600
55	150	3025	22500	8250
58	180	3362	32400	10440
58	120	3364	14400	6960
60	180	3600	32400	10800
60	150	3600	22500	9000
60	130	3600	16900	7800
60	120	3600	14400	7200
60	150	3600	22500	9000
60	150	3600	22500	9000
62	180	3844	32400	11160
62	150	3844	22500	9300
62	120	3844	14400	7440
65	100	4225	10000	6500
65	130	4225	16900	8450
65	190	4225	36100	12350
68	150	4624	22500	10200
70	100	4900	10000	7000
70	150	4900	10000	10500
70	210	4900	44100	14700
70	180	4900	32400	12600
70	250	4900	62500	17500
70	200	4900	40000	14000
72	200	5184	40000	14400
72	140	5284	19600	10080
72	200	5184	40000	14400
75	200	5625	40000	15000
75	180	5625	32400	13500
76	150	5776	22500	11400
80	200	6400	14400	16000
80	150	6400	22500	12000
80	200	6400	40000	16000
80	170	6400	14400	13600
86	200	7396	40000	17200
100	180	10000	32400	18000

120	150	14400	22500	18000
120	200	14400	40000	24000
130	200	16900	40000	26000
150	250	11500	62500	37500
150	300	22500	32400	45000
160	380	25600	144400	60800
170	400	28900	160000	68000
175	350	30625	122500	61250
180	300	32400	90000	54000
200	450	40000	250000	90000
200	350	40000	122500	70000
250	400	62500	160000	100000
5236	**11135**	**541678**	**2331375**	**1122200**
ΣX	ΣY	ΣX^2	ΣY^2	ΣXY

4.21 Product Moment Coefficient of Correlation (r)

The researcher used product moment coefficient of correlation to find out the strength of the linear relationship between the size of micro-enterprise in terms of capital employed and the respondents' level of investment.

$$r = \frac{n\Sigma xy - \Sigma x\Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\ X\ \sqrt{n\Sigma y^2 - (\Sigma y)^2}}$$

$r = 0.9980$

The correlation coefficient is 0.9980 which indicates a very strong positive linear association between the amount of capital employed and the amount of investment.

4.22 Testing the Significance of *r*

After getting the value of *r*, the researcher was able to make an estimate of ρ, the population co-efficient of correlation and test whether the value of ρ is sufficiently different from zero for him to decide whether the amount capital employed and the amount of investment are correlated.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

The researcher carried out t test for which the best statistic is given by:

$$|t| = \left| \frac{r - \rho}{\sqrt{1 - r^2}} \text{ X } \sqrt{n - 2} \right|$$

Using the values of $r = 0.9980$ and $n = 70$;

$|t| = 1070.41$

The tabulated value for n – 2 for 8 degrees of freedom using 5% level of significance is 2.306. Since 1070.41 is greater than 2.306 the numerical evidence is strong enough to reject the null hypothesis and conclude that the value of ρ is not zero.

4.23 Regression Analysis on Amount of Capital Employed

The researcher used this statistical technique to establish the line of best fit to the observed data.

Using the general equation for a straight line:

$$Y = a + bx$$

The values of a and b are obtained as follows:

$$a = \frac{\Sigma y - b\Sigma x}{n}$$

$$b = \frac{n\Sigma xy - \Sigma x\Sigma y}{n\Sigma x^2 - (\Sigma x)^2}$$

Substituting, we get:

a = 14.7
b = 1.93

Therefore, the line of best fit is given by:

Y = 14.7+ 1.9x

4.24 Coefficient of Determination

The researcher used this measure denoted by r^2 (because it is the square of the square of the correlation coefficient, r) to calculates what proportion of the variation in the actual values of y may be predicted by changes in the values of x.

$$r^2 = \frac{(n\Sigma xy - \Sigma x\Sigma y)^2}{(n\Sigma x^2 - (\Sigma x)^2 X(n\Sigma y^2 - (\Sigma y)^2)}$$

= 0.9960

From the above results, r^2 (0.996) is high implying that there is a very strong linear relationship between the amount of capital employed and the amount of investment.

4.25 Standard Error of Regression

As with means and proportions, the researcher considered the sampling errors associated with the estimates a and b.

Standard error of regression= $\mathbf{S_e}$ = $\sqrt{\frac{\Sigma y^2 - a\Sigma y - b\Sigma xy}{n-2}}$

= **5.21**

The standard error of regression obtained above can be used in setting confidence limits for the calculated regression line *Y=18.7-2.3x*

4.26 Standard Error of the Intercept (a)

Since the values of a and b were calculated from a sample, then they are estimates of the population intercept and gradient α and β. Both of these distributions have standard deviations known as standard errors.

The intercept $S_a = S_e \sqrt{\frac{\Sigma X^2}{n\Sigma X^2 - (\Sigma X)^2}}$

= 0.227

The confidence interval for the intercept is given by:

$\alpha = a \pm t \times S_a$

The 95% confidence interval of the intercept is given by:

= 14.71 ± 2.306×0.227
= 14.71 ± 0.5235

This gives the upper limit of 15.23 and a lower limit of 14.19

Significant test for the intercept

H_0: α = 0
H_1: α ≠ 0
$t = (a - \alpha) \div S_a$
= 284.88

Since 284.88 is much greater than 2.306 (the value from t tables) H_0 can be rejected.

4.27 Standard Errors of the Gradient (b)

The researcher calculated the standard error of the gradient as follows:

The gradient $S_b = \frac{S_e}{\sqrt{\Sigma X^2 - \frac{(\Sigma X)^2}{n}}}$

= 0.0005861

The 95% confidence interval for the slope is

$$\beta = 1.928 \pm 2.306 \times 0.0005861$$
$$= 1.928 \pm 0.00135$$

Giving an upper limit of 1.9293 and a lower limit of 1.9267

Significant test for the slope

$H_0: \beta = 0$

$H_1: \beta \neq 0$

$$t = (b - \beta) \div S_b$$

$= 33.47$

Since 3289.54 is much greater than 2.306 (the value from t tables) H_0 can be rejected.

Conclusion: On the basis of this evidence, there exist a strong linear relationship between the size of micro-enterprise and the amount of investment and the regression equation ***Y=14.7+1.9x*** could be used as a basis of prediction.

4.28 Correlation Analysis for Amount of Capital Employed: Respondents with Entrepreneurship Skills

To investigate the impact of entrepreneurship skills on investment, the researcher used correlation analysis to establish the nature of relationship between amount of capital employed by skilled respondents and the amount of investment. The table below shows the correlation model.

Table 6 Correlation Analysis for Amount of Capital Employed by Skilled Respondents

Amount of Capital Employed (X) in Ksh "000"	Amount of Investment (Y) in Ksh "000"	X^2 "000,000"	Y^2 "000,000"	XY "000,000"
25	70	625	4900	1750
30	70	900	4900	2100
35	75	1225	5625	2625
40	90	1600	8100	3600
45	85	2025	7225	3825
45	80	2025	6400	3600
55	120	3025	14400	6600
55	150	3025	22500	8250
58	180	3362	32400	10440
60	180	3600	32400	10800
60	150	3600	22500	9000
60	150	3600	22500	9000
62	180	3844	32400	11160
62	150	3844	22500	9300
70	210	4900	44100	14700
70	180	4900	32400	12600
70	250	4900	62500	17500
70	200	4900	40000	14000
72	200	5184	40000	14400
72	200	5184	40000	14400
75	200	5625	40000	15000
76	150	5776	22500	11400
80	200	6400	14400	16000
80	200	6400	40000	16000
86	200	7396	40000	17200
160	380	25600	144400	60800
170	400	28900	160000	68000
175	350	30625	122500	61250
180	300	32400	90000	54000
200	450	40000	250000	90000
200	350	40000	122500	70000
250	400	62500	160000	100000
2848	**6550**	**357890**	**1704050**	**759300**
ΣX	ΣY	ΣX^2	ΣY^2	ΣXY

4.29 Product Moment Coefficient of Correlation (r)

The researcher used product moment coefficient of correlation to find out the strength of the linear relationship between the amount of capital employed by skilled micro-entrepreneurs and their level of investment.

$$r = \frac{n\Sigma xy - \Sigma x\Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\, X\, \sqrt{n\Sigma y^2 - (\Sigma y)^2}}$$

$r = 0.905$

The correlation coefficient is 0.905 which indicates a very strong positive linear association between the amount of capital employed by skilled micro-entrepreneurs and the amount of investment.

4.30 Coefficient of Determination (r^2)

The researcher used this measure to calculates what proportion of the variation in the actual values of y may be predicted by changes in the values of x

$$r^2 = \frac{(n\Sigma xy - \Sigma x\Sigma y)^2}{(n\Sigma x^2 - (\Sigma x)^2 X (n\Sigma y^2 - (\Sigma y)^2)}$$

= 0.8190

From the above results, r^2 (0.8190) is high implying that there is a strong linear relationship between the amount of capital employed by skilled respondents and the amount of investment.

4.31 Correlation Analysis for Amount of Capital Employed: Respondents without Entrepreneurship Skills

To investigate the impact of entrepreneurship skills on investment, the researcher used correlation and regression analysis to establish the nature of relationship between amount of capital employed by unskilled respondents and the amount of investment. The table below shows the correlation model.

Table 7 Correlation Analysis for Amount of Capital Employed by Unskilled Respondents

Capital Employed (X) in Ksh "000"	Amount of Investment (Y) in Ksh "000"	X^2 "000,000"	Y^2 "000,000"	XY "000,000"
30	50	900	2500	1500
30	60	900	3600	1800
30	70	900	4900	2100
40	85	1600	7225	3400
40	95	1600	9025	3800
48	60	2304	3600	2880
50	65	2500	4225	3250
50	70	2500	4900	3500
50	80	2500	6400	4000
55	150	3025	22500	8250
55	200	3025	40000	11000
58	120	3364	14400	6960
60	130	3600	16900	7800
60	120	3600	14400	7200
60	150	3600	22500	9000
62	120	3844	14400	7440
65	100	4225	10000	6500
65	130	4225	16900	8450
65	190	4225	36100	12350
68	150	4624	22500	10200
70	100	4900	10000	7000
70	150	4900	10000	10500
72	140	5284	19600	10080
75	180	5625	32400	13500
80	150	6400	22500	12000
80	170	6400	14400	13600
120	200	14400	40000	24000
130	200	16900	40000	26000
55	150	3025	22500	8250
58	180	3362	32400	10440
60	180	3600	32400	10800
200	450	40000	250000	90000
100	180	10000	32400	18000
120	150	14400	22500	18000
120	200	14400	40000	24000
130	200	16900	40000	26000
150	250	11500	62500	37500
150	300	22500	32400	45000
2731	5425	239057	1000575	481050
ΣX	ΣY	ΣX^2	ΣY^2	ΣXY

4.32 Product Moment Coefficient of Correlation (r)

The researcher used product moment coefficient of correlation to find out the strength of the linear relationship between the amount of capital employed by skilled micro-entrepreneurs and their level of investment.

$$r = \frac{n\Sigma xy - \Sigma x\Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2}\, X\, \sqrt{n\Sigma y^2 - (\Sigma y)^2}}$$

$r = 0.0190$

The correlation coefficient is 0.0190 which indicates a very weak linear association between the amount of capital employed by unskilled micro-entrepreneurs and the amount of investment.

4.33 Coefficient of Determination (r^2)

The researcher used this measure to calculates what proportion of the variation in the actual values of y may be predicted by changes in the values of x

$$r^2 = \frac{(n\Sigma xy - \Sigma x\Sigma y)^2}{(n\Sigma x^2 - (\Sigma x)^2 X (n\Sigma y^2 - (\Sigma y)^2)}$$

= 0.000361

From the above results, r^2 (0.000361) is high implying that there is a very weak linear relationship between the amount of capital employed by unskilled respondents and the amount of investment.

Table 8 Statistical summary of the above analysis

		Amount of Micro-credit	Amount of micro-savings	Amount of Capital employed	Amount of Capital employed: Skilled	Amount of Capital employed: Unskilled
N	**Valid**	25	30	70	32	38
	Missing	0	0	0	0	0
Correlation Coefficient (r)		0.9330	0.515	0.9980	0.905	0.0190
Coefficient of Determination (r^2)		0.8705	0.2652	0.9960	0.8190	0.000361
Nature of Relationship		**Very Strong**	**Weak**	**Very Strong**	**Very Strong**	**Very Weak**

4.34 Conclusion

From Table 4.12 gives a summary of both the correlation and the regression analysis of the independent variables; amount of micro-credit awarded, amount of micro-savings, amount of capital employed and the level of entrepreneurship training on the dependent variable; the amount of investment. Correlation and regression analysis for the amount of micro-credit gives correlation coefficient of 0.9330 and coefficient of determination of 0.8705. This implies that there exists a very strong linear relationship between the amount of micro-credit awarded to micro-entrepreneurs and the level of investment. The relationship is positive and the line of best fit is given. This shows that MFIs, Government and other organizations offering micro-credit facilities need to consider the size of micro-credit awarded to young micro-entrepreneurs as this will influence their level of investment directly and the level of empowerment consequently in the long run.

Correlation and regression analysis for the amount of micro-savings gives correlation coefficient of 0.515 and coefficient of determination of 0.2650. This implies that there exists a weak linear relationship between the amount of micro-savings accumulated by the respondent and the level of investment. The relationship is positive and the line of best fit is given. This shows that MFIs, Government and other organizations offering micro-credit facilities need to enhance the culture of micro-savings amongst the young micro-entrepreneurs to enable them accumulate wealth thereby breaking the vicious cycle of poverty in the long run..

There exists a very strong linear relationship between the size of an enterprise (measured by the amount of capital employed) with the amount of investment. The relationship is positive and is confirmed by coefficient correlation of 0.998 and coefficient of determination of 0.996. This shows that micro-entrepreneurs whose micro-enterprises are big in size in terms of capital employed enjoy higher returns than micro-entrepreneurs with small micro-enterprises. Consequently, they are able to graduate from small and micro-entrepreneurs to medium entrepreneurs accumulating higher levels of investment and wealth in the long run. This shows that MFIs, Government and other organizations funding young micro-entrepreneurs need to consider the amount of capital they award to young micro-entrepreneurs as this will influence their level of investment directly and the level of empowerment consequently in the long run.

To investigate whether the level of entrepreneurship training influences the size of investment, the researcher conducted correlation analysis between the amount of capital employed and the level of investment using two sets of data; the data obtained from respondents who have undertaken entrepreneurship training and the data from respondents who have not. For the skilled micro-entrepreneurs, the results of correlation and regression analysis gave correlation coefficient of 0.905 and coefficient of determination of 0.819. This implies that there exists a very strong linear relationship between the level of micro-entrepreneurship training and the size of investment. For the unskilled micro-entrepreneurs, the results of correlation and regression analysis gave correlation coefficient of 0.019 and coefficient of determination of 0.000361. This implies that there although there is a relationship between the amount of capital employed and the level of investment, this relationship is very weak if the micro-entrepreneur in question does not possess entrepreneurship skills. This shows that MFIs, Government and other organizations seeking to enhance micro-entrepreneurship amongst the youth population must embrace the culture entrepreneurship training. This will equip them with the right knowledge, skills and business etiquette thereby enhancing their capacity to conduct sustainable micro-entrepreneurship.

4.35 Discussion of Findings

The study was based upon youthful entrepreneurs in Murang'a County. It revealed how micro-finance can be used as a tool to empower the youth through sustainable micro-entrepreneurship. The study investigated the influence of the four independent variables: amount of micro-credit, amount of micro-savings, amount of capital and the level of entrepreneurial training on the dependent variable; amount of investment. The relationship between independent and dependent variables was tested through correlation and regression analysis. Young entrepreneurs were sampled randomly.

The research disclosed that young people can be empowered socio-economically through sustainable micro-entrepreneurship enabled by "socio-conscious-driven" micro-financing customer retention was a norm embedded in the company practices. The research findings showed a strong relationship between variables tested and the dependent variable in the analysis. The results of the correlation and regression analysis showed that the amount of micro-credit awarded to a beneficiary strongly and positively influences youth empowerment through growth in the size of investment. The correlation coefficient (r) of 0.9330 indicates a very strong positive linear association between the amount of micro-credit given to the respondents and the respondent's size of investment. Micro-credit is believed to inject some liquidity into the "Low productivity-low income-low wealth" cycle of poverty that is believed to unleash the productivity of household labour. According to the study findings, Micro-finance does not only break the vicious chain of poverty by injecting liquidity in to the vicious chain, but also initiates a whole new cycle of virtuous spirals of self-enforcing economic empowerment that lead to increased household well-being.

Micro-savings is an integral component of micro-finance. Since long, it was a misconception that poor cannot save. This research has proved that poor also have the ability to save. In fact it is their saving culture which determines their lending capacity. 42.9% of the respondents had a micro-saving plan with their MFIs. The average amount of micro-savings per respondent per year was Ksh. 80,200. Annual micro-savings per respondent ranged between Ksh. 36,000 to Ksh. 350,000. The correlation coefficient of 0.515 indicates a positive linear relationship between the amount of micro-savings and the amount of investment. Micro-savings are an important means of establishing client history which is considered when evaluating loan application. Savings can be used as a substitute for collateral. The research has confirmed Grosh and Somoleke (1996) argument that majority of entrepreneurs fail to graduate from micro to small or medium enterprise due to lack of access to capital. They considered lack of capital for expansion as one of the major constraint in business expansion. The research has revealed that this capital for expansion of business can be obtained from accumulated savings. Quoting the importance of micro-savings for a micro-enterprise, Buckley (1997) stated that "For micro-entrepreneurs, micro-savings have some advantages over loans. Micro-savings screen for skills and

entrepreneurship where information is the least asymmetric The dilemma is that most micro-enterprises need micro-savings more than loans b ut micro-enterprise programs have no clear role to facilitate micro-savings." From the research findings, it can be concluded that micro-savings should be an integral part of micro-enterprise development programmes.

The study reveals that there is a direct linear relationship between the size of an enterprise and the size of investment. Correlation analysis on the amount of capital employed gave correlation coefficient is 0.9980 which indicates a very strong positive linear association between the size of an enterprise and the amount of investment. The study therefore confirms that there is a direct relationship between micro-entrepreneurial culture and investment. In a study on the role of micro-entrepreneurship in poverty alleviation, Vincent (2004) concluded that micro-entrepreneurship has economic benefits and it affects the quality of life for the micro-entrepreneurs. Schreiner (2004) has defined support for micro-enterprise in terms of asset-building. He believes that micro-entrepreneurship helps people to build human, financial and social capital. The research findings have revealed that the bigger the size of the business enterprise, the bigger the level of investment. Micro-entrepreneurs should therefore embrace the culture of micro-saving so that they graduate from micro to small or medium enterprise thereby increasing their level of investment.

Finally, the research findings show that micro-entrepreneurial training has direct impact on the level of investment. Entrepreneurship education is a lifelong learning process, starting as early as elementary school and progressing through all levels of education, including adult education. Robinson (2001) drew a boundary around entrepreneurship education as comprising of personal development, business development and entrepreneurial skills development. These skills are acquired through a learning process. The study findings show that most entrepreneurs lack entrepreneurial skills. 54% of the respondents did not have entrepreneurial skills and use basic knowledge and skills to run their business micro-enterprises. Only 36% of respondents have undertaken entrepreneurship skills. Correlation and regression analysis of capital employed by skilled micro-entrepreneurs and that employed by unskilled micro-entrepreneurs gives very contrasting results. For the skilled micro-entrepreneurs, the analysis gave correlation coefficient of 0.905 and coefficient of determination of 0.819. This implies that there exists a very strong linear relationship between the level of micro-entrepreneurship training and the size of investment. For the unskilled micro-entrepreneurs, the results of correlation and regression analysis gave correlation coefficient of 0.019 and coefficient of determination of 0.000361. This implies that there although there is a relationship between the amount of capital employed and the level of investment, this relationship is very weak if the micro-entrepreneur in question does not possess entrepreneurship skills. A lot of emphasis must therefore be put to equipping young people with entrepreneurial skills to enable them practice sustainable micro-entrepreneurship.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary.

The study aimed at investigating micro-financing as an effective youth empowerment tool through sustainable micro-entrepreneurship and consequent growth in investment level. In many developing countries micro-enterprise in its various forms is the major source of livelihood in rural as well as urban areas. It contributes to a large proportion of employment generation in developing as well as developed countries. Micro-enterprises are considered to be the source of equitable distribution. Otero and Rhyne (1994) stated that "For increasing number of poor people, micro-enterprise is a source of income and employment where no other alternatives are available. The researchers found out that majority of the respondents are engaged in transport business at 30% followed by retail traders at 28.6%. 22.9% of the respondents are service providers while 11.4% are in agribusiness. 7.1% are engaged in other small scale businesses. It is worth noting that transport sector is the most preferred sector by youth followed by small scale retail. Agribusiness is the last preferred sector despite Murang'a County being an agriculture economy.

The researcher agrees with Rutherford (2000) who argued that, there is already the impression in the global arena that micro-finance is a successful poverty reduction tool. The researcher's thinking that poverty amongst the youth is a consequent of liquidity constraint has been confirmed by the study as 35.7% of all micro-credit beneficiaries have been able to generate regular flow of income, have regular micro-savings and immense investments. The study confirms Brian and Janette (2002) reasoning that to break the vicious cycle of poverty, there needs to be an outside force that will intervene at some point of the cycle to improve demand for goods and services. This they argued could be done by injecting some liquidity that is believed to unleash the productivity of household labour.

According to the study findings, Micro-finance does not only break the vicious chain of poverty by injecting liquidity in to the vicious chain, but also initiates a whole new cycle of virtuous spirals of self-enforcing economic empowerment that lead to increased household well-being. This is confirmed by the fact that the mean of the amount of investment for all the respondents was 159 implying that most of the respondents had investments worth Ksh. 159,000. This was accumulated from capital employed mean of 70 (Ksh. 70,000). The fact that all the respondents who were awarded micro-credits from MFIs have been able to repay at market interest rates or slightly above market rates and also generate profits is a good indication that they have improved their financial status; and therefore it is a sign of good impact of micro-credit. However, key question on whether micro-credit facilities are freely accessible by the youth population remains unanswered. The research revealed that only 35.7% of all respondents have been able to access micro-credit facilities. 64.3% of all the respondents have not benefitted from micro-credit facilities. 24% of the respondents who have not benefitted from micro-credit facility cited lack of collateral as the major barrier that prevents them from accessing micro-credit while 18.6% cited rigid bureaucracy. 11.4% and 7.1% of respondents cited lack of guarantors and high interest rates respectively while the remaining 2.9% cited fear of unknown. This implies that loan accessibility to youth population remains a major challenge as majority of willing youthful micro-entrepreneurs are locked out of business due to liquidity constrain.

The findings further supports Vrajlal (2006) statement that micro-finance reduces poverty through higher employment and higher incomes that lead economic empowerment. Majority of respondents who have benefitted from micro-finance have annual savings ranging from Ksh. 36,000 to Ksh. 300,000 pa. Correlation analysis of the amount on micro-credit awarded on the size of investment gives correlation coefficient (r) of 0.9330 which indicates a strong positive linear association between the amount of micro-credit given to the respondents and the level of investment. Further regression analysis on the amount of micro-credit gives a coefficient of determination (r^2) of 0.8705 further confirming the researcher's thinking.

Micro-saving is an integral component of micro-finance. Various studies were reviewed to emphasize on the significance of micro-saving culture in poverty eradication and socio-economic empowerment. Buckley (1997) viewed savings as the basis to achieve financial independence and self-sufficiency for micro-entrepreneurs. This research has proved that poor also have the ability to save. In fact it is their saving culture which determines their lending capacity. 42.9% of the respondents had a micro-saving plan with their MFIs. The average amount of micro-savings per respondent per year was Ksh. 80,200. Annual micro-savings per respondent ranged between Ksh. 36,000 to Ksh. 350,000. With regular savings, micro-savers can finally accumulate enough capital to start new business and expand existing ones. This is well illustrated by growth in respondents' level of investment. Correlation and regression analysis for amount of micro-savings on the size of investment gives correlation coefficient of 0.515 and coefficient of determination of 0.2652 respectively which indicates a positive linear relationship between amount of micro-savings and the size of investment.

The study revealed that from an average capital base of Ksh. 74,800, respondents were able to generate income, make regular savings and consequently accumulate wealth as depicted by an average investment size of Ksh. 159,000 per respondent. This confirms that micro-entrepreneurship does not only break the vicious chain of poverty, but also initiates a whole new cycle of virtuous spirals of self-enforcing economic empowerment that lead to increased household well-being. The study findings ascertained that there exist a direct linear relationship between the amount of capital and investment. Capital is a major constraint in business start-up and expansion. Majority of youth fail to engage in micro-entrepreneurial activities due to lack of capital. Consequently, micro-enterprises fail to graduate from micro to small or medium enterprise due to lack of access to capital. Grosh and Somolekae (1996) considered lack of access to capital as one of the major constraint in start-up and expansion. In a study in Africa it was found that principal source of finance for start-up funds for any entrepreneur was self-generated funds. In most cases this generation of fund was through savings. These savings were supplemented with the loan from friends and relatives. Once after establishing only well-established entrepreneurs become integrated with the informal financial intermediaries but self-generated funds played a predominant role (Buckley, 1997).

In conformity with the past studies, the researcher found out that 32.9% of all the respondents obtained their business capital from own savings followed by contributions from families and friends at 28.6%. Only 21% of all respondents acquired business capital from MFIs in form of micro-credit. 10% and 7% of respondents acquired capital from Youth Enterprise Development Fund and other sources respectively. Capital unleashes labour productivity and consequently leads to generation of future streams of income. This is well illustrated by the growth in average capital base of Ksh. 74,800 per respondent to an average investment size of Ksh. 159,000. Correlation analysis on the amount of capital employed gives a correlation coefficient of 0.9980 which indicates

a very strong positive linear association between the amount of capital employed and the size of investment. Further regression analysis on the same variable gives a coefficient of determination of 0.9960 confirms existence of a strong linear relationship between the amount of capital employed and the size of investment.

Feigenberg *et al*., (2011) underscored entrepreneurship education as a lifelong learning process, starting as early as elementary school and progressing through all levels of education, including adult education. Robinson (2001) drew a boundary around entrepreneurship education as comprising of personal development, business development and entrepreneurial skills development. These skills are acquired through a learning process. The study findings show that most entrepreneurs lack entrepreneurial skills. 54% of the respondents did not have entrepreneurial skills and use basic knowledge and skills to run their business micro-enterprises. To investigate whether the level of entrepreneurship training influences the size of investment, the researcher conducted correlation analysis between the amount of capital employed and the level of investment using two sets of data; the data obtained from respondents who have undertaken entrepreneurship training and the data from respondents who have not. For the skilled micro-entrepreneurs, the results of correlation and regression analysis gave correlation coefficient of 0.905 and coefficient of determination of 0.819. This implies that there exists a very strong linear relationship between the level of micro-entrepreneurship training and the size of investment. For the unskilled micro-entrepreneurs, the results of correlation and regression analysis gave correlation coefficient of 0.019 and coefficient of determination of 0.000361. This implies that there although there is a relationship between the amount of capital employed and the level of investment, this relationship is very weak if the micro-entrepreneur in question does not possess entrepreneurship skills. Government, MFIs and other organizations seeking to enhance micro-entrepreneurship amongst the youth population must embrace the culture entrepreneurship training. This will equip them with the right knowledge, skills and business etiquette thereby enhancing their capacity to conduct sustainable micro-entrepreneurship.

5.2 Conclusion

The study aimed at finding out an all-inclusive, practical and sustainable way of empowering youth population in Murang'a County through Micro-financing. The study focus was development and implementation of a model of sustainable micro-entrepreneurship enabled by "socio-conscious-driven micro-financing" without bearing detrimental externalities on the beneficiaries or the environment. The researcher chose youth population as it is the largest population segment nationally and therefore forms the largest source of human capital. However, they have been placed on the periphery over the years and have not been fully utilized for social, economic and political development. As a result, majority of youth have been tapped in a "low productivity-low income-low wealth" vicious cycle of poverty" The study therefore sought to analyze micro-financing as a strategy to reverse this vicious cycle of poverty though sustainable micro-entrepreneurship.

The study was premised on the assumption that the independent variables: amount of micro-credit awarded, amount of micro-savings, size of micro-enterprise and level of entrepreneurial training affect the dependent variable: the amount of investment. Correlation analysis for the amount of micro-credit awarded gave correlation coefficient of 0.993 that showed existence of a very strong positive linear relationship between amount of micro-credit awarded to a micro-entrepreneur and the amount of investment. Further regression analysis on the same variable gave coefficient determination of 0.8705 confirming a strong linear relationship between the amount of micro-credit awarded and the size of investment. The postulation that the amount of micro-credit awarded influences the size of an investment is therefore true.

The second variable was based on amount of micro-savings as influencing the size of investment. Correlation and regression analysis on this variable showed positive relationship. Correlation test for the amount of micro-savings showed a weak relationship of 0.515 which indicate a positive linear relationship between amount of micro-savings and the size of investment. Regression analysis gives coefficient of determination as 0.2652 further confirming existence of a linear relationship between amount of micro-savings and the size of investment.

The third variable was the amount of capital employed and its influence on the size of investment. Correlation analysis gives a correlation coefficient of 0.9980 which indicates a very strong positive linear association between the amount of capital employed and the size of investment. Further regression analysis on the same variable gives a coefficient of determination of 0.9960 confirms existence of a strong linear relationship between the amount of capital employed and the size of investment.

The fourth variable that the researcher investigated was the level of entrepreneurial training and its influence on the size of investment To investigate whether the level of entrepreneurship training influences the size of investment, the researcher conducted correlation analysis between the amount of capital employed and the level of investment using two sets of data; the data obtained from respondents who have undertaken entrepreneurship training and the data from respondents who have not. For the skilled micro-entrepreneurs, the results of correlation and regression analysis gave correlation coefficient of 0.905 and coefficient of determination of 0.819. This implies that there exists a very strong linear relationship between the level of micro-entrepreneurship training and the size of investment. For the unskilled micro-entrepreneurs, the results of correlation and regression analysis gave correlation coefficient of 0.019 and coefficient of determination of 0.000361. This implies that there although there is a relationship between the amount of capital employed and the level of investment, this relationship is very weak if the micro-entrepreneur in question does not possess entrepreneurship skills. The findings confirms the researcher's assumption that the level of entrepreneurship training directly influences the level of investment.

5.3 Recommendations

The study findings confirm that micro-finance can be used as a practical, all-inclusive and effective youth empowerment tool through sustainable micro-entrepreneurship. This would provide a shift from the conventional "risk-based" preventive approach to youth development to a positive youth empowerment approach that fosters healthy youth development and capacity building through active engagement and participation in national building. According to the researcher, youth population will be empowered when they gain control and mastery, within the social, economic and political contexts, of their lives in order to improve equity and quality of life. The researcher findings present a practical youth empowerment approach that supports and fosters youth contributions to positive community development and socio-economic change resulting to youth who are critical citizens, actively participating in the day to day building of a stronger, more equitable community.

The study findings reveal that the "low productivity-low income-low wealth" vicious cycle of poverty amongst youth population can be reversed through injecting some liquidity into the cycle in form of micro-credits that is believed to unleash the their labour productivity. According to the research findings, micro-credits do not only break the vicious poverty cycle but also initiates a whole new cycle of virtuous spirals of self-enforcing economic empowerment that leads to increased socio-economic well-being. The government, NGOs and other stakeholders should therefore develop and implement policies that are aimed at providing the youth population with "socio-conscious-driven" micro-credit facilities without bearing detrimental externalities on the beneficiaries or the environment. The micro-credit facilities so provided should be adequate and affordable. The Youth population must also develop a sense of initiative and access the available micro-credit facilities. They must also utilize the micro-credit awarded to them efficiently and effectively to ensure a win-win situation for both the agency offering the micro-credit facility and themselves. This will ensure mutual benefit to all the stakeholders.

The study has established existence of a strong positive relationship between micro-savings and investment. The study has viewed the culture of micro-saving as a critical basis to achieve financial independence and self-sufficiency. According to the findings, the main factor that constrains entrepreneurs from accumulating wealth is poor micro-saving culture. The culture of micro-savings does not only provide capital for business start-ups and expansion, but also improves individual's credit capacity. The researcher therefore, recommends government, MFIs and other stakeholders to embrace and inculcate the culture of micro-saving amongst youth population and also ensure that micro-saving culture forms an integral part of youth micro-enterprise development programmes. On their parts, young people must also embrace the culture of micro-savings to enable them accumulate wealth thereby breaking the vicious cycle of poverty and taking part in national building.

Entrepreneurship is a key economic driver. According to the researcher, high majority of jobs are created by small businesses started by entrepreneurially minded individuals, many of whom grow to become great entrepreneurs. People exposed to micro-entrepreneurship have expressed that they have more opportunities to exercise creative freedoms, higher self-esteem and overall greater sense of control over their own lives. The research findings reveal that effective micro-entrepreneurship is directly affected by the size of micro-enterprise in question. The research findings have revealed that the bigger the size of the business enterprise, the bigger the level of investment. Micro-entrepreneurs should therefore embrace the culture of micro-saving so that they graduate from micro to small or medium enterprise thereby increasing their level of investment. The Government, MFI and other organization seeking to empower the youth population through micro-entrepreneurship must seek to provide them with adequate amount of capital for investment. They must also

enhance the culture of micro-savings amongst the youth to enable them accumulate wealth and break the vicious cycle of poverty. The youth on their part must ensure that the capital provided by various agencies is efficiently utilized as intended to help them repay the capital and save for future.

The study has revealed that, there exist a direct relationship between the level of entrepreneurship training and the size of investment. The government, Non-Governmental organizations and other stakeholders must ensure that youth are well equipped with entrepreneurship skills though a life-long entrepreneurship education process starting as early as elementally school and progressing through all levels of education, including adult education. This would enhance personal development, business development and entrepreneurship skills. This would give rise to a blend of young entrepreneurs whose business knowledge and skills are combined with the best of personal development skills for a wholesome person. The researcher underscores that, while economic and political reforms play an important role in creating opportunities, people need the knowledge, skills and mind-set to take advantage of these opportunities. The youth have a major role to play in ensuring that they utilize every learning opportunity that is offered by interested stakeholders. They must out of their own initiatives seek to acquire entrepreneurship training for their own personal growth.

5.4 Suggestion for Further Studies

This research focused on analysis of micro-financing on youth empowerment. There is need to research on low micro-credit accessibility rate amongst youth population in Kenya, this is despite the favourable climatic conditions and rich agricultural land the county is endowed with.

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