DETERMINANTS OF INNOVATION PERFORMANCE IN YOUTH ENTREPRISES IN KENYA

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Determinants of innovation performance in youth entreprises in Kenya

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DECLARATION

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

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DEDICATION

This study is dedicated to my dear and late mother Rachael Wangeci, who has been a role model of hard work and total trust in God, which bear lasting fruits for the benefit of humankind.

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ABBREVIATIONS

CC-	Customer Capital
CYES	Constituency Youth Enterprise Scheme
ES-	Entrepreneurial Skills
GDP-	Gross Domestic Product
GoK-	Government of Kenya
HC-	Human Capital
IC -	Intellectual Capital
IP-	Innovation Performance
R & D-	Research and Development
SC-	Structural Capital
SME-	Small and Medium Enterprises
YEDF-	Youth Enterprise Development Fund

DEFINITION OF TERMS

Innovation - According to Deteco innovation (2014) Innovation is the ideation, development, and commercialization of substantially new products, services or businesses and facilitates the development of new sources of competitive advantage.

Intangible Asset - An intangible asset is a non-physical asset having a useful life greater than one year. These assets are generally recognized as part of an acquisition, where the acquirer is allowed to assign some portion of the purchase price to acquired intangible assets Steven Bragg (2012). Cearns (1999) defines intangible assets as separately identified, non-monetary, without physical substance. Trained and assembled workforce is termed as an asset (Tollington 1997).

Youth - This is anyone who has attained the age of 18 years but not older than 35 years. GOK (2012)

Entrepreneur - According to Schumpeter(1936), an entrepreneur is one who seeks to reform or revolutionize the pattern of production by exploiting an innovation, or more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of material or a new outlet for products.

Entrepreneurial Skills-This is generic competences necessary for the success of self-employment over and above any occupational skills which may be required. These include the individual values, beliefs and attitudes, interpersonal skills, communication skills, and

networking skills and realistic awareness of the risks and benefits of self-employment Meager *et al*. (2011)

Micro, Small and medium enterprises - The micro-enterprises as a firm, trade, service industry or business activity employ less than ten people. The small businesses employ between ten and fifty people, and medium enterprises have fifty to one hundred employees (Micro and Small Enterprises Act 2012.

Innovation performance - According to Trott (1998) innovation performance is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of new (or improved) products, process organization, management production, commercial ventures, and services.

Training - According to Armstrng (2004) training is the planned and systematic modification of behavior through learning events, program, and instructions which enable individuals to achieve the levels of knowledge, skills, and competence needed to carry out their work efficiently and effectively.

Intellectual capital - According to Prusak (2008), Intellectual Capital can be looked into as innovative, possession of entrepreneurial skills, structural capital and customer capital that have been "formalized, captured and leveraged" to create assets of higher value.

Human capital - The human resources cease to be viewed as just cost factors but are given a view of capital for investment with an aim of yielding income like any other production factor according to Becker (1975) as cited in Muammer *et al*. (2008).

Structural Capital - Structural Capital is the availability of information, databases, processes, and other infrastructure required to support the firms in executing its strategy. According to Hosnavi (2011), Structural Capital consists of the supportive infrastructure, processes, and databases of the organization that enables human capital to function.

Customer Capital - Customer capital is also referred to as relational capital by some scholars and is defined as the external linkages of the company with suppliers and clients that enable it to procure and sell goods and services in an effortless manner according to Talukdar (2008)

Technological Capital - According Bueno et.al (2006), Technological capital is the set of intangible assets which is based on innovation and technical processes.

Loan processing – This is all the steps taken by a lending institution from the time a loan application is received to the time the loan is closed and placed on the books, including taking the application, conducting the credit investigation, evaluating the loan terms and other steps. Mark (2005).

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ABSTRACT

Youth enterprises play a key role in poverty alleviation and if they are ran innovatively, growth and sustainability would be assured and unemployment problems would be easily addressed. This study sought to investigate the determinants of innovation performance in youth enterprises in Kenya ,focusing on youth led enterprises which have benefited from an economic stimulant fund introduced by the government as youth enterprise development fund (YEDF).The research aimed at giving insight and a model that would help the youth to run more profitable and sustainable businesses in a more competitive way through innovation and creativity and consequently create more employment opportunities as envisaged in vision 2030.This category of enterprises was chosen for the study considering that youths have continually been affected by high levels of unemployment despite the fact that the government has invested a lot of money to stimulate growth in youth led enterprises as a way of solving socio- economic problems.The study investigated on how intangible assets or intellectual capital in dimensions of human capital, structural capital,customer capital,technological capital and entrepreneurial skills determine the level of innovation performance in terms of ability to come up with new products,entering into new markets , coming up with trademarks and patents. Descriptive research design was used in a combination of qualitative and quantitative models, techniques and measures. Multiple regression analysis was used to analyze the qualitative data and descriptive analysis was used to analyze the quantitative data. Seven managers were interviewed while 160 youth entrepreneurs filled the questionnaires and returned. Direct observation was also done which was confirmed by the results from the study. The results showed that innovations demonstrated by the introduction of new products, entry into new markets, trademarks and patents were mainly triggered by technological capital, entrepreneurial skills and structural capital which made the optimal model while other determinants like human

and customer capital had little influence on innovation performance in these enterprises. Patents and trademarks as indicators of innovation were not at all evidenced in this study though the youths had original ideas specifically those in art and craft but they were not aware of patenting and registration of trademarks due to lack of relevant training. Creation of employment was the key benefit for the youth entrepreneurs since majority and nearly all the respondents were owner- managers for the enterprises thus they were self-employed, however, the rate of employment creation was not matching the rate of youths entering the job market. The processing of loan application and disbursement also discouraged many from joining the groups due to fear of default and consequent loss of their hard earned savings under co-guaranteeing model of security for the group loans. The study recommended more training for the youths periodically as they continue to service the loans advanced to their businesses. This will increase the ability to view the intangible assets as key contributors to the growth and expansion of the enterprises especially because nearly all youths are technologically advanced. Group model used in the disbursement would also be embraced positively as a way of spreading the risk in lending, without necessarily making the youths fear forming groups, if training on group dynamics was included in the training. The patenting agency in the country was also recommended to be a close ally with Youth Enterprise Development Funds in order to create awareness in protecting the original ideas emanating from the youths. Improvement on information management systems in these enterprises emerged as a real need and it was recommended that out sourcing may be good for the small enterprises rather than ignoring the need for proper data handling irrespective of the size of the organization. In a nutshell the government should repackage the youth funds to accommodate more partners in the program who are supportive to the beneficiaries in a more inclusive manner.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Globally, 85 percent of the world's young people live in the developing countries, and an ever-increasing growing number of them are in the cities. By 2030, it is estimated that as many as 60 percent urban dwellers will be less than 18 years of age. The difficulties of penetrating the labor market for the youths is increasing day by day, making the young people be 43.7 percent of the unemployed worldwide. Action is therefore required to achieve economic prosperity for and inclusion of the youths. In Kenya, the rate of unemployment is at 40% and 70% of the unemployed are youths (RoK 2012).

World Bank (2010) on the other hand reported that Kenya is faced with poor utilization of human, structural, customer and technological capitals or intellectual capital (IC) among the SMEs leading to detrimental effects on the GDP. Recommendation by Narveka *et al*. (2006) indicates that improvement of IC by the management would enhance innovation performance. Bontis (2000) further affirms that the poor utilization of IC leads to poor quality products and technology. There is, therefore, a positive relationship between use of IC and the quality of products thus increases the competitive advantage of the enterprises. A study by Matanda (2007) on the role of human capital and entrepreneurial orientation on radical product innovation in small carpentry workshops in Nairobi revealed the importance of specific human capital and the strategic processes that firms utilize to develop radical innovations.

Kenya has an innovative way of fighting unemployment through the introduction of a twin strategic pillar of Youth Enterprise Development Fund (YEDF), for enterprise development internally and externally focused on employment creation through Youth

Employment Scheme Abroad (YESA). Studies on the influence of YEDF have revealed that little has been accomplished regarding the growth of the enterprises in which this fund has been employed. According to Odhiambo *et al*. (2013), despite the effort put by the government of Kenya through this fund, in the last five years, it is evident that only 40,063 out of a total youth population of 202,897 have benefited from these funds. And this represents a small success rate of 19.8 percent. This information is confirmed by the increasing rate of unemployment over time in Kenya, which has persistently affected men and women graduating from all levels of education from primary to the university. Approximately 503,500 graduates from a pool of 1,374,360 graduates enter the job market every year, and the rest remain unemployed due to weak economic performance. According to (Frederiksen, & Munive, 2010), without education, jobs and seemingly, prospects for a meaningful future, African youth may become a breeding pit that may fuel migration, radicalization, and instability. It is, therefore, important to realize that empowering the youths economically through capital and raising levels of innovation may be a very crucial intervention in making Africa a development hub with assured social, political and economic security. One way of enhancing entrepreneurial activity and enterprise growth is to create an active culture among the youths (Nelson & Mburugu, 1991).

In a global and knowledge -based economy innovative utilization of soft assets in an enterprise increases the competitive advantage of the enterprises Muammer (2008).Studies have been carried out indicating that human, structural, customer, technological capital and entrepreneurial skills or the intangible assets are associated with a firm's innovative performance among Turkish automotive companies, Subramanian *et al*. (2008) asserts. The same has been reported by Ngugi *et al*. (2013) through a study on the influence of intellectual capital on the growth of small and medium enterprises (SMES).It has also been noted that wealth and growth in today's world economy are driven by IC Eberhart *et al*. (2004).Other scholars like Ngari *et al*. (2013) have carried out a similar study on the influence of IC on accounting, and

financial performance which showed that IC is a recognized foundation of an entrepreneur, enterprise growth, and competitiveness (Bournfour & Edvinson, 2005). Making a business sustainable and profitable through innovation may be the way forward in this global knowledge-based and extremely competitive economy especially in the era of escalating levels of unemployment, currently standing at 40% in Kenya out of which 70% are youths (RoK 2012). According to Gakure (2012), creation of new knowledge or technology forms intellectual assets which are key to competitiveness. It is asserted by Muammer *et al*. (2008) that IC is a strategic element in business enterprises nowadays. While Prusak (2008) confirms that IC can be looked into as being innovative, possession of entrepreneurial skills, structural capital and customer capital that have been "formalized, captured and leveraged" to create assets of higher value. Intellectual capital is generated by improving relationship management skills which are part of entrepreneurial skills in a firm Henrik (2012) and good knowledge management. Further, Sullivan (1999) indicated that IC is that knowledge that can be converted into future profits and comprises of resources such as ideas, inventions, technologies, designs, processes and informatics programs. Intellectual capital is an intangible asset that has supplanted industrial machinery, and natural resources, and is today considered as one of the most valuable factors for the creation of wealth, being at the same time a source and a final product (Souleh, 2014).

When innovative ways of utilizing such elements are employed in enterprises, growth, productivity and profitability may be realized which will create more jobs thus reducing the dangers of unemployment among the youths who form the majority of the unemployed in Kenya. Knowledge of what determines the level of innovation in youth enterprises is quite scarce, and investigation of the same was carried out in this study. This investigation was done in line with another study done by Hermans *et al*. (2005) which suggested that creation of innovations is enhanced by sufficient intellectual capital, relating intellectual capital directly with the level of innovation in enterprises.

The youths are graduating from institutions of learning with a great wealth of knowledge and skills, however their attitude towards self-employment is highly challenged such that this knowledge is not being utilized since they become desperate in looking for formal employment which is very scarce. This knowledge being an essential element of IC require some empirical evidence regarding the influence it has on innovation performance among youth enterprises so that the policy makers may be advised on improving government support in fighting unemployment among the youths. This study has considered investigating the determinants of innovation performance in dimensions of human capital (HC), structural capital (SC), customer capital (CC) technological capital (TC), entrepreneurial skills (ES) and the research questions were guided by the same.

In this study innovation performance was measured using the new products introduced in the enterprises, new markets entered and the patents or trademarks obtained in the lifetime of the youth enterprises. According to Trott (1998) innovation performance is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of new (or improved) products, process organization, management production, commercial ventures, and services. Griffith et al. (2006) assert that innovation is an essential cornerstone in performance concerning improving productivity, performance, and growth.

The human capital which is used interchangeably with employee capital in this study was defined as the collection of knowledge, skills, capabilities, experience, attitude, wisdom, creativeness, and commitment of the employees. The human resources cease to be viewed as just cost factors but are termed as human capital for investment with an aim of yielding income like any other production factor, Becker (1975) as cited in Muammer *et al*. (2008). The skills, talents and know-how of the employees that is required on a daily basis towards the achievement of the strategic plan of the enterprises are of primary concern in this study. This is in line with the fact that resources that are valuable, unique and difficult to imitate can provide the basis for firm's competitive

advantages (Souleh, 2014) Organization exists for a purpose and is a deliberate arrangement of human and other resources with the aim of delivering needs, satisfying services and products as effectively and efficiently as possible (Choudhury, Mishra, 2010)

Structural capital in this study was defined as the availability of information, databases, processes, and other infrastructure required to support the firm in executing its strategy. According to Hosnavi (2011), structural capital consists of the supportive infrastructure, processes, and databases of the organization that enables human capital to function. It can be measured by looking at the organization culture, programs for training, databases, information systems, innovation reward systems in the organization among others. The company owns this infrastructure and, therefore, remains in the business after employees leave the organization. It requires the high level of formalization to avoid dependence on people and to stay within the organization.

According to (European Commission, 2006) the role of top management diversity and organizational reputation on entrepreneurial performance is key whereas the effect of intellectual property on innovation and performance was insignificant. The image of that company which is more likely to be boosted by having delighted customers will depend on the management skills demonstrated by the top management via knowledge management in the firm. Precisely the knowledge of entrepreneurs about the modes of knowledge creation may promote innovation as expressed by Nonaka (1994) in tacit to explicit (externalization), from tacit to tacit (socialization), from explicit to tacit (internalization) and explicit to explicit (combination).The diversity of managing the knowledge within and collaboration with the external sources is a skill to be held dear by top management of any organization that values innovation for survival in a competitive environment. In line with the concept of absorptive capacity introduced by Cohen and Levinthal (1990) who argued that knowledge management is closely intertwined with innovation management as the potential of a firm to generate change is

dependent on the prior accumulation of the knowledge they have absorbed. On the other hand in the past it has been proposed that knowledge-based assets could be found in three places: the competencies of organization members, its internal structure; such as: patents, models, computer and administrative assets, and external structure such as brands, reputation and relationships with customers (Tsai, 2001).

Customer capital which also referred to as relational capital by some scholars was defined as the external linkages of the company with suppliers and clients that enable it to procure and sell goods and services in an effortless manner according to (Talukdar, 2008). The longevity of relationship with customers as affirmed by Crossan *et al*. (2006) contribute the most to the growth of small and medium enterprises. The same scholar further indicated that the essence of customer capital is to be the knowledge embedded in relationships external to the firm and that the scope lies external to the human capital nodes. This component is the value embedded in the marketing channels and relationships that an enterprise develops by conducting business. It is confirmed by Fornel (1992) who argued that the satisfaction of customers could maintain a business relationship, decrease the elasticity of product prices and improve company's prestige.

On the other hand, technological capital according to Fernandez *et al*. (2000) includes knowledge related to access, use of innovation, production techniques and products technology which is highly acknowledged in a knowledge-based economy. According to Bueno et.al (2006) technological capital is the set of intangible assets which is based on innovation and technical processes. It is further described as a product of technological knowledge Ramirez (2010) as a combination of knowledge related to the development and technology systems of an organization. Technological capital is based on the activities and functions of both internal and external scope which are linked to the development of products and services of the organization.

Entrepreneurial skills are acquired through formal and informal training, and it has been proven that training has a positive relationship with innovation, Ballot *et al*.

(2001).According to Armstrong (2004), training is defined as a planned and systematic modification of behavior through learning events, program, and instructions which make individuals achieve levels of knowledge, skills and competence required to carry out their work efficiently and effectively. It is further asserted by Armstrong (2004) that Entrepreneurial training makes a major contribution towards the achievement of organizational objectives and, therefore, investing in such training results to more innovative ways of product development, new and better business processes and new markets. It inculcates entrepreneurial culture among young people which is crucial in identifying emerging business talents (Kanyari & Namusonge, 2013).The open innovation model of Chesbrough (2003) suggests that accessing knowledge across the boundaries of the firm greatly speed up innovation processes and increases innovation potential of the company. Innovation enables companies to achieve sustainable competitive advantages, and this is a crucial factor for growth (Van Auken *et al*., 2008).Higher value added ratios can rise from creativity from intangibles managed by the firm as argued by Bontis (2001).It is therefore concluded by Miguel *et al*. (2012) that there are several links between the intellectual capital and innovation and probably the better managed the IC, the higher the level of innovation for any enterprise. This study aimed at establishing determinants of innovation performance.

The provision of entrepreneurial skills to youths in business may promote innovation performance for more sustainability and profitability. With better Innovation performance, these enterprises are expected to be more sustainable and highly profitable thus making self-employment more attractive to the youths. This initiative target reducing the unemployment problem which currently stands at 40% (GoK 2012) by creating more jobs, which is one of the strategic goals in vision 2030 in Kenya under the social pillar. It is empirically proven that despite the central role of youth-led enterprises in employment, industrial transformation, and poverty reduction, their competitiveness and growth prospects fall below the levels required to meet the challenges of increasing and changing patterns in competition. This may shift patterns of legislation and

regulations, reducing trade barriers and market fragmentations, Subramanian and Youndt 2005). . Intangible assets such as skills of the workforce and its organization are increasingly taking a critical position in determining the future profits of enterprises. They are, however, much harder to identify and harder still to quantify into value and, therefore, are hardly reported. They remain invisible to both the external world and the insiders.

In regard to loan processing and requires which has a mediating role in this study, accessibility of information has been limited to the youths, however, Kanyari and Namusonge (2013) recommends that there should be more public sensitization and education avenues in the disadvantaged areas. Such avenues are local FM stations, village elders, church leadership, county leaders (formerly Administration) and faith-based communities. Funds are not readily available since it is not easy to predict the time it will take to process the YEDF application according to Amenya, Onsongo & Guyo (2011); however YEDF remains the most preferred source of fund for the youths despite the problem of accessibility. The duration of the formal application and receipt of funds is normally between three and four weeks (YEDF, 2009). This period is rather long especially for any urgent business opportunities that the youths may want to seize. This, therefore, means opportunities that require critical execution may pass by and, therefore, deny the youth a chance to make a profit Ndirangu (2014).The frequency of the disbursements also has a bearing on the performances of the business, keeping in mind that the initial fund loan of Kshs.50, 000 may not be enough to stock the business, because of the start-up overheads. A group can only qualify for another loan after completing the initial loan after 12 months, thereby limiting the youth regarding quicker expansion. This process has been seen as a key hindrance to innovation performance among youth enterprises in Kenya.

1.2 Statement of the problem

According to the World Bank (2010) countries with over 90% growth rate of GDP achieved the rate of high utilization of the human, structural, customer, technological capital and entrepreneurial skills (Intellectual capital) or ability to innovate as defined by Subramanian et. al. (2005), Wu *et al*. (2008), Zenler *et al*. (2008) which has a significant effect on the enterprise growth and gives competitive advantage.

Youth enterprises play a key role in poverty alleviation and if they are ran innovatively, growth and sustainability would be assured and unemployment problems would be easily addressed. Despite the inception of youth enterprise development fund in 2006 as an initiative to curb unemployment among the youths, the unemployment rate in Kenya has so far increased by 27.35% between 2006 and 2015 (RoK 2015) as the youths account for 70 percent of the unemployed. As recommended by Kanyari and Namusonge (2013) in their study on Youth Enterprise Development Fund, provision of continuous and relevant business development services to youth entrepreneurs is the key to the success of the enterprise development initiatives in creating long term employment. This circumstance implies that the government's initiative has not met the expectations and probably, innovation as an intervention, is worth being investigated. This statement is in agreement with Bird (1989) who defined innovation as the commercialization of ideas and implementation and change of the existing systems, products and resources. It is further supported by the fact that in entrepreneurship and management studies the innovativeness of growing firms has been discovered to be important in value and job creation (Acs et al., 2008; Autio, 2009;

Matanda (2007) studied the role of human capital on radical product innovation in small carpentry workshops in Nairobi and the findings emphasized the importance of specific human capital and the strategic processes that firms utilize to develop radical innovations. It also demonstrated that the organizational and strategic processes are important because they facilitate manipulation of resources into attaining innovation. It therefore, means there is a close relationship between human capital and innovation.

Another similar study done by Kiraka (2013) on innovation and growth of small and medium enterprises in Kenya by assessing women enterprise fund, the most common form of innovation observed was in the change or addition of new products in the post loan period. Innovations regarding services, markets and sources of raw materials were, however, less common among women-owned enterprises. The same study came up with no evidence of significant differences in growth and innovation among enterprises across geographical regions, borrowing stream and age groups. Overall, entrepreneur characteristics such as age, marital status, the level of education and family size were minor determinants of growth and innovation.

Innovation as an intervention in business development may be quite instrumental in creating employment to curb unemployment which is a major concern in Kenya. There is, however, little empirical evidence on the determinants of innovation in youth-led enterprises. This study has attempted to fill the existing gap of knowledge by investigating the determinants of innovation performance among youth enterprises in Kenya.

1.3 General Objective

The overall objective of this study was investigating the determinants of innovation performance in youth enterprises in Kenya.

1.4 Specific objectives

1. To investigate role of human capital in determining innovation performance in youth enterprises in Kenya.
2. To establish the role of structural capital in determining innovation performance in youth enterprises in Kenya.
3. To establish the role of customer capital in determining innovation performance in youth enterprise in Kenya.

4. To explore the role of technological capital in determining innovation performance in the youth enterprises in Kenya.
5. To establish the role of entrepreneurial skills in determining innovation performance of the youth enterprises in Kenya.
6. To investigate the role of loan accessibility procedures and requirements on innovation performance of youth enterprises in Kenya.

1.5 Hypotheses

Ho $_1$ Human capital does not determine innovation performance of youth enterprises in Kenya.

Ho $_2$ Structural capital does not determine innovation performance of youth enterprises in Kenya.

Ho $_3$ Customer capital does not determine innovation performance of youth enterprises in Kenya.

Ho $_4$ Technological capital does not determine innovation performance of youth enterprises Kenya.

Ho $_5$ Entrepreneurial skills does not determine innovation performance in youth enterprises Kenya

Ho $_6$ Loan processing procedures and requirements do not play an intervening role in innovation performance in youth enterprises in Kenya.

1.6 Justification of the study

Kiambu County is cosmopolitan due to its proximity to the city and is a main residential area for the people working in Nairobi city thus, it is very susceptible to high levels of crime, alcohol and substance abuse (NACADA 2010).The County also cuts across both rural and urban orientations giving richness to the data used in this study. This study concentrated on the youth enterprises specifically those that have benefited from the

YEDF in Kiambu County in Kenya to contribute to the establishment of innovation units responsible for acquiring, assimilating, transforming and exploiting any knowledge, networks and opportunities accessed by the County Government so as to come up with new products, enter new markets as well as patent the original ideas the youths could be possessing and create new employment opportunities.

According to Lin and Chen (2007), innovation is a dominant factor in a firm's competitiveness in an environment of low-value markets where majority youth enterprises operate. It fuels organizational growth, drives future success and is the engine that allows businesses to sustain their viability in a global and competitive economy. Firms must be able to create and commercialize a stream of new products and processes that extend the technology frontier while at the same time keeping a step or two ahead of their rivals. Every organization, therefore, needs one core competence which is innovation (Sheu 2007) consequently, the pressures on all business enterprises to continuously innovate so as to enable them develop and launch new products and services, are greater than ever specifically with the rising levels of unemployment. The successful development and launch of new products and services are fundamentally essential to the survival and success of business enterprises, irrespective of their size (Wynarczyk 1997). Life-cycle theories also focus on the liabilities of smaller and younger companies, which are discussed in terms of "smallness" and "inexperience", respectively (Wright et al., 2007). This could imply that both age and size influence the innovativeness of growing firms. There is a positive relationship between human capital, structural capital, customer capital and innovation performance that was indicated by Muammuer *et al*. (2008) in Turkey's automotive industry and this has been confirmed by this study for the youth enterprises in Kenya.

In the recent past, influence of innovation performance on the growth of enterprises has attracted the attention of some scholars, businesses and governments in practical application but there are very few relevant studies exploring the determinants of

performance innovation in youth enterprises. This study has made a real attempt to fill this knowledge gap and has come up with very important recommendations which are believed to be of help to policy makers at national and county levels in regards to unemployment and the success of economic stimulant initiatives in Kenya ‘s economy through the youth led enterprises.

The World Bank estimates that approximately 800,000 Kenyans join the labor market each year, and only 50,000 succeed in getting professional jobs. The high level of unemployment has been blamed for escalating incidents of crime and insecurity in the country. This is confirmed by Obonyo (2013) who stated that youth unemployment in Kenya is a ticking time bomb waiting to explode. Similarly, in 2009, a World Bank-funded youth project dubbed Kazi Kwa Vijana (KKV, or Jobs for Youth) which was launched to deal with youth unemployment, but collapsed in 2011 after claims of gross cash mismanagement and misappropriation of funds. Approximately 300,000 young Kenyans employed in the Kazi Kwa Vijana (jobs for youths) initiatives were left without a source of income when the program was brought to an abrupt halt. This situation communicates that more innovative ways of fighting unemployment may not be optional, and therefore, interventions need to be considered regarding technological and structural innovations to support new product, markets and patenting. Appropriate financial packages to fund the development of such innovations and managerial skills to commercialize the innovations as is the case with women-led enterprises (Kiraka 2013) are highly required for the youths who form the majority of the unemployed population in Kenya.

According to Robson et.al (2008), despite the growing emphasis on business as a sustainable means of development, almost all studies on determinants of innovation use data from western nations (Matanda, 2007), which may not necessarily match the needs of the African countries like Kenya. It is argued by Orwa *et al*. (2011) that the emergence of new technology, information technology practices, and human resource

management practices has led to higher innovation within organizations and that degree of quality, productivity and flexibility are also achieved through the introduction of advanced technologies. This study has explored on how the beneficiaries of youth enterprise development fund have utilized human, technological, structural, customer capital and entrepreneurial skills among other intangible assets in product development, reaching out to new markets and patenting and/or new trademarks in making youth enterprises operate at an acceptable productivity level and profitability for the better success rate of the YEDF project to achieve the goal of employment creation for the youths in Kenya.

Irrespective of the youth's level of education, their creativity and innovation can be enhanced leading to the creation of more job opportunities. Ultimately, this may result in improving their economic status, consequently reducing the level of crimes, alcohol and drugs abuse by the creation of jobs as the enterprises become sustainable and highly profitable.

The results of this study have informed the policy makers on the necessary interventions that will boost the youth enterprises, making them more profitable and sustainable, and ultimately leading to more job creation through raising the levels of innovation. The county government has also benefited from the study by knowing specifically what is required for the youth enterprises to survive and apply innovation as an intervention and, probably, it has obtained a basis of establishing innovation policy as a way of making youth businesses in the county perform better. The national government has also been enhanced with key knowledge in youth enterprises and, in this era of radicalization, the youths are going to use their energy in developing the economy rather joining destructive terror activities for survival.

The results are also helpful in providing insight into how to raise productivity, profitability, and growth for the youth enterprises for employment creation, which is in line with a study done by Ngugi, *et al*. (2013) which asserted that the relationship

between a company's intangible assets or intellectual capital (human, structural, customer, technological capital and entrepreneurial skills), innovation performance, profitability, employee's productivity and growth of sales are significant. The results of the study have been published so that the existing body of knowledge may be enriched and further research may be conducted based on the further research proposed in this study.

1.7 Scope of the study

This study confined itself to the youth-led enterprises which have benefited from the youth enterprise development fund since inception in 2006 in Kiambu County in Kenya.The geographical coverage was in all the sub counties which included Limuru, Kikuyu, Kabete Lari, Gatundu South, Gatundu North, Githunguri, Kiambu, Kiambaa, Ruiru, Juja and Thika Town. The list of the group hosting the entrepreneurs was obtained from the youth enterprise fund offices in the head office, and a few (10%) were used for piloting and were not included in the research anymore.

1.8 Limitations of the study

It was hard to access the enterprises for the youth since many thought the study was meant for reporting their performance in repayment of the loans. This was mitigated by getting the contacts of the youth fund field officers who explained to them the real purpose of the study through the group leaders who consequently managed to talk to their group members who turned out to be very supportive.

It was quite hard to follow up on the questionnaires during the data collection process since the group meetings are once a month and they kept on changing as per their convenient times. This made it hard to get them in their shops or in the group meetings. This was overcome by agreeing with the field officers to collect the questionnaires that were hard to get during their normal visits to their business since it was easier for them to make appointments with the youth entrepreneurs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter is organized in a theoretical framework, conceptual framework, and review of empirical literature, critique of literature, research gaps, and the summary. This chapter reviewed the literature and came up with a conceptual and theoretical framework in an attempt to integrate entrepreneurial skills, human, structural, customer and technological capital or intellectual capital in one word as sources of competitive advantage manifested in innovation performance.

2.2 Theoretical review

This study has considered a number of theories that have formed the basis for the investigation on the determinants of innovation performance in youth enterprises in Kenya. These include the Schumpeterian theory of entrepreneurship, Human capital theory, the Knowledge spill over theory and The n-Arch theory of McClelland (1961)

2.2.1 Schumpeterian Theory of Entrepreneurship (1934)

This study is anchored on the Schumpeterian theory of entrepreneurship which emphasizes on innovation regarding carrying out new combinations, introducing new products, and production functions, the opening of new markets, conquering of new sources of materials among many others. This theory also supports the work of Trott (1998) who asserts that innovation is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of new (or improved) products, process organization, management, production, commercial ventures, and services. According to Schumpeter (1936), entrepreneurs exploit opportunities through creation and provision of leadership and exercising good management practices to maximize the potential profit and growth. The n-Arch theory of McClelland (1961) is shared by Schumpeter in his argument that the driving force of

an entrepreneur is motivation to achieve. According to Cabrita and Bontis (2008), intellectual capital is a core ingredient of small and medium enterprises (SME) for the production of innovation and creativity. In the knowledge-based economy management of an organization should improve on its intellectual capital so as to enhance innovation performance (Narvekar & Jain, 2006).This study has also considered that innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practiced. Youth Entrepreneurship rests on a theory of economy and society. This means that when the youth entrepreneurs manage their enterprises in an innovative way especially in the era of great technological advancement these enterprises provide a base for economic growth and consequently the social challenges like alcoholism and drug abuse are dealt with by having the youth getting involved in value adding activities.

2.2.2 Human Capital Theory (1975)

Human capital theory regards people as assets and emphasizes that investing in them by an organization generates excellent returns. It proposes that sustainable competitive advantage is attained when a firm acquires a human resource pool that cannot be substituted or imitated by its competitors Barney (1991).The concept in this theory recognizes workers as an essential resource that managers use to achieve competitive advantage for the companies. When accounting for the human resources according to Fombrun *et al*. (1990) as cited in Ngugi *et al*. (2013), Ross *et al*. (2007) it involves measuring the costs incurred by an organization to recruit, select, hire, train and develop human assets. It further involves measuring the economic value of people to the organization. People should not be treated as mere variable costs, and there should be a long-term perspective in managing them conforming to Beer *et al*. (1991). The human resources cease to be viewed as just cost factors but are given a view of capital for investment with an aim of yielding income like any other production factor according to Becker (1975) as cited in Muammer *et al*. (2008).Creativity and innovation among the

youth entrepreneurs was demonstrated through the introduction of new products and entry in new markets which was supported by their ability to embrace modern technology.In this study, the theory of human capital has given a good foundation since human capital has been defined as the collection of knowledge skills, capabilities, experience, attitude, wisdom, creativeness, and commitment of the employees in the running of enterprises. Therefore with the hiring of the suitable staff there is assurance of adopting technology more easily and also having people who are able to make effective communication to customers for healthy customer relationships?

2.2.3 Knowledge Spill Over Theory (2003)

This study incorporated the Knowledge Spill Over theory of entrepreneurship which considers that in entrepreneurship there is creation of new knowledge expands that technological opportunities. The entrepreneurial activity does not involve only the arbitrage of opportunities, but the exploitation of knowledge spillover not appropriated by targeted firms. The Knowledge Spillover Theory of Entrepreneurship shifts the fundamental decision-making unit of analysis in the model of economic growth away from exogenously assumed firms to individual agents with endowments of new economic knowledge. Agents with new knowledge exogenously pursue the exploitation of knowledge suggesting that the stock of knowledge yields knowledge spillovers and that there is a strong relationship between such spillovers and entrepreneurial activity. According to Chesbrough (2003), if the incumbent firms appropriate all the results of research and development in open innovation model, accessing of knowledge across the firm significantly speeds innovation process and increases the innovative potential of the company. This theory supported this study since entrepreneurial skills are acquired through research and development, and full utilization of these skills result to the introduction of new products, entry into new markets, and trademarks for the youth enterprises in Kenya.

2.2.4 The n-Arch theory of McClelland (1961)

This when entrepreneurship is carried out purely on the basis of the need to achieve, excel and succeed. A person with this type of need, will set goals that are challenging but realistic. The goals have to be challenging so that the person can feel a sense of achievement and this study involved the youths who borrow funds from the youth enterprise development fund which is more challenging than borrowing from family members or friends. However the goals also have to be realistic as the person believes that when a goal is unrealistic, its achievement is dependent on chance rather than personal skill or contribution. This type of person prefers to work alone or with other high achievers. They do not need praise or recognition, achievement of the task is their reward. The study has drawn much support from the theory because it is a requirement to have the youths in Kenya team up in groups of like-minded who are determined to take the youth funds so that they make their enterprises excel. Since majority of the youth entrepreneurs were the owner managers and the only ones depended upon for the growth and sustainability for the enterprises, they tended to be highly motivated by their individual need for achievement in the current era of high unemployment levels. The success of the enterprises largely depend on their ability to introduce new products and services thus attract more customer and ensure sustainability of their growth and profitability. The aggressiveness to get higher market shares was a motivation because it meant more customers and higher sales of the products. The need to archive then acts as the driving force in getting into new markets as well.

Conceptual framework was derived from Edvinson's categorization of the intellectual capital model which is fully supported by the human capital theory (Becker 1975) includes human, structural, customer and technological capital which are the independent variables in this study (see Figure 2.1).In this model the intangible assets of the firm are categorized in regard to the knowledge, skills and experiences of the employees, the infrastructures put in place by an enterprise such information systems to enhance data management and consequently improve customer relations leading to

customer loyalty. Edvinson categorized the intellectual capital/intangible assets as the non-material capital or the hidden brain power which is paramount in helping a firm in executing its strategy.

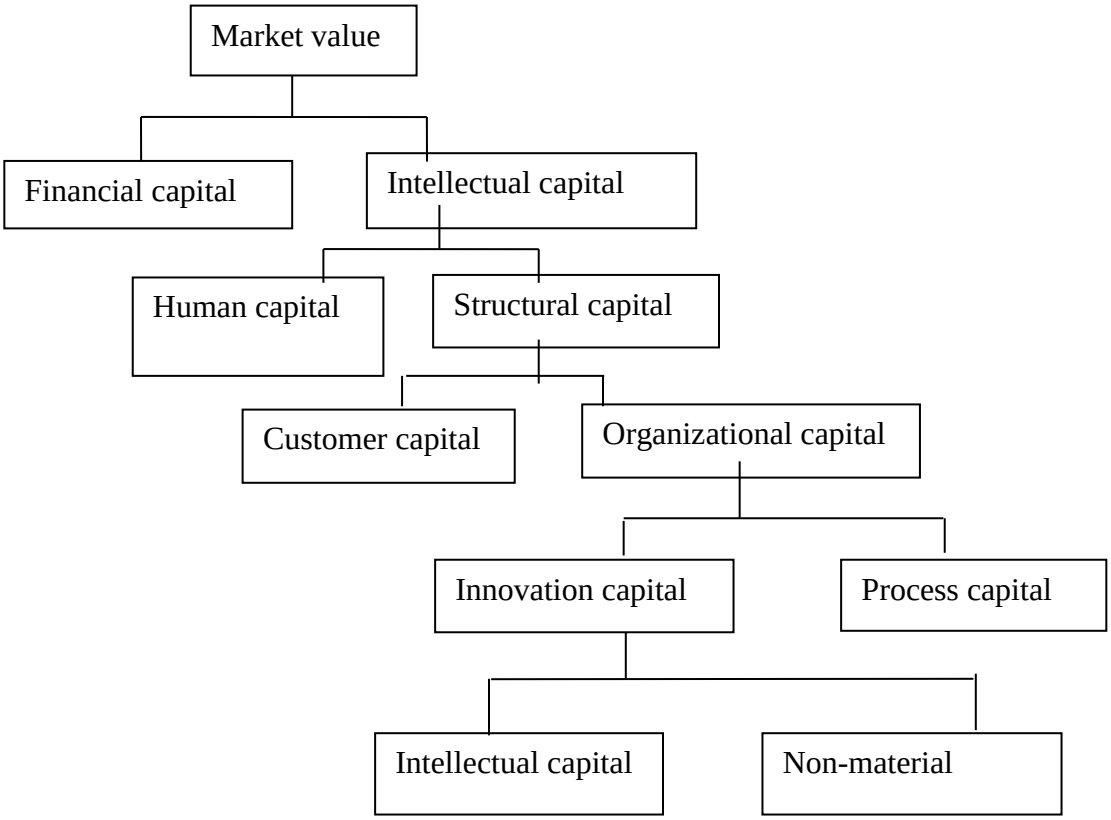


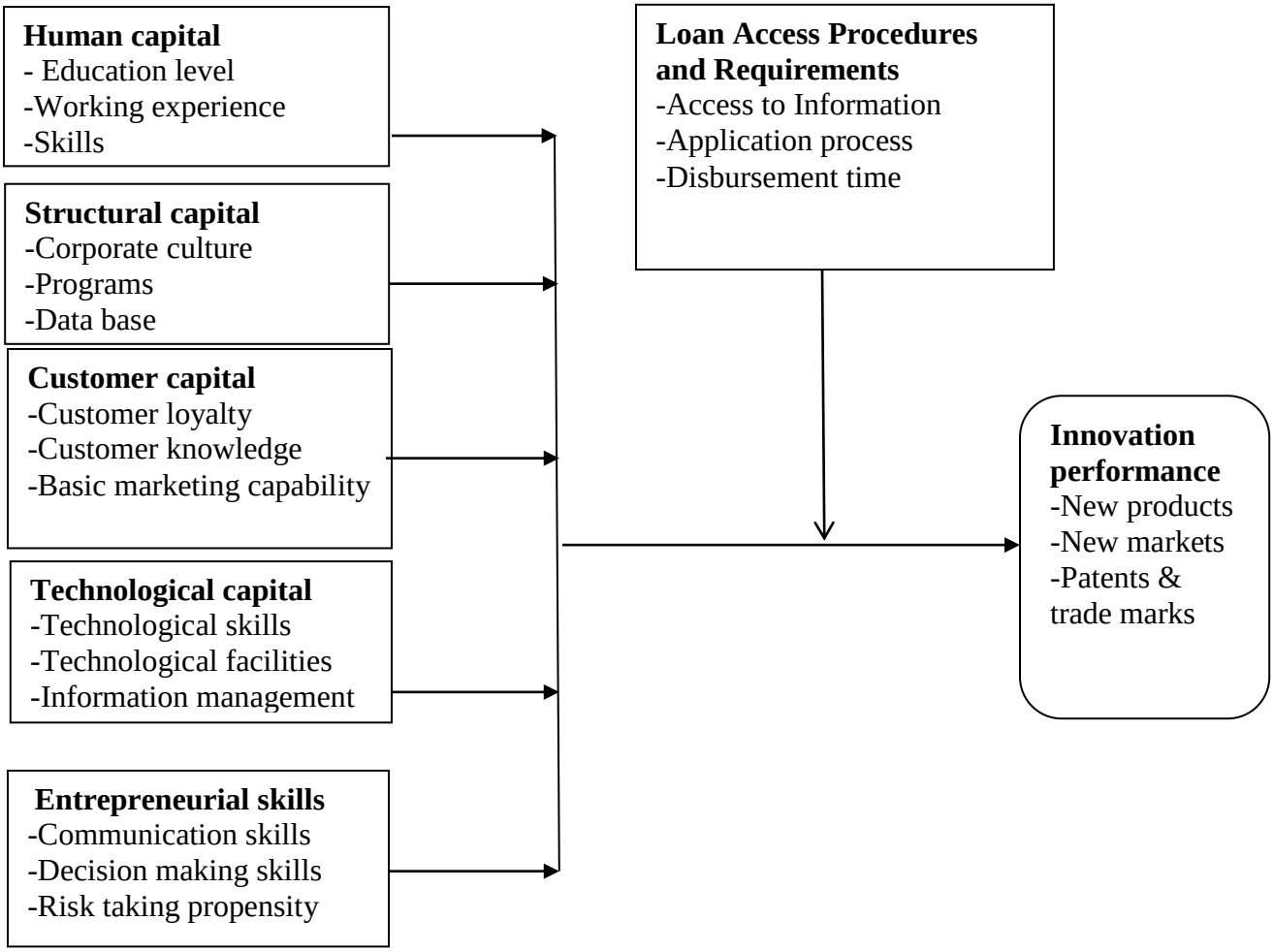
Figure 2.1 Edvinson's categorization of capital

Resource: Leif Edvinson and M. S. Malone, "Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower", Harper Business, New York, 1997.

2.3 Conceptual Framework

The conceptual framework in Figure 2.2 shows the relationship between variables hypothesized as determinants of innovation performance. The independent variables of this study included human capital, structural capital, and customer capital, technological

capital and entrepreneurial skills which determine innovation performance which is the dependent variable. The intervening variable is the loan processing requirements and procedures. According to human capital theory, business activities take place when those who believe they have the skills, knowledge, and motivation to start a business perceive an opportunity to do so. The component of human capital impacts individuals' capabilities and motivation, and influences an individuals' belief in their ability to succeed in specific situations. For example, Lee and Venkataraman (2006) suggest that an individuals' aspirations tend to be formed from the human, intellectual and social capital of an individual. This study puts in perspective the aspect of the youth entrepreneurs with bear minimum level of education, having the appropriate skills, with the correct infrastructure being able to run a profitable and sustainable enterprises when given financial boost through loan funds. The human capital theory therefore supported the conceptual framework as illustrated in Figure 2.2



Independent variable **intervening variable** **Dependent variable**

Figure 2.2 Conceptual Framework

2.4 Review of variables

2.4.1 Human capital and innovation performance

Human capital and innovation performance are a fundamental aspect of Intellectual Capital which presents the individual tacit knowledge lodged in the minds of employees

as stressed by Gakure (2001) in that, mediating and handling complaints about the company requires tact and diplomacy. It is an ultimate source of information, strategic renewal of a corporation and the company can create value in the knowledge-based economy. According to Maddocks *et al*. (2002), Human Capital is the value added to the organization through skills application, use of know-how and their expertise. The minds of the youths are very active by their age and therefore if they are fully utilized, they can be of great help to the economy. Human capital comprises of how effectively an organization uses its people resources as measured by creativity and innovations Maddocks *et al*.

(2002), this is confirmed in this study by the results which indicated that a considerable number of enterprises were able to enter into new markets through the skills acquired by the youths especially in matters related to technology. It was noted that the youths were able to earn more customers loyalty due to the use of technology as compared to their older counterparts that are not ready to adapt technology easily. Their businesses have become more profitable and sustainable such that the challenge of unemployment among them probably will be, globally, a thing of the past if the tread is maintained. It can only be believed when supported by some empirical evidence as has been labored on in this study.

The knowledge acquired in the schools, colleges and universities forms an excellent foundation for innovation; however it is more theoretical knowledge as argued by Hosvani and Ramezan (2011).Additional and more practical knowledge is needed for the young youth entrepreneurs to make any impact in the business world through innovation. According to the annual report on the YEDF (2013), the fund has been used to train over 150,000 youth entrepreneurs in Kenya yet very little entrepreneurial skills has been evident among youth led enterprises. It is expected that the impact of this training, if all necessary skills were given, was to be felt in the economy the following year in the youth enterprises through better communication, decision making and higher

level propensity to take risk. The level of innovation was expected to rise in terms of new products, new markets and increase in patents and trademarks as confirmed in this study that there was a positive linear relation between entrepreneurial skills and innovation performance.

The skills imparted in the young entrepreneurs are expected to be beneficial to their businesses and make self-employment more attractive and reliable as may be shown forth by the number of innovations recorded in their individual enterprises as well as group projects. According to Schumpeter (1936), a well-trained entrepreneur is expected to use creative destruction to bring forth the best that an enterprise carries the potential to produce. The innovations demonstrated reflect a high-quality human capital in play within the enterprises. Across the world, youths face real and increasing difficulties in developing their entrepreneurial skills with each day passing as affirmed by Robinson (2001) yet entrepreneurship is not something one can fake a way through. It is either doing it right or not doing it for there are no two ways about it Thurik (2009) argued.

2.4.2 Structural capital and innovation performance.

Structural capital in this study is defined as the availability of information, processes, databases, and other required infrastructure to support the firm in executing its strategy. It is the supportive non-physical infrastructure, processes, and databases of the organization that enables human capital to function Maddocks et.al (2002).This element of Intellectual Capital is further divided into organizational capital which is the philosophy and the systems for leveraging the organizational capabilities. There is also process capital which includes techniques, procedures, and programs that implement and enhance delivery of services and goods. Innovation capital is the other element of Structural Capital that includes intellectual property such as patents, trademarks, and copyrights according to Edvinson *et al*. (1997). Intangible assets such as organizational image, information systems are shreds of evidence of innovation performance of the enterprises. According to Hosnavi (2011), Structural Capital consists of the supportive

infrastructure, processes, and databases of the organization that enables human capital to function. It is owned by the company and, therefore, remains in the business after employees leave the organization. It requires a very high level of formalization to avoid dependence on people and remain within the organization (Roos *et al*., 1997: European Commission, 2006).

The image of the company which is more likely to be boosted by having delighted customers will depend on the management skills demonstrated by the top management via knowledge management in the firm. Pure knowledge of entrepreneurs on the modes of knowledge creation may promote innovation as expressed by Nonaka (1994) in tacit to explicit (externalization), from tacit to tacit (socialization), from explicit to tacit (internalization) and explicit to explicit (combination).The diversity of managing the knowledge within and collaboration with the external sources is a skill to be held dear by top management of any organization that values innovation for survival in a competitive environment. Fiol (1996) in line with the absorptive capacity concept introduced by Cohen and Levinthal (1990) argues that knowledge management is closely intertwined with innovation management as the potential of a firm to generate change is dependent on the prior accumulation of the knowledge they have absorbed.

The structures existing in the youth enterprises in this study included data bases and information systems though for the very small enterprises they did not have computerized way of storing the data. Most of the customer related data were manually maintained, however, the youth entrepreneurs were very keen in record keeping and were highly disciplined in how they transacted. This formed a commendable organizational culture in reporting to their businesses very early and they demonstrated a lot of passion in what they were doing. Due to the proximity to the city majority of the entrepreneurs were accessing diverse information through exhibitions and trade fares thus they were quite informed on how to run their businesses professionally though there were no established programs for training or policy guidelines. Ability to get to

new markets was greatly supported by the ability to network widely. It was also observed that entrepreneurial culture was common in the area since a good number of youths were doing what the parents were doing in business.

2.4.3 Customer capital and innovation performance.

A good foundation for a company to manage its human capital is having basic marketing capabilities (Hosvani & Ramezan, 2011) such as serving skills, collecting and utilization of customer data. Rich customer data helps in giving tailor-made services and keeping relationships sound. Current technological advancement acts as a great enhancement especially among the youths with social media being highly magnetic.

Customer capital is an essential element of Intellectual Capital it is the value of relationships that a company builds with its customers which is reflected in their loyalty to the firm and its products. Though not shown in the balance sheet, yet it has a lot of effect on the same. As an essential element of Intellectual Capital, Customer Capital is embedded in the marketing channels and relationships that an enterprise develops over time. Marketing intensity, customer loyalty is real indicators of the customer capital level in a business. In a liberalized global market it is of essence for youths to up their game in marketing capabilities so as to remain competitive and bulb sustainable businesses. Customer capital is also referred to as relational capital by some scholars who define it as the external linkages of the company with suppliers and customers that enable it to buy and sell goods and services in an unchallenging manner as stated by Talukdar (2008).

The Theory of relationship marketing by Berry (1995) brings with it the idea of a relationship in which the business earns the customers' favor and loyalty by satisfying their wants and needs. This idea is referred to as new-old by Berry (1995) since it was not unknown to the old merchants. Marketing is seen as a combination of interactions, relationships, and networks by Gummesson (1996).The interactions, relationship and networks are not able to be executed without the human elements which are held in the

employees. The youths who are capable of utilizing the technology in creating and maintaining customer loyalty as they keep growing in their creativity and the levels of innovation in their enterprises continued to increase. Ability to search for market online and delivery of the products and services without any physical movement of the two parties is a big stride in the current economy. It saves both time and money for the entrepreneurs and their customers. The study established majority of the youth entrepreneurs had invested in complex mobile phones which enabled them access internet very easily and through that they were able to reach out to new markets, introduce new products and services so easily. The youths have been able to keep good relations; healthy interactions and extensive networks with their clients and are reaping a lot of benefits from technology. Through social media the cost of advertising has been cut down thus profitability has been positively affected. Such enterprises are also good in getting feedback from their customers thus they are more likely to introduce new products and get into new markets which increases customer base and consequently achieve business growth. Through these interactions, one can know their customer very well which further enhances loyalty to the business or the products. It is as simple as knowing the customers and addressing them by their names when selling to them that gives them a lot of confidence, creating an impression of care and personal attention given to them.

2.4.4 Technological capital and innovation performance

According to Joseph Schumpeter (1939), technological change is one of the primary determinants of industrial change, and it consists of the introduction of new products (product innovation), production processes (process innovation) and management methods (organizational innovation) in an economic system. In a knowledge-based economy, the role of technology is highly acknowledged and is mainly based on information technology. Technological capital according to Fernandez *et al*. (2000) includes knowledge related to access, use of innovation of production techniques and products. According to Bueno et.al (2006) Technological capital is the set of intangible

assets which is based on innovation and technical processes. It is further described as a product of technical knowledge by Ramirez (2010) as a combination of knowledge related to the development and technology systems of an organization. Technological capital is based on the activities and functions of both internal and external scope which are linked to the development of products and services of the organization.

According to Saleemi (2009), technology is the big bang that has propelled the world into endless possibilities. It is a valuable tool for excelling in the current marketplace. It is further noted that technology gives an edge to the traditional ways of working and, therefore, provides innovative products and services. It gives speed in operations thus increases the productivity of overall processes. An enterprise with an efficient information system is able serve the customers in a more efficient way for instance it is easier to give updated reports with an efficient information system than with an inefficient system. This promotes loyalty since the customers are assured of the accessibility of reports when they need them. The study established that those who were running institutions like schools were highly challenged by the parents when they require to know their fees balances at a click of a button. Others running chemists had greatly suffered losses but when they introduced a computerized stock management system they experienced great improvement. This boosted the ability to introduce new products and it was for this reason that beauty products were added to the ordinary human medicine sold in the chemists.

2.4.5 Entrepreneurial skills and innovation performance

These are generic competences necessary for the success of self-employment over and above any occupational skills which may be required. These include the individual values, beliefs and attitudes, interpersonal skills, communication skills, and networking skills and realistic awareness of risks and benefits of self-employment Meager *et al*. (2011). According to Ndirangu and Mukulu (2013), Entrepreneurial skills help in the improvement of decision making, communications skills and interpersonal skills which

lead to business growth as manifested by the opening of new branches thus getting into new markets bringing the aspect of innovation performance in the firm.

Organizational learning emphasizes on methods for acquiring knowledge in regards to entrepreneurial skills (Senge, 1992; Argyris, 1993), which enables the enterprise to convert the knowledge that remains in the organization after the workers leave the organization, and this forms a basis for sustainable enterprises due to competitive advantage in the business. Entrepreneurial skills enhance management of human capital regarding skills, attitudes, and knowledge (Prahalad & Hamel, 1990; Zack, 1999), which helps in empowering the human capital in an organization. Therefore, the enterprises need to keep ahead in the market by maintaining a programs of continued discovery and innovation. Entrepreneurship involves the impulse to create and innovate, recognizing innovation by others, Gibbs (2009) the desire to implement innovation (e.g. starting a new venture, finding new markets, introducing new organizational models) and the drive to motivate others to succeed in its implementation (OECD, 2010).

Thus investigating how this is happening among youth enterprises in Kenya and was suggested to be good in informing policy makers who spend a lot of time strategizing on youth unemployment to an extent of introducing financial and training support to this critical group in the economy. This information is in agreement with what is stated by Singh *et al*. (2001) on training and education programs addressing specific tasks and also increase self-confidence (Gathenya & Bwisa, 2012).When youths leave school, they are faced with many challenges which include low self-esteem, especially where parents are not able to continually give pocket money to their sons and daughters. When they lack employment and probably join youth groups for national funds like YEDF, the little and scantly provided entrepreneurial skills cannot be enough to make them prosper in the business world which is highly competitive. The intellectual capital in them will require some stimulation through mentorship and coaching. According to YEDF annual report (2013), the level of appreciation of entrepreneurship is low in the country, and this may be attributed to an education system and culture that focuses on employment in

a formal sector other than self-employment, leading high levels of unemployment. Many young people take entrepreneurship as a last resort and not necessarily as a choice for career development. Equally, as the youths leave school, many are unable to make informed decisions on the type of enterprise to start. This ignorance justifies a package of training and coaching for the young entrepreneurs' as much as the need for financial support is outstanding (RoK 2013). Equipping the youth with managerial skills communication skills, which are the core element in entrepreneurial skills (ES) raises the chance of becoming more innovative for the success of their businesses as revealed by the results in this study. The ability to take calculated risks among the youth entrepreneurs in Kenya was greatly supported by the fact that some entrepreneurial skills were acquired through the YEDF and entrepreneurship exhibitions that are common in the area where the research was carried out.

Ray (1989) reinforces this point by quoting Drucker, who said that the rise to industrial dominance of Great Britain, Germany and United States of America (USA) was based on aviation, agriculture, and optics among others. The first country that apparently rose to industrial power through management innovation was Japan. This study has put Kenya on the innovation map by determining how managerial skills are imparted and utilized in pursuit of Vision 2030 which has industrialization as an economic goal to achieve. Ray (1989) predicts that the rate at which persons and companies learn may be the only competitive advantage especially in knowledge intensive industries.

2.4.6 Loan Access Procedures and Requirements

According to Chigunta (2002), a major constraint to the growth of youth-led enterprises is the lack of access to finance, and there are few micro- finance institutions which specifically target the youths. Lack of collateral, experience and biases further puts the youths at a disadvantage. The accessibility of information has been limited to the youths, however, Kanyari and Namusonge (2013) recommends that there should be more public sensitization and education avenues in the disadvantaged areas. Such

avenues are local FM stations, village elders, church leadership, county leaders (formerly Administration) and faith-based communities. Funds are not readily available since it is not easy to predict the time it will take to process the YEDF application according to Amenya *et al*. (2011); however YEDF remains the most preferred source of fund for the youths despite the problem of accessibility. Odhiambo *et al.* (2011) upholds that Kenya needs long-term strategies to enable youth access more rewarding and effective work. Since there is also a tendency of treating youth as a related group, which could end up isolating a few young people who cannot fulfill YEDF requirements such as business plan development, registered groups, and existing bank accounts. The rules should be more flexible and need-based to benefit some of the needy and illiterate youth who require more support and rigorous training to succeed Muthee (2010).

2.4.7 Innovation Performance

Germany has expanded in research and innovation systems over the last decade such that investment in Research & Development has grown substantially since 2000 to reach 2.84 % of the GDP in 2011 which is close to 3% national target for 2020.Public expenditure represents one-third of investment in Research and Development. Their government increased the public budget on research and innovation even during the 2009 economic crisis as part of a policy of prioritizing spending on education and research. Business enterprise expenditure on Research and Development which represents two-thirds of investment in Research and Development also grew as a percentage over the period. The priority given to Research and Development is amazing in this developed country. The commitment amidst the global economic crisis is a big lesson in fighting poverty through innovation. The way to sustainable businesses is researching on new markets, processes and products. It was surprising to note that the Kiambu County is on the verge of establishing a YEDF Bill. Among all the objectives, there is nothing to do with Research and Development, but the emphasis is put on financial capital accessibility, attracting investments, networking among other equally important aspects of enterprise development. Without giving attention to innovation

performance trends, sustainability may remain a challenge, especially for the SMEs which are commonly led by the youths after facing a lot of frustrations in the job market, resulting into 40 per cent level of unemployment in Kenya currently.

The intangible assets or intellectual capital in an organization is the amount by which the value of an enterprise exceeds its tangible (physical and financial assets) and the liabilities Paola and Paola (2012).It is, therefore, important to put intangible assets into consideration when measuring the performance of the businesses. For high-level value creation and competitive advantage, intangible resources and capability have been widely acknowledged as confirmed by Drucker (1993) and Grant (1996).The value creation role of IC remains understood accordingly to Schiuma and Lero (2008), and the effect on the innovation performance thereof. Griffith *et al*. (2006) assert that innovation is an essential cornerstone in performance concerning improving productivity, performance, and growth. The growth is anticipated to create more employment opportunities which eventually solve the problem of employment in Kenya. There is a very close relationship between innovation and intellectual capital according to Lev (2001) innovations since are created primarily to be investing in intangibles.

Intellectual capital, specifically in human, structural, customer and technological capital, are the ancestors of innovation, (Ahuja, 2000; Subramanian & Venkatraman, 2001: According to Thornhill (2006), innovation is more common when industry dynamism is high, and innovative firms are likely to enjoy revenue growth, irrespective of the industry in which they operate. Tsai & Ghoshal, 1998) term innovation as an outcome of Intellectual capital. In support of the ensuing argument, the skills learned in the education system in Kenya do not necessarily make the prospective entrepreneurs innovative enough to run profitable and sustainable enterprises for the creation of reliable self-employment. The allocation of some funds under national economic stimulation programs like the YEDF for training on entrepreneurial skills and mentorship program confirms there a glaring need for the skills as a basis for greater

levels of innovation in youth enterprises in Kenya. When these budding entrepreneurs are prepared and full utilization of these skills is keenly tracked, they become more innovative and obtain a competitive advantage over those who are not trained at all. This study supported innovation as an outcome in that it investigated on the determinants of innovation performance through a multi-dimensional approach which considered intellectual capital in regard to Human Capital, Structural Capital, Customer Capital, Technological Capital and Entrepreneurial Skills among youth-led enterprises. European Commission (2006) defined IC as a combination of activities and intangible resources that enables the organization to transform a set of materials, financial and human resources to systems capable of creating value for the stakeholder and this value may be interpreted as profitability and expansion.

2.5 Review of empirical Literature

2.5.2 Innovation performance

Calvo (2006) investigated whether small, young and innovating firms experienced greater employment growth than other Spanish firms during the period between 1990 and 2000. His results showed that old firms grow less than young ones and that both new products and the adoption of new processes stimulate survival and employment growth independently of the age of the firm. According to Anne (2012), order to achieve high innovation performance, firms must first develop the cultural and behavioral practices for innovation. Wu et al. (2007) demonstrate that structural and relational capital fully mediate the effects of human capital on innovative performance in the Taiwanese electronic and IT industry.

There are two main dimensions of innovation considered: innovation as a process and innovation as an outcome (Crossan & Apaydin, 2010). Innovation as a process focuses on the drivers (why innovate), sources (inputs for innovation) and locus (where innovation takes place) of innovation, where innovation as an outcome pertains to the type of innovation (product, process, organizational, marketing), the magnitude

(incremental or radical) and the referent (firm, market, industry). This study is inclined more towards both dimensions since the youth enterprises are looked upon even by the Kenyan government as a source of economic and social solution for the youths who have been faced with high levels of unemployment. The growth and sustainability of the enterprises under study is highly depending on the ability to be innovate thus get bigger market shares and produce new products as well as commercialize new and patented business ideas.

2.5.2 Human Capital

Annelies *et al*(2014) carried out on human capital and innovation in developing countries a firm level got results which indicated that formal training has a strong positive effect on innovation. One explanation for this strong positive effect could be that, especially in developing countries, formal training supports innovation and compensates for lower levels of education of employees. This is in line with previous studies in developing countries (e.g. Goedhuys and Srholec, 2010) that argued that formal training often supplements the lower degree of education in developing countries. Human capital and its effects on the innovation process have been deeply investigated. Understanding and measuring the contribution of both individuals and teams to innovation (process and outcome) has been scrutinized from different angles, to name a few, efforts in R&D, propensity of individuals to innovate, demographic characteristics including education levels, composition of teams, role of management, level of autonomy and attitudes to work. The results in this study showed that all the youth entrepreneurs had acquired the minimum formal education which in Kenya is the primary level however those with formal entrepreneurial training were making fast decision especially in line to change in products and markets in more effective way than their counterparts that had only primary level of education

2.5.3 Structural capital

An organization exists from the combination of internal structure and people.Once the organization enhances its technology, develops process and establishes other internal initiatives, structural capital will improve. Therefore, structural capital means the ability of organization to accommodate their customers demand. Recent evidence suggests that a good organization structure, together with skilled employees providing efficient and quality service will cause greater performance of an institution (Amrizah & Nawal, 2013). Structural capital consists of concepts, models, patents, computers and system created by employees, yet owned by the organization (Akpinar & Akdemir, 1999).To date, research on the role of structural capital on innovation has mainly concentrated on information systems and patents. The impact of information systems (i.e. technologies and processes to facilitate their usage and adoption) on organizational performance is generally acknowledged. Patents are assimilated to intermediary outputs of the innovation process or potentially tradable elements. This observation mirrors the considerable focus on high-tech manufacturing industries of innovation studies. Therefore, the role of structural capital on the innovation process in service industries, both from the input (rather neglected so far, also in manufacturing firms) and output perspectives, deserves further investigation.

2.5.4 Customer capital

Suppliers are also a source of specialized knowledge and skills, which can adequately complement the capabilities of the firms (Un et al., 2010). Customer capital, also known as relational capital or external capital consists of relationships with customers and suppliers, the government or related industry associations, brand names, trademarks and reputation. According to Akpinar and Akdemir (1999), it refers to the "organization's relationships or network of associates and their satisfaction with and loyalty to the company"

2.5.5 Technological capital

Technology as indicated by the results in this study determined the level of innovation performance among youth enterprises very highly compared to all other variables considered for investigation. This is supported by a unique factor observed among Chinese firms and innovation. The Chinese model of innovation is shown through the Chinese companies investing in advanced technology and then using that technological foundation in addition to customer proximity and propensity to take the risks. As established in this study entrepreneurial skills enhance communication and decision making thus enable the youth to enter new markets, expand their customer base and consequently acquire bigger market shares. The youth entrepreneurs have invested in high technology in terms of phones and computers so as to have the best advantage of the social media over their elder counterparts in competition.

Audrey (2016) posited in a desktop research on The Impact of Technology and Innovation (Technovation) in Developing Countries that the relative productivity performance of the Developed countries has improved over the last two decades particularly given factor inputs. Over this period, technology growth has been among the highest in these countries. Consistently in Turkey context examined innovation and firm performance in automotive industry where the results demonstrated that technological innovation (product and process innovation) has significant and positive impact on firm performance, but no evidence was found for a significant and positive relationship between non technological innovation - Technnovation (organizational and marketing innovation) and firm performance. The study further concluded that Technology in developing countries Kenya being one is challenged by the lack of deep pockets (Capital), by the nature of their organization still being innovative and by being in a rapidly changing environment. For a successful management of technologies under these circumstances, a management system has to be compact, flexible and adaptable. The Pocket concept (Pocket Technology Management or technology and innovation management) aims at supporting according to their entrepreneurial needs, possibilities

and opportunities. Youth enterprise development comes in the fill such gaps in this study. Information and

2.5.6 Entrepreneurial skills

The study sought to establish the relationship between innovation performance and the skills youth entrepreneurs have acquired formally and informally. The level of education did not have a direct influence on ability to introduce new products and entry into new markets. The results supports a study carried earlier which concluded that advanced knowledge-intensive skills and converging skills are more important to innovation than basic skills (OECD, 2010). It is further empathized that entrepreneurship skills include two components related to innovation: an active component comprising the entrepreneur's propensity to drive innovation**,** and an absorptive component comprising the entrepreneur's capacity to recognize and welcome innovation delivered by external factors (Green et al., 2007).

2.5.7 Loan processes and requirements

Amenya et al (2012) carried out a study on youth enterprise development fund (YEDF) and growth of enterprise at constituency level in Kenya and concluded that increasing awareness of YEDF, its objectives and loan features among the youths will have an effect on the growth of small enterprises. This would result to more youths applying for the loans and also utilize the loans prudently in order to repay. As pointed out by Amenya et al (2011) most of the youth are not properly informed about the loans which make it a challenge in accessing. There is need to provide the youth with adequate information on YEDF objectives and loan features. The study also concludes that reducing the youth problems in the constituency will have an effect on growth of enterprises in that more youths will involve themselves in gainful activities. Reducing the challenges in implementation of YEDF in the constituency will also have an effect on growth of enterprises. The financial support given by the government such as youth enterprise development fund in Kenya could be of great benefit if it is well blended with

human, structural, customer and technology capital or intellectual capital in support of entrepreneurial skills in promoting innovation especially if the loans are processed without delays. This will bring into play efficiency and ultimately the funds will be of great help to the youth entrepreneurs thus make the repayments to be done in a timely way because the loans are not diverted to unintended needs. With the globalized and high technology dominated economies in information and communication, soft assets are requiring high management techniques for enterprises to get the best returns on the capital invested. These results can be achieved best through being innovative in product development, marketing techniques and highly efficient and effective processes.

The survival rate, especially for micro, small and medium enterprises which dominate the youth-led businesses in the developing world, greatly depends on the ability to incorporate innovation into their strategies more and more each day (Van Auken Madrid Guijarro & Garca-perez-de-lema, 2008).Intellectual capital whose outcome is innovation as stipulated in this study is a core driver in the creation and maintaining of competitive advantage for the youth enterprises in Kenya. The results of this study are in conformity with a study previously done by Ngugi *et al*. (2013) which confirmed that organizational innovativeness is the most significant factor that influence the growth of SMEs. The managers of youth-led enterprises should, therefore, try to get more innovative and think conventionally through creating an innovative culture by giving themselves time and the resources needed to develop a new mindset and skills. They should also understand their enterprises concerning the competition. The knowledge in the organization is supposed to be converted into a business value according to Roper *et al*. (2008).

2.6 Critique of existing literature

Kiraka *et al*. (2013) carried out a study on growth and innovation in women-owned enterprises in Nairobi, Nakuru, Nyeri and Kakamega counties in Kenya using mixed approach methodology comprising qualitative and quantitative methods. The results indicated that the most usual form of innovation was observed in the change and

addition of new products in the business after loan period. Innovations regarding services, markets and sources of raw materials were, however, less frequent among women-owned enterprises. Same results indicated that the fund continued to face numerous challenges at the Women Enterprise Fund Secretariat, the lender, and borrower levels. The main problem at the fund level included inadequate field personnel, insufficient facilitation of fieldwork, low amounts loan, delays in disbursements and an inefficient multi-layered fund structure. The high cost of loan administration, competition with commercial bank products, inadequate information dissemination, the high demand or limited coverage scope, lack of clear branding of product, lack of individual choices in group lending, high rates of default, bureaucratic processes, and limited business monitoring were the main challenges at lender level. The same study recommended timely disbursement of the funds and simplification of the application process. Researching more on the access and procedures for getting the funds is an essential element of this study in a mediating perspective in furtherance of the research carried out by Kiraka (2013).The results from this study confirmed the same with the youth fund where the youth enterprises suffer delayed disbarments which end up making them to divert the loans and consequently increase chances of default and multiple borrowing. The cost of borrowing for the youths in Kenya was termed as very high in terms of time and this has been discouraging many from borrowing from the youth fund though the interest rates are very low compared to the conventional banks in the country.

The study done by Matanda (2007) on the role of human capital and entrepreneurial orientation on radical product innovations in small carpentry workshops in Nairobi used a survey research design. The study aimed at examining the determinants of radical product innovations in small carpentry workshop a sample of small carpentry enterprises Nairobi County in Kenya. The number of employees was found to be statistically associated with the introduction of rigorous product innovations. This study established that older businesses were more likely to introduce radical product innovations thus the

age of the business was important as far as innovation was concerned. The findings underscore the importance of specific human capital and the strategic processes that firms utilize to develop radical innovations. It also demonstrated that the organizational and policy processes of businesses are crucial because they make easier the manipulation of resources into attaining innovation outcomes. The overall results of this study offered support for an entrepreneurial push as an important driver of innovation. Could the push be regarding entrepreneurial skills? Further study will establish the extent to which entrepreneurial skills determine innovation in the youth-led enterprises.

2.7 Research gap

Studies which have been done previously on the influence of Intellectual Capital on innovation performance focused on the areas such Automobile by Muammer (2008) and those that have studied on youth enterprises have researched on the challenges facing the youth enterprises in respect to youth enterprise development fund (Kanyari & Namusonge, 2013; Amenya *et al*., 2012). A limited set of studies like (Chen *et al*., 2006; Tseng & Goo, 2005; Wu *et al*., 2007; Muammer, 2008) has investigated the effects of Intellectual Capital on innovation, which they considered as an antecedent to firm performance. These studies have given mixed results on the interrelationship between Intellectual Capital components and their influence on firm performance. Hence, the areas deserve further research on the role of Intellectual Capital on innovation performance. Given the literature review in this study Innovation Performance has a positive relationship with the Intellectual Capital. The elements of Intellectual Capital, which include Human Capital, Structural Capital, Customer capital, Technological capital and Entrepreneurial skills have a strong connection with innovation performance in all enterprises youth enterprises included, and more studies are required to uphold this fact. Studies have been carried out indicating that intellectual capital is associated with a firm's innovative performance Subramanian *et al*. (2008) asserts. Intellectual capital in conformity with a study done by Talukdar (2008) can be looked into as new possession of entrepreneurial skills, structural capital and customer capital that have been

formalized, captured and leveraged to create assets of higher value. Human capital ceases to be viewed as just a cost factor but is given a view of capital for investment with an aim of yielding income like any other production factor Becker (1975).

Structural capital is the availability of information, databases, processes and other infrastructure required to support the firm in executing its strategy. According to Hosnavi (2011), structural capital consists of supportive infrastructure, processes, and databases of the organization that enables human capital to function. On the other hand Customer capital is referred to as the external linkages of a business with suppliers and clients which enables it to procure and sell goods and services in an effortless manner according to Talukdar (2008).Entrepreneurial skills are generic competences necessary for the success of self-employment over and above any occupation skills which may be required. These include the individual values, beliefs and attitudes, interpersonal skills, decision-making skills, communication skills, networking skills and realistic awareness of the risks and benefits of self-employment, Meager *et al*. (2011). According to Ndirangu and Mukulu (2013), entrepreneurial skills enhance communication skills, decision-making, and time management which lead to the growth of SMEs and enables entrepreneurs to reach out to new markets by opening new branches. Little has been done in Kenya specifically on what determines the level of innovation in youth enterprises and the gap has substantially filled by the results of this study.

2.8 Summary

This chapter has reviewed the theories found to be appropriate for the study which include the Human capital theory, Schumpeterian theory of entrepreneurship and Knowledge spillover theory. The research instrument was developed based on the theoretical contributions of these approaches to investigate the determinants of innovation performance in five dimensions of human capital, structural capital, customer capital, technological capital and technological capital as elements of intellectual capital considered as the independent variables in this study. The procedures and requirements for accessing the loans or loan processing was taken for the intervening variable in this

study. The results indicated that technological capital, structural capital and entrepreneurial skills had the highest influence in determining the level of innovation performance in youth enterprises in Kiambu County in Kenya and formed the optimal model, while human capital and customer capital had minimal ability to determine innovation in these enterprises. Loan processing had both partial and complete intervening function in influencing the level of innovation in the youth-led enterprises as revealed by the results of this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses how the research was conducted in order to meet the objectives of this study and find answers to the research questions. Included in this chapter are: the research design, the population of the study, the sampling frame, the sample and sampling techniques, the instruments, the data collection procedure, the pilot test, and data processing and data analysis.

3.2 Research Design

A research design is a blueprint for collection, measurement, analysis of data and plans to obtain research questions (Cooper & Schnidler, 2006). This study used descriptive and correlational research methods in the identification, determination and analysis of the determinants of innovation performance in youth enterprises in Kenya. The logical positivist framework was effective since public experimentation surpasses personal experiences as supported by positivist philosophy. To quantify the hypothesized relationship between independent and dependent variables descriptive research method was used. This research method was backed by the fact that the data is supposed to be put into numbers in a formal, objective, and systematic process and obtain information to describe variables and their relationships (Nicholas, 2011; William, 2010).

Descriptive research design gave an accurate account of the characteristics of particular individual occurrence or group as it is in reality among the youth enterprises that have benefited from the youth enterprise fund in Kiambu County in Kenya. Descriptive research determines and reports the way things are (Mugenda & Mugenda, 2003) posits. Correlation analysis was used to measure the relationship between human, structural,

customer, technological capital and entrepreneurial skills against the dependent variable, which was innovation performance in youth enterprises considered in this study. According to Kothari (2007), simple correlation assumes there is a linear relationship between the two variables and they are causally related meaning one is independent and the other one dependent variable. It therefore describes the examinees relationship and determine causality among variables where possible statistical analysis is conducted to reduce and organize data, determine the significant relationships and identify differences and similarities within and between different categories of data, reliability and validity of instrument, (Nachimias & Nachimias, 2008; Nicholas, 2011).Interview guide and questionnaire were tools used to collect primary data making the study use a mixed approach which gave a profound and broad understanding of the innovation performance in youth enterprises in Kiambu County in Kenya.

3.3 Population of study

The population of youths in Kenya is approximately 31,080,000.The target population are the youth led enterprises that have benefited from the youth enterprise development fund.The sample in this study was drawn from youth enterprises which have benefited from the youth enterprises development fund thus playing a critical role in reducing unemployment. Kiambu County where the research was carried out has registered 1107 groups with the Youth Enterprise Development Fund .The Youth Enterprise Development Fund was conceived in 2006 by the government of Kenya as a strategic move towards reducing unemployment which is virtually a youth problem. The funds are meant to advance loans to business youth-led enterprises whether owned individually, as a company, groups, in cooperatives or any other legal form of business ownership. The fund has been in operation for the last nine years and has been faced with many challenges as manifested in low success rate Odhiambo *et al*. (2013).It has so far managed an allocation of Kenya shillings 4,425,454,002 from the treasury since inception (NACADA, Annual Report, 2013). Despite this enormous investment, it has only achieved approximately 20% success rate according to a study carried out by

Odhiambo *et al*. (2013) in general. The beneficiaries of this fund are spread all over the country since it is a constituency-based economic stimulant fund and has offices in all the former 210 constituencies in Kenya. The youths own the businesses that were considered in this study which are under the category of micro, small and medium enterprises (1-100 employees) who have benefited from the Youth Enterprise Development Fund (YEDF) since the inception of the fund. The entrepreneurs who were engaged in this study included both men and women between the ages of 18 to 35 years. The study considered choosing youth-led enterprises from a population of 1107 groups in Kiambu County which had so a far benefited from the youth enterprise development fund by the time of collecting the data (see Table 3.1).

Table 3.1 : Summary of population

Sector	**Enterprises**	**Number of Youth Enterprises**
Agro-based industries	-Value addition (fruit juice ,jams, yoghurt) Animal feeds bakery , brewery Horticulture	78
Other industries	-Pesticides, detergents other chemicals products, mining, timber wood, furniture photo processing motor vehicles and accessories textile and apparels.	110
Services	-Hospitality, health and beauty: transport communication financial education building and construction.	475
Trade	-Whole sale distribution ware house retail of goods (physical products).	442
Total		**1107**

Source: Project Finance Data Centre (1997): RoK (2008); RoK (2009)

3.4 Sampling Frame

According to Nicholas (2011), it is impossible to do a random sampling on a population without a sampling frame unless the population is extremely small. The sampling frame (see Table 3.2) is done from the enterprises within registered youth groups in Kiambu County which have benefited from the YEDF. This data was obtained from Youth Enterprise Development Fund constituency offices with express permission from the headquarters.

3.5 Sample and sampling techniques

The sample included 1 enterprise from 223 youth groups which made 223 respondents as per the latest data for June 2014 (see Table 3.2) Simple random sampling was used to select 1 youth entrepreneur from each of the registered groups. The sample size determination formulae and procedure for categorical data (Cochran 1977; Bartles *et al* (2001) was adopted and calculated according to the following formula. In which n=Z*Z (P (1-P)/ (D*D) and the required sample is (N_o) = n/ [1+ (n-1/N] Z= confidence level at 95% (standard value 1.96).

P=True proportion of factors in the population, or the expected frequency value (estimated adoption rates of the intellectual capital elements specifically human, structural, customer, technological capital and entrepreneurial skills by youth entrepreneurs).

D= margin error at 6% (standard value 0.06)

n= $(1.96)^2(0.5)\ (0.5)/\ (0.06)^2$ =266.6667

Sample size (N_o) = n/ [1+ (n-1/N] & N_o=267/ [1+266/1107] =223

Since the population is less than 10,000 the effective sample size was 223 youth enterprises. The study estimates that roughly 50% (0.5) of the youth entrepreneurs trained on entrepreneurial skills covering the elements of Intellectual capital have

adopted the principles and practice -(Magnani,1997; Barringer & Bluedorn, 1999). A sample size of 223 was arrived at using the calculations under the guidance of the above formula. This criterion was used at 95% confidence level, 6 % margin of error and a Z-Value of 1.96.

Table 3.2 Sampling frame

Sector	Enterprises	Number of Youth Enterprises	Sample Size
Agro-based industries	-Value addition (fruit juice ,jams, yoghurt) Animal feeds bakery , brewery Horticulture	78	16
Other industries	-Pesticides, detergents other chemicals products, mining, timber wood, furniture photo processing motor vehicles and accessories textile and apparels.	110	22
Services	-Hospitality, health and beauty: transport communication financial education building and construction.	475	96
Trade	-Whole sale distribution ware house retail of goods (physical products).	442	89
Total		**1107**	**223**

Sources YEDF database 2013

The ultimate test of a sampling design is how well it represents the characteristics of the population it purposes to investigate (Kothari, 2004; Thorn Hill, 2009; Nachmias & Nachmias, 2008).Stratified sampling was used since the research was conducted in Kiambu county which was already stratified according to the constituencies and sectors. The simple Radom sampling was applied at the point of selecting the enterprises from the various groups in the constituencies. At the point of choosing the particular category of youth enterprises to be included in the research, those who benefited from the Youth Enterprise Development Fund through training and loans were purposively selected because they are the only ones who have undergone the training and have been funded through YEDF and, therefore, conform to some criteria set by the researcher as affirmed

by Sekaran (2003). The researcher used judgmental sampling to select the owner-managers or their spouses in the case of small enterprises while the general managers were selected as respondents in bigger enterprises in case the owners were not immediately available to provide the required information. The judgmental sampling involves the choice of subjects who are advantageously placed or in the best position to provide the information on what led to the introduction of new products, entry into new markets, trademarks and patenting in youth led enterprises in Kiambu County in Kenya with specific consideration of human, structural, customer technological capital and entrepreneurial skills with loan processing playing an intervening role.

3.6 Data collection Instruments

The study used three basic methods to collect data which included questionnaires, an interview guide, and review of secondary data. The structured questionnaires are recommended because they help the respondents to respond more easily and help the researcher to accumulate and summarize responses more efficiently William (2006). The researcher also used computer-based data provided by Youth Enterprise Development Fund offices. The questionnaires comprised psychometric measures in a likert scale of 1-5 ranging from strongly agreed to strongly disagreed and open-ended questions for independent variables (Human capital, structural capitals, customer capital, technological capital and Entrepreneurial skills), dependent variable (Innovation performance) and intervening variable (loan processing procedures and requirements).The study also used an interview guide to gather information from the general managers on innovation status focusing on new product, new markets, patents and trademarks. Historical documents such as annual reports, commentaries, journals and newspapers were used to explain the trends in youth enterprises in terms of customers, structures, human resources, skills, loan processing requirements and technology.

3.7 Data collection procedure

Data collection was mainly based on primary data. Structured questionnaires were adopted from Khalique, Bontis,Abdul, Abu and Isa (2015), Amrizah and Rashidah (2013)and Ngah and brahim (2012).Primary data was used in this study using a structured questionnaire to collect the data. The research tool for this study was tested for reliability and validity to ensure internal consistency for the variables in measuring innovation performance. The variables were selected from the previous studies and tested for relevance. The other way of testing the variables was by using of expert opinion from entrepreneurship professionals. The questionnaires were administered to 223 respondents while seven general managers were interviewed as well. The list was obtained from the YEDF head office through the constituency offices which helped in mapping the enterprises in the eight constituencies (see Table 3.3).

The questionnaire was written in simple English language which was easily understood by all the respondents and could be interpreted in the local language to those who could not understand English. It was pretested on 22 entrepreneurs who are beneficiaries of the youth fund and were not included in the final study. This procedure helped in rephrasing and reorganizing the instrument for outstanding results regarding data collected for the study.

Data was collected through interviews with the managers in the businesses using the interview guide to gather information on innovation status focusing on new product, new markets, patents, and trademarks. The pretesting questionnaires were administered by the researcher directly to the youth entrepreneurs while collecting the questionnaires was done with the help of one research assistant. The research assistant was trained on how to handle the research tool and the topic before being allowed to collect the instruments. The questionnaires were administered to the whole sample and it took about 21 days to complete the exercise of administering and having the questionnaires collected back for analysis.

3.8 Pilot Test

A pilot test was conducted using 10% of the sample population involving all groups that have been trained and funded through youth enterprise development fund in Kiambu County in Kenya. This approach was based on the model used by Barringer and Bluedorn (1999).The pilot test aimed at assessing the reliability of the instrument's psychometric measures utilized in the study. This test helped in refining the questionnaires and made them more relevant and meaningful (Mugenda & Mugenda, 2003; Kothari 2007) in capturing the correct data for the study.

As a rule thumb, 1% of the sample should constitute the pilot test Cooper & Schilder (2011). From the pilot study reliability test using Cronbach's Alpha Coefficient was carried out on the variables and sub variables to ensure it gave reliable results. The reliability test indicated that the individual components and overall coefficient were acceptable. For a newly developed questionnaire an alpha coefficient of 0.7 is usually termed as adequate according to Cooper and Schindler (2008) however, one variable which was the human capital had alpha coefficient of 0.614 and according to Knile (1999) it was noted that Cronbach alpha of .8 is ideal for reliability of cognitive surveys but when dealing with psychological and behavioral constraints, values below .7 is realistically expected because of the diversity of constructs being measured. Based on this recommendation, the study and its results were used to generalize the characteristics of the population. The enterprises that were used for the pilot study were not included in the study at all.

3.9 Data Analysis and presentation

For the purpose of carrying out the analysis in this study, three dependent sub-variables were considered namely new products, new markets, and patents/trademarks. In these sub-variables, different measures were used including new products (number of new products, the time taken to develop new products,) new markets (new outreach, the

overall response to competition, area market analysis data). Intellectual property rights (patents, copyrights, trademarks).

The independent variables were also measured using different indicators. Five independent variables were considered to conduct the analysis in this study. These variables included Human capital (education level, working experience and skills), Structural capital (corporate culture, programs and databases), customer capital (basic marketing skills, customer loyalty and customer knowledge), Technological Capital (Technological knowledge and skills, Technological facilities and information management systems) and Entrepreneurial skills (propensity to risk-taking, communication skills and decision-making skills).

An intervening variable was also considered in this study that has an intervening role between independent and independent variables and, therefore, had a crucial role to play in the final results. Loan access procedures and requirements played partial intervening role with some independent variables and full intervening role with others in determining the levels of innovation performance in the youth enterprises in Kenya (see Table 3.3). Through the eyes of human capital, structural capital, customer capital, technological capital and the entrepreneurial skills the results indicated innovative enhancement to achieve competitive advantage in youth enterprises. Loan processing in terms of requirements and procedure manifests the ease of accessing the funds quickly and processed efficiently thus making on time disbursement which enhanced business innovative processes for higher competitiveness and business growth however some enterprises experienced delayed which posed a great risk of borrowing from elsewhere and even diverting the borrowed funds to others uses that were not planned for.

Table 3.3 Summary of the measures of variables

Variable	Indicator	Source	Number of items
Human capital	Learning and education Experience and expertise Age	Adapted from Bontis & Sharati 2010	10
Structural capital	Programs, Data base Organizational culture	Formed	10
Customer capital	Customer royalty Customer knowledge Basic market capabilities	Formed	10
Technological capital	Technological facilities Technological skills Information management systems	Formed	10
Entrepreneurial skills.	Communication skills Decision making skills Risk taking propensity	Formed	10
Loan access procedures and requirements	Access to Information Application process Disbursement timelines	Formed	10
Innovation performance	New Products New market Patent and trade marks	Formed	10

By using factor analysis, the sub-variables were ran through a statistical package for social sciences SPSS version 21 to test the validity of the variables. This confirmed the dimensions of the concept that were operationally defined and also indicated the items that were most appropriate for each size. None of the variables had less than 0.2 correlation and therefore none was discarded but all were used in further analysis.

There are primary objectives of data analysis according to Sekaran (2003) which include, getting a feel of the data, testing the goodness of the data and testing the hypothesis developed for the research. Getting the feel of the data was achieved by using qualitative techniques such as descriptive statistics in this study. These included the response rate, frequency distributions, means, and standard deviation for variables listed in the study. The skewedness and kurtosis for the dependent variable also done to give a feel of the data on innovation performance. By testing the goodness of the data the study got to establish credibility and reliability of the data using Cronbach's alpha coefficient.It measured how well a set of items or variables measured a single uni-dimensional latent construct. It was the coefficient of reliability or consistency which is usually low where there is multidimensional structure. The Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items (Cronbach 1951).

Some sub-constructs were subjected to a reliability test using Cronbach's alpha which is a reliability coefficient that indicated how the five independent variables measured.Other scholars who have used Cronbach's alpha to test reliability successfully include (Bollen *et al*. 2005; Cabrita & Bontis, 2008; Cheng *et al*. 2010).Hypothesis testing was done using the F-test, and correlation analysis. It was achieved by using structural equation modeling correlation analysis, multiple and step-wise regression analysis. ANOVA was carried out to establish to test the level of significance. For both qualitative and quantitative data (PASW) Predictive Analysis Software was used namely SPSS version 21.

The overall statistical model was $Yi=\beta_0+\beta_1+X_1+\beta_2+X_2+\beta_3+X_3+\beta_4+X_4+\beta_5+X_5+e$.... (1)

Yi= Innovation performance which is the dependent variable (Innovation performance)

β0= the regression coefficient β_1 β_2 β_3 β_4 β_5 = slopes of the regression equation

X_1=Human capital, X_2=Structural capital, X_3=Customer capital X_4=Technological capital X_5=Entrepreneurial skills and e is the error term which is distributed with a mean of 0.

The results indicated that three of the variables that determined innovation performance which included structural, technological and entrepreneurial skills were more influential on innovation levels in the youth enterprises in Kiambu, Kenya than the other two which are human capital and customer capital thus an optimal model was established for the study which is as illustrated below

$Yi=\beta_0+\beta_2+X_2+\beta_4+X_4+\beta_5+X_5+e$.... (2)

Yi= Innovation performance which is the dependent variable (Innovation performance)

β0= the regression coefficient

β_2 β_4 β_5 = slopes of the regression equation

X_2=Structural capital, X_4=Technological capital X_5=Entrepreneurial skills and e is the error term which was distributed with a mean of 0.

The following model was used to test the influence of the intervening variable.

$Yi=B_3 + c'X+ bZ +e_3$…… (3)

Yi= Innovation performance which is the dependent variable (Innovation performance)

B_3=the regression coefficient

c'= regression coefficient with a mediator.

X=independent variable mediated between by Loan processing

b= the regression coefficient of LP (b)

Z= Loan processing which is the intervening variable.

e_3=error term distributed with a mean of 0.

The effect of this intervention was considered because there was a significant change in multiple R^2 for model 1, 2 and model 3.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter discusses the findings of the study with focus on the response rate, reliability of the data, demographics details of the youth enterprises in Kenya. The discussion started with response rate, reliability, and factor analysis, background information of the enterprises, descriptive statistics, inferential statistics, hypothesis results, and association of the variables as purely based on the study objectives in chapter one. This information was organized and presented in form of bar graphs, plot boxes, pie charts, ANOVA tables and frequency distribution tables.

4.2 Response rate

The total number of questionnaires distributed were 223, out of them 160 were filled and returned. This response rate was 72% which was rated as very good as recommended by Mugenda and Mugenda (2003) who termed 50% response rate as adequate, 60% as good and 70% and above as very good. In this study, a response rate of 72% was therefore very good.

4.3 Reliability

Statistical reliability was conducted to ensure the validity and precision of the statistical analysis. Cronbach's Alpha coefficient was used being the most common reliability coefficient which estimates internal consistency through determining how all the items on a test relate to all other items and the total internal coherence of the data Cronbach (1971).Reliability has a coefficient between 0 and 1and the higher it is the more reliability a test is.

In this study, Cronbach's Alpha was used, and the findings were as follows: Human capital had the lowest coefficient of 0.614 while Innovation performance which is the

dependent variable had 0.822 showing that it is an acceptable measure for innovation performance according to Cronbach's rule for internal consistency and reliability of alpha coefficient of 0.7 is recommended, however, Kline (1999) noted that Cronbach alpha of 0.8 is ideal for reliability of cognitive surveys but when dealing with psychological and behavioral constraints, a value below 0.7 is realistically expected because of the diversity of constructs being measured. This confirms that the case of 0.614 for human capital in this study was acceptable and further analysis was conducted. Others included structural capital which had 0.709, customer capital with 0.700, Technology Capital had 0.739.Entrepreneurial skills had 0.730 while loan processing as an intervening variable had 0.780 as illustrated in Table 4.1.It was therefore indicated that the data was consistently measuring what it was meant to measure whereby all variables were inclined to investigating how new products, new markets and patents/trademarks were determined by the nature of human resources, the structures in place, customer related matters, technological and entrepreneurial skills in the youth enterprises in Kenya. Loan processing played an intervening role in this study in that the easier it was to have the youth funds available the easier it was to implement innovation strategies in the youth enterprises. This study is in line with a study carried by Gathenya (2012) where a Cronbach's reliability test attained was 0.774 therefore verifying reliability of the measurement tools.

Table 4.1 Reliability analysis for specific variables

Variables	**Reliability Cronbach's Alpha**	**Comment**
Human capital	0.614	Accepted
Structural capital	0.709	Accepted
Customer capital	0.700	Accepted
Technology capital	0.739	Accepted
Entrepreneurial skills	0.730	Accepted

Loan processing	0.780	Accepted
Innovation performance	0.822	Accepted

4.4 Factor analysis

Factor analysis was conducted to test whether the findings were really about innovation performance. The method helped to develop factors that assisted in explaining the role of constructs in innovation performance. The principal axis factoring method with Varimax rotation was performed on the questions to ensure good construct validity. This method has been accepted as reliable for factor analysis according to Alexander and Colgate (2000).Factor analysis looks at the internal-correlations among data to come up with internally consistent surrogates of the variables (Mugenda, 2010). According to Field (2005), factor analysis is an exploratory tool and is used to help the researcher to choose the variables to be included in the regression analysis and a loading of 0.5 is considered to be good Field (2005). Extraction was done by specifying six factors to be extracted from the study which involved five independent variables and one intervening as advocated by Field (2005). Factor analysis in this study (see appendix V) indicates that the factors related to human capital, structural capital, customer capital, technological capital, entrepreneurial skills were selected as the independent variables and loan processing as an intervening variable while innovation performance was the dependent variable.

Factor analysis was done to confirm how suitable all the variables were after confirming that all the five independent variables, intervening variable and the dependent variable were acceptable by attaining an acceptable level of reliability. In this study all the variables and sub-variables items were confirmed to be valid since their factor loading values were more than 0.4 which was taken as the threshold in the study and therefore adopted as the minimum level for item loading. According to Costello and Osborne (2005), if an item has a loading less than 0.4 it may either not be related to other items

or suggests that an additional factor should be explored. That notwithstanding, a loading of 0.3 has been argued by other researchers such as Hair *et al* (1998) as adequate. These results also conformed to another study done by Bollen *et al* (2005). All the sub-variables of the dependent variable which is innovation performance were confirmed to be valid for further subsequent analysis since their factor loading values were more than 0.5 which is considered as an adequate Field, (2005).Correlation analysis matrix was obtained for all the factors and multi co-linearity chances were checked. None of the factors had correlation less than 0.2 and therefore all were used for the final analysis.

4.5 Background Information

This section summarizes the demographic information of the study stating clearly how business registration,age of the business, number of employees, the subsector, education level of the entrepreneurs, gender , marital status age of the business and the curent position of the respondents have played a role in determining the innovation perormance in their enterprisess

4.5.1 Business registration

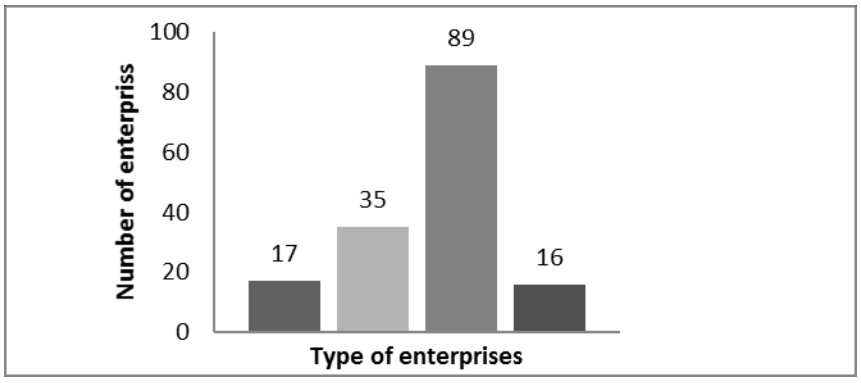


Figure 4.1 Business registration

The majority of the youth enterprises were in the category of sole proprietorship having over 80% representation while all others fell below 40% which included partnerships 32% and limited liability companies were 18%. There were still a few that were not

categorized in any of the options given which were community and church-based group enterprises 17% (see Figure 4.1). The study therefore revealed that majority of the youth enterprises in Kenya are in sole proprietorship and this being the case the creativity and innovation capability of the owners is of importance if the enterprises were to register any substantial level of growth so as to create more job opportunities for other youths. These results are in agreement with the fact that in entrepreneurship and management studies the innovativeness of growing firms has been discovered to be important in value and job creation Acs et al., (2008).Reaching out to new markets and introduction of new products as well as patenting of original ideas lied solely in the hands of the owner manager as a way of demonstrating innovation in their specific enterprises.

4.5.2 Age of the business

The results in this study clearly indicated that majority of the enterprises were between the age of four and nine years. This was indicating that the majority may have been initiated due to the availability of the youth funds which has been in operation for the last nine years (see Figure 4.2). There were a few outliers which have been in operations for over 10 to a maximum of 24 years. It was further clarified that a youth enterprises offering painting services and another one selling cereals had existed for over 20 years. Between 15 -20 years were the enterprises offering videos and photography services and information technology and communication services while those offering motor vehicle spares parts and beauty products had been in existence between 9-11 years. It was therefore clearly noted that out of 160 enterprises only seven enterprises were older than the youth enterprises fund which was launched in the year 2007.Calvo (2006) investigated whether small, young and innovating firms experienced greater employment growth than other Spanish firms during the period between 1990 and 2000. The results showed that old firms grow less than young ones and that both new products and the adoption of new processes stimulate survival and employment growth independently of the age of the firm.

From this, it was deduced that some youth enterprises were inherited from the parents or bought from other previous owners or still under a family ownership but operated by the youths. The results revealed that though the enterprises were as old as the Youth Enterprise Development Fund, many of them were operating in the same geographical areas, having the same customer catchment area thus little innovation was demonstrated in terms of new markets through the opening of new branches. That notwithstanding many were able to use their phones to fetch customers from far places and payments could be done via M-Pesa which is a money transfer technology commonly used in Kenya and therefore technological capital has played a great role in promoting innovation in those enterprises. The results also indicated that the older the business, the more the innovation seen, especially in the areas of new products and markets.

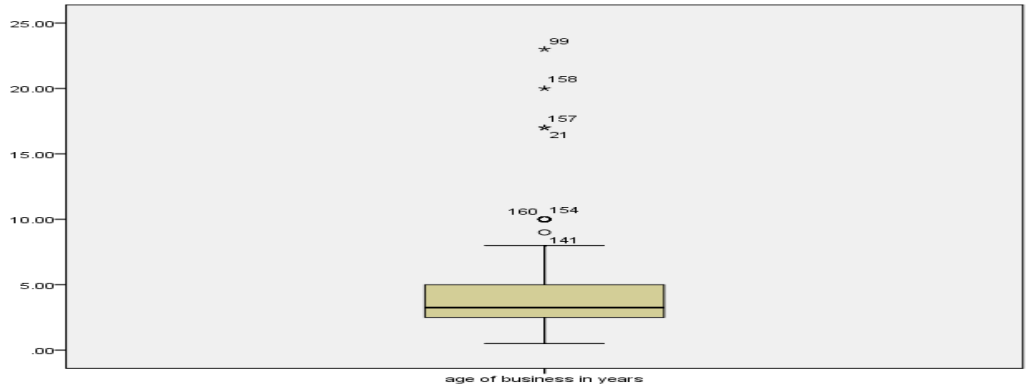


Figure 4.2 Box plot for age of the business

4.5.3 Number of employees

The majority of the youth enterprises did not have more than one employee besides the owner. As illustrated in figure 4.3 only 6.25% had more than ten employees. From the observation made these were group projects other than individual youth enterprises. Each of the group members was termed as an employee of the business since they all contributed to the levels of innovation in their group projects. It was observed that the group projects had very good indications of future growth because these youth were

competitively bringing in new business and they could be rewarded for doing so. In this study the highest level of innovativeness and potential to create new employment opportunities was mainly observed in the few enterprises that operated as group projects. It was therefore concluded that youth entrepreneurs should be encouraged to start up as teams before they graduate to individuals because there is so much to learn from one another and the risk is also spread widely when they are many as compared to when they start up their small businesses individually with minimal entrepreneurial skills. The propensity to take risk was more in group enterprises where employees were more, than in the individual business setup operated by the owner alone.

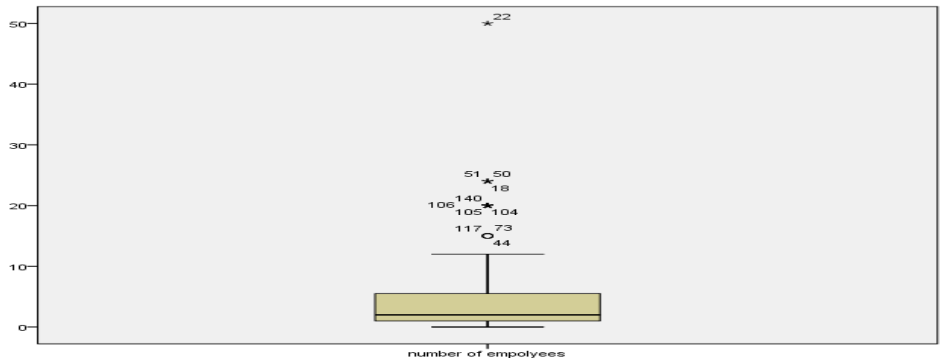


Figure 4.3 Box plot for the number of employees

4.5.4 Subsector

The enterprises in this study under the service industry were taking 64% of all responses. These included saloons, money transfers, tents and chairs hiring out, transport services, equipment hiring among others. Trade subsector had a good representation of 50 % of all enterprises. The types of enterprises in the study included but not limited to assorted goods (mali mali in Kiswahili), butcheries, and general shops. Agro based enterprises such as milk shops, groceries, horticulture took 36 % of the enterprises represented in this study. Other industries that have not been described in the options given were amounting to a small percentage of 10% (see Figure 4.4).The combination of enterprises involved in this study provided a rich data source in

investigating the levels of innovation performance. The results indicated that through technology and with the enhancement by entrepreneurial skills, youth enterprises in Kenya were able to introduce new products consistently. They were also able to reach out to new customers as well as make and receive payments at the comfort of their business premises, a manifestation of innovation in those enterprises.

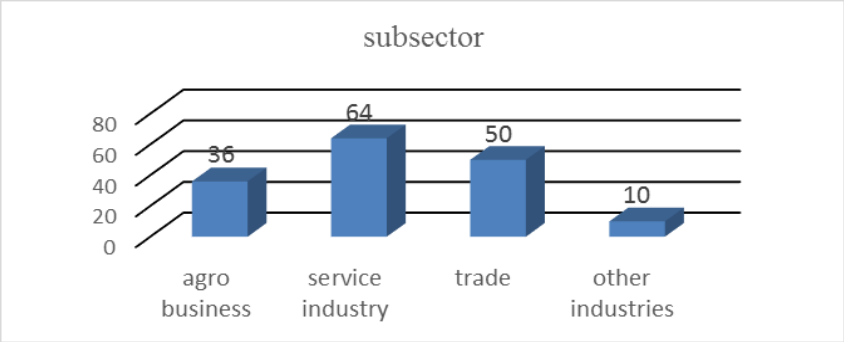


Figure 4.4 The subsector

4.5.5 Education level of the entrepreneur

The results in this study indicated that secondary school level of education was attained by majority of the respondents to a tune of 35.6% who were closely followed by the diploma holders 31.9%. The respondents who had a bachelor's degree were a small percentage of 16.3% and only 3.1% had a master's degree. There was still a small percentage which had only attained a primary school level of education who were only 10.6% and four respondents did not indicate their education levels (see Figure 4.5).These results revealed that nearly all the youth entrepreneurs had acquired basic education which means they were able to read and write which are basic skills in entrepreneurship especially for communication purposes and decision making. It was therefore posited that the youth entrepreneurs Kiambu County in Kenya had the basic requirement of literacy that enabled them to reach out to new customers or geographical areas using written communication like short messages using their mobile phones or even use emails for communication which consequently enhanced innovation in their businesses.

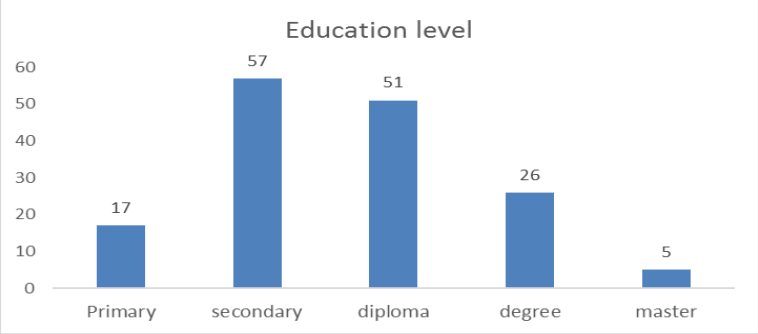


Figure 4.5 Education level of youth entrepreneurs

4.5.6 Entrepreneurs' gender

The results for the study revealed that men were the majority of the respondents at 63%, while ladies were 37% and this is illustrated in Figure 4.6. Putting into consideration that women have a similar economic stimulant fund Women Enterprise Development Fund running parrallel to the Youth Enterprise Development Fund, it was conluded that mainly ladies were taking loans from the women fund thus, they were not very interested with the youth fund.

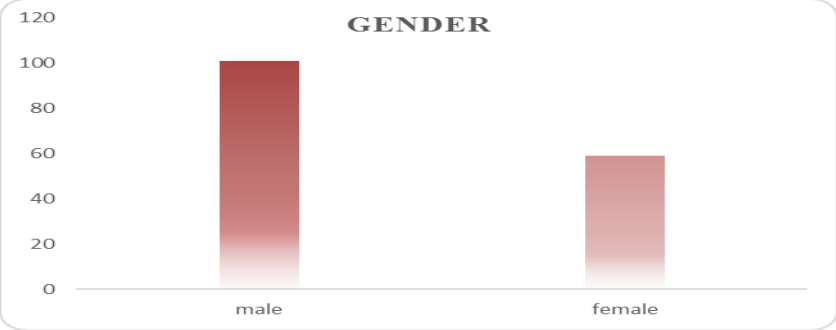


Figure 4.6 Gender of the respondents

4.5.7 Marital status of the entrepreneurs.

Regarding marital status, the respondents were characterized by having the married as 54.4% and 45% single status. A small part was in the category of those who have separated which was only 0.625% (see Figure 4.7).Marital status is an important aspect in entrepreneurship due to gender-related roles played by the entrepreneurs. Those who

are single happen to have more time for their enterprises as opposed to their married counterparts thus they tended to be more innovative. For instance the single ladies frequently travelled outside the country for business purposes and when interviewed some said they had all the time to spend on their business matters. However it was also noted that those that were married hardly closed their shops because the spouses stood in for them and kept the business continually in operation.

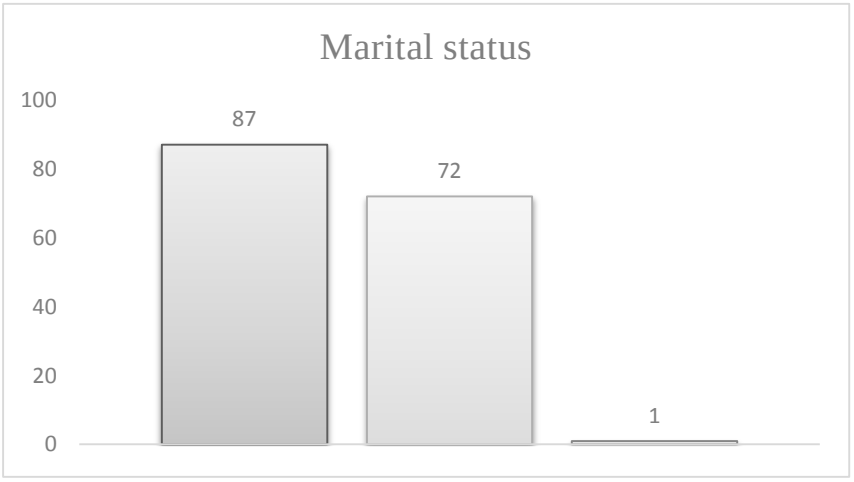


Figure 4.7 Marital status

4.5.8 Age of the entrepreneurs

The respondents were in three categories, and the majority was in the category of 26-30 years age bracket with 41.56 %. A tiny proportion of the respondents was in the range of 18-25 years which was 22.08 % of all the respondents while the age bracket of 31-35 years was 36.36%. The study findings are almost similar to a study done in America by Muijanack, Vroonhof and Zoetmer (2003) who suggested that the optimum age for entrepreneurs was 25-35 years. The younger youths were more flexible in doing their business especially those who were not married since their responsibilities were not as many as for those who were married. They could easily move from one market to another even those outside their localities. Some could go as far as Kisii from Kiambu

during special markets days thus they were more innovative in terms of getting to new markets.

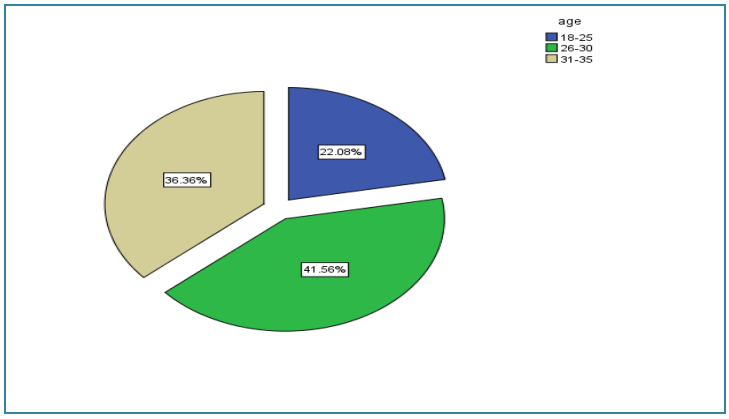


Figure 4.8 Age of the respondents

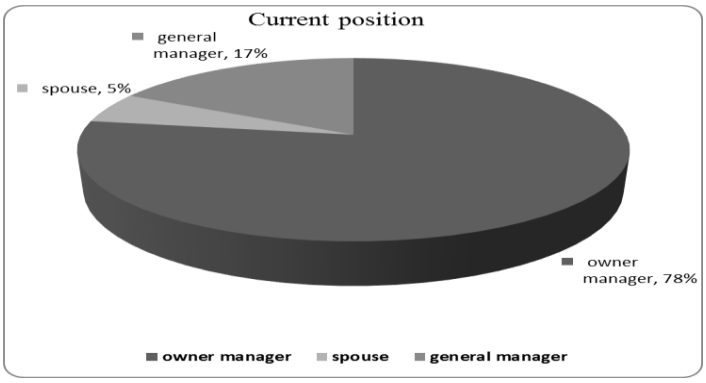


Figure 4.9 Respondent's current position

4.5.9 Current position of respondents

The study depicts that the largest number of respondents were the owner managers in this study to a tune of 78% while 17% were general managers and only 8% were in the category of spouses. Looking at Figure 4.9 it was noted that the probability of being very innovative in youth enterprises was very high since the owners were the managers and therefore they bore the whole responsibility of introducing new products, entering

into new markets and even patenting their original ideas and commercializing the ideas in youth enterprises in Kenya. The level of aggressiveness in reaching out to new markets was observed in all the categories. There was a specific a group that had similar businesses of human medicine chemist and a number of money transfer agencies for different banks like co-operative bank, Equity and Commercial bank. At the time of collecting the data one of the group members had introduced a baby day care behind the premises where the chemist and M-pesa was. It was, therefore, concluded that the owner manager's level of aggressiveness was supported by the ability to make timely decision for the growth of their business since nobody else was looked upon for the growth and sustainability of the businesses. Creation of more employment opportunities was observed in these youth enterprises since the owner managers were not able to handle all the activities involved.

4.6 Descriptive statistics of dependent, independent and intervening variables

Descriptive statistics were used to analyze the phenomena under investigation in this study. It helped the researcher to come up with conclusions about the characteristics of the data used to proceed to inferential statistics.

4.6.1 Human Capital

The study indicated that the youth enterprises that experienced introduction of new products and entered into new markets be due the influence of their human resource capabilities was on average 14 % of all the youth enterprises (see Table 4.2).The skills and the experience that the human capital executed directly affected the ability to get to new markets and helped in the introduction of new products or services. There were some entrepreneurs who were operating M-pesa money transfer business and after getting some training in pharmacy they were able to venture into the business of selling human medicines. The study is in agreement with Souleh (2014) who posited that organization exists for a purpose and is a deliberate arrangement of human and other resources with the aim of delivering needs, satisfying services and products as

effectively and efficiently as possible (Choudhury, Mishra, 2010).Youth entrepreneurs in Kenya are therefore generating job opportunities to some extent through innovation originating from their own ideas thus reducing the unemployment levels in the country.

Table 4.2 Human capital descriptive statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
HUMAN CAPITAL	160	18.43	.96	19.40	14.0019	.22424	2.83644	8.045
Valid N (list wise)	160							

The mean score of the 160 youth enterprises on human capital was 14.0019 with a minimum score of 0.96 and a maximum of 19.40 (see Table 4.2). The confidence interval was deduced from the mean and the standard deviation.

C.I=14.0019 $\pm$1.6449 (0.95) *.22424

14.0019$\pm$ .3504

(14.3523, 13.6515)

The study revealed that the population mean for human capital lies between these two bounds of 14.3523 and 13.6515 at 95% level of confidence.

4.6.2 Structural Capital

Table 4.3 Structural capital descriptive statistics

	N	Range	Min	Max	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Structural capital	160	18.24	.00	18.24	12.3977	.25198	3.18737	10.159
valid N (list wise)	160							

The descriptive statistics for structural capital in this study reflected a mean score of 12.3977 with a minimum score of 0.00 and a maximum of 18.24.among the 160 youth enterprises as illustrated in Table 4.3. The confidence interval was got from the mean and the standard deviation as shown below.

C.I=12.3977$\pm$1.6449 (0.95) *.25198

12.3977$\pm$ .39375

(12.79145, 12.00395)

The results of the study indicated that the population mean of structural capital lies between an upper bound of 12.79145 and a lower bound of 12.00395.The study concluded that approximately 12 % of the youth enterprises were having their new product and entry into new markets determined by the infrastructure established in the business. For instance one of the respondents running a chairs and tents hiring enterprises stated that,

> If guidelines are well structured on how to improve in new ventures, every laid strategy will fall into place in due time and also through sharing of new ideas and bringing together different models and thinking on the entry into new markets and expanding of customer base is enhanced.

The confession made by the owner manager in that business is a confirmation that policy guidelines play a key role in helping organizations improve on their innovation performance since they are able to get new products and entering new markets.

4.6.3 Customer Capital

Table 4.4 Customer capital descriptive statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Customer capital	160	18.50	.70	19.20	13.3934	.24727	3.1179	9.721
Valid N (list wise)	160							

Results show the descriptive statistics of customer capital as an independent variable in this study whereby the mean score of the 160 youth enterprises regarding customer capital was 13.3934 with a minimum score of 0.00 and a maximum of 18.24 (see Table 4.4). Confidence interval was got from the mean and the standard deviation.

$$C.I = 13.3934 \pm 1.6449\,(0.95) * .24727$$

$$13.7798 \pm .386398$$

$$(13.7798, 13.007)$$

It was revealed by the results that the population mean for customer capital lies between these two bounds of 13.7798 and 13.007 at 95% level of confidence.

The contribution of customer knowledge, basic marketing capabilities and customer loyalty among youth enterprises in Kenya was on average 13.4% (see Table 4.4).The customers who came back for a repeat business made referrals to other customers thus the affected enterprises were able to reach out to new clients. This was common with the service providing enterprises like saloons. Whenever the saloon provided an outstanding

hair style many could ask about the details of the saloon where that service was obtained from and they would go for a similar style. One of the youth entrepreneurs stated in his response that:

> Since the staff interact well with the customers, they are able to identify customers demand and ideas which enables the company and the suppliers to meet their demands. From the customers' feedback, customers will always allow me to come up with new products and even better ways of serving them.

It was therefore noted that a good proportion of youth enterprises benefited from their customer capital through getting new customers and therefore expanding their market and also through introduction of new products with the help of customer feedback thus they raised their innovation performance through customer loyalty. The study is in line with Ngari *et al* (2013) who suggested that longevity of relationships contributed the most to growth of SMEs.

4.6.4 Technological capital

Table 4.5 Technological capital descriptive statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
TC	160	17.41	2.16	19.58	13.1650	.268	3.378	11.4
Valid N (list wise)	160							

The descriptive statistics of technological capital as an independent variable in this study are illustrated in Table 4.5 showing a mean score of 13.1650 among 160 youth enterprises in terms of Technological capital with a minimum score of 2.16 and a maximum of 17.41.

Confidence interval was got from the mean and the standard deviation as follows:

C.I = 13.1650$\pm$1.6449 (0.95) *.26787

13.165$\pm$ .418588

(13.58359, 12.74641)

The results of the study indicated that the population mean of technological capital lies between an upper bound of 13.58359 and a lower bound of 12.74641 at 95% level of confidence. This therefore meant that the youth enterprises attributed 13% of ability to get to new markets and introduction of new products which increased productivity to technological capital (see Figure Table 4.5). This is in line with a desktop research carried out by Audrey (2016) which concluded that Technological innovation across the world is one of the driving forces behind productivity advance and therefore employees and organizations have to be open to new ideas and able to realize them quickly, because they cannot rely on unlimited financial resources and are often working in small, innovative niche markets. None of the youth enterprises involved in this study had nothing to attribute to technological capital. It there meant that all were helped by technology to introduce a new product or reach out to new markets by use of mobile phone and money transfer technology

4.6.5 Entrepreneurial Skills

Table 4. 6 Entrepreneurial skills descriptive statistics

The results indicated that the mean score of the 160 youth enterprises in terms of entrepreneurial skills was 13.9838 with a minimum score of 1.12 and a maximum of 19.43 as illustrated in Table 4.6. Confidence interval was got from the mean and the standard deviation as shown below

C.I= 13.9838±1.6449 (0.95) *.24291

13.9838± .3796

(14.3634, 13.6042)

According the results of the study the population mean of entrepreneurial skills lies between an upper bound of 14.3534 and a lower bound of 13.6042 at 95% level of confidence.

The ability to enter into new markets and introduction of new products was attributed to the acquisition of entrepreneurial skills to a range of 18% and approximately an average of 14 %.The study indicated that there were no patents or trademarks among the youth entrepreneurs attained thus the entrepreneurial skills did not support innovation in the

	N	Range	Min	Max	Mean	Std. Deviation	Variance	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Entrepreneurial skills	160	18.31	1.12	19.43	13.9838	.24291	3.07259	9.441
Valid N (listwise)	160							

line of intellectual protection. This does not imply there were no original ideas among the youths but it was a clear indication that they lacked awareness in patenting and having trademarks which as an indicator of innovation performance. This study supports a study by Ngugi *et al* (2012) who observed that technical skills are important in businesses that relate to engineering and other technical orientations. The youths with technical skills were far much better calculating the risks involved in technical

orientations thus could make sound decisions before introducing any product or get into a new markets in taking risk

4.6.6 Loan Processing

Table 4.7 Loan processing Descriptive statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Loan Processing	160	17.77	.00	17.77	11.7666	.27835	3.52085	12.396
Valid N (listwise)	160							

The descriptive statistics of loan processing as an intervening variable in this study showed the mean score of the 160 youth enterprises in terms of loan processing as 11.7666 with a minimum score of 0.00 and a maximum of 17.77 (see Table 4.8). The confidence interval was got from the mean and the standard deviation.

C.I =11.7666$\pm$1.6449 (0.95) *.27835

11.7666$\pm$ .434965

(12.20157, 11.33164)

According the results of the study the population mean of loan processing and requirements lie between an upper bound of 12.20157and a lower bound of 11.33164at 95% level of confidence.

4.6.7 Innovation Performance

Table 4.8 Innovation performance descriptive statistics

	N	Range	Min	Max	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
IP	160	15.67	.72	16.38	10.5194	.25512	3.22709	10.414	-.952	.192	1.199	.381
Valid N (listwise)	160											

The valid frequency of response from the questionnaires was 160 with a mean score of 10.5194 having a minimum score of 0.72 and a maximum of 16.38. Skewness characterizes the degree of asymmetry of a distribution around its mean. In this study, the skewness of the dependent variable was -952 which indicated a distribution with an asymmetrical tail extending towards the negative values of innovation performance (see Table 4.8). This meant that most of the youth enterprises in Kenya in terms of innovation performance were not operating at very commendable levels and a lot need to be done to raise the level of innovation. Kurtosis, on the other hand, is a measure of flatness of the distributions. It characterizes the relative peakedness or flatness of the distribution compared with the normal distribution. The kurtosis for the dependent variable (innovation performance) was 1.199 which indicated some flatness since the standard kurtosis normal distribution is 3.0. The results indicate that a number of youth enterprises were around the mean in terms of their level of innovation performance. The confidence interval was got from the mean and the standard deviation as calculated below.

C.I=10.5194 $\pm$1.6449 (0.95) *.25512

10.5194$\pm$ .398665

(10.91807, 10.12074)

The results of the study indicated that the population mean of innovation performance which is the dependent variable lies between an upper bound of 10.91807 and a lower bound of 10.12074 at 95% level of confidence.

4.7 Inferential statistics

The statistical models in this study demonstrate the regression analysis of the data for the youth enterprises in Kenya. They include the overall model which involved all the independent variables, the optimal model which involved the variables that had maximum influence on innovation performance. The other statistical model involved the mediating variables against all the independent variables. The statistical models under investigation in summary were:

Model 1

$Y_i=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+ \beta_5X_5+e$.... (1)

$Y_i=\beta_0+ \beta_2X_2+ \beta_4X_4+ \beta_5X_5+e$..... (2) Optimum influence model.

Y_i= Innovation performance which is the dependent variable (Innovation performance)

β_0= the regression co-efficient

β_1 β_2 β_3 β_4 β_5 = slopes of the regression equation

X_1=Human capital,

X_2=Structural capital,

X_3=Customer capital

X_4 Technological capital

X_5=Entrepreneurial skills and

e = the error term which is distributed about a mean of 0.

To test the influence of the intervening variable, the following model was used so as to describe the proportion of the X-Y relation that is attributable to Z (Shrout & Bolger, 2002) that is loan processing which is the intervening variable in the model.

Where a, b, and c are unstandardized regression coefficients

Model 3

$Y=B_3 + c'X+ bZ +e_3$…….3

Z= Loan access procedures and requirements.

The effect of this intervention was being considered and the results indicated a significant change in multiple R2 for model 1, 2and model 3.

4.7.1 Normality of innovation performance

The results for the normality test indicated that the data for the dependent variable was normal since the expected normal values fall on the linear line (see Figure 4.10).This is in conformity with Shenoy and Madan (1994) who argued that one way of making it likely that the residuals will be normal is to have a normal distribution for the dependent variable and all the predictors as well should have a normal distribution as illustrated in Figure 4.10 indicating the normal (quantile- quantile) QQ Plot, confirming that the conditions of normality are satisfied. A scatter plot shows the relationship between the actual observed values and what those values would be when the data is normally distributed. The theoretical quartile line of the data is fitted and from the normal QQ Plot, it indicates that the observed values versus the expected normal values are randomly distributed along the line of best fit indicating that innovation performance in youth enterprises in Kenya was normally distributed according to the results from this study. It was therefore established that the enterprises that were involved in this study were a good representation of the other youth enterprises in terms of the new products, markets and patenting along the line of age, gender, educational levels of the entrepreneurs and the sector they are operating in since most of the points were falling on the theoretical quartile line.

4.7.1 Normality of innovation performance

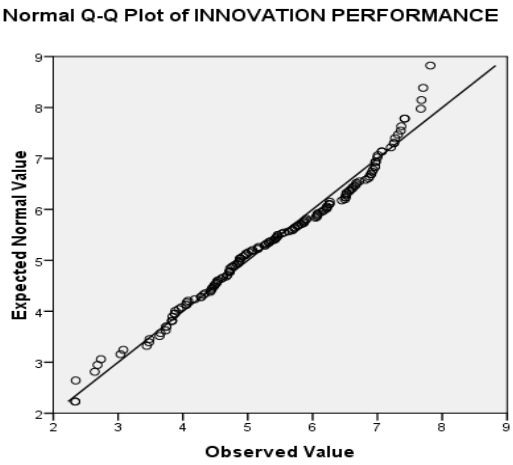


Figure 4.10 Normal Q-Q plot of innovation performance

The results of normality test indicated that most of the expected normal values fall on the linear line and therefore in terms of new products, new markets and trademarks and patents were normally distributed among the youth enterprises in Kenya.

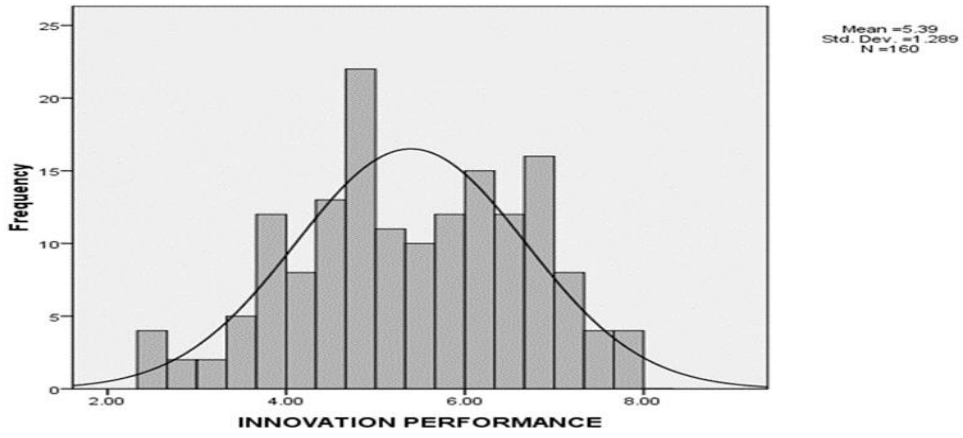


Figure 4.11 Histogram of normality test of innovation performance

The normality of the dependent variable was further confirmed by the results in the histogram which has a bell shape(see Figure 4.11) .In order to evaluate how far data are from Gaussian distribution, it was best done by looking at a graph and see if the distribution deviates grossly from a bell shaped normal distribution (Graph Pad, 2011). In this study there were no gross deviations thus the data was normal and inferential analysis was therefore done. The results indicated a bell shaped distribution as presented in Figure 4.12 which confirms that the dependent variable which is innovation performance is normally distributed in youth enterprises in Kenya.

Table 4.9 One- sample Kolmogorov Test

One-Sample Kolmogorov-Smirnov Test		
		INNOVATION PERFORMANCE
N		160
Normal Parameters[a]	Mean	5.3942
	Std. Deviation	1.28895
Most Extreme Differences	Absolute	.073
	Positive	.054
	Negative	-.073
Kolmogorov-Smirnov Z		.923
Asymp. Sig. (2-tailed)		.362

a. Test distribution is Normal.

From One- sample Kolmogorov Test the results showed statistics of 0.923 with a significance of 0.362 which is greater than 0.05 thus fail to reject the null hypothesis implying the dependent variable was normally distributed.

4.7.2 Test for independence for Innovation performance

Table 4.10 Model summary independence for innovation performance

Model Summary[c,d]					
Model	R	R Square[b]	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.978[a]	.956	.954	2.34795	1.917

a. Predictors: ENTREPRENEURIAL SKILLS, STRUCTURAL CAPITAL, CUSTOMER CAPITAL, TECHNOLOGY CAPITAL, HUMAN CAPITAL

b. For regression through the origin (the no-intercept model), R Square measures the proportion of the variability in the dependent variable about the origin explained by regression. This CANNOT be compared to R Square for models which include an intercept.

c. Dependent Variable: INNOVATION PERFORMANCE

d. Linear Regression through the Origin

The results on independence test using Durbin Watson test (DW statistics) indicated that there was no potential auto-correlation with a Durbin Watson of 1.917 which is nearly 2 since values approaching 0 indicate positive autocorrelation whereas values approaching 4 indicate negative autocorrelation according to Montgomery, Peck, and Vining, (2001) as illustrated in Table 4.10. It was therefore noted that each of the youth enterprises gave results on innovation performance that were independent from all others in the study. This was an indication that they were operating under different circumstances, across different sectors and therefore each of the youth enterprises had very independent results in terms of innovation performance which was the dependent variable in this study. It was further noted that the youth entrepreneurs were endowed differently in terms of talents, education level and other life experiences which made their ability to introduce new products and enter into new markets unique in their own ways.

Table 4.11 ANOVA for independence test

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	604.843	1	604.843	91.021	.000[b]
	Residual	1043.283	157	6.645		
	Total	1648.126	158			
2	Regression	771.466	2	385.733	68.641	.000[c]
	Residual	876.659	156	5.620		
	Total	1648.126	158			
3	Regression	801.042	3	267.014	48.858	.000[d]
	Residual	847.084	155	5.465		
	Total	1648.126	158			

a. Dependent Variable: INNOVATION PERFORMANCE

b. Predictors: (Constant), TECHNOLOGY CAPITAL

c. Predictors: (Constant), TECHNOLOGY CAPITAL, ENTREPRENEURIAL SKILLS

d. Predictors: (Constant), TECHNOLOGY CAPITAL, ENTREPRENEURIAL SKILLS, STRUCTURAL CAPITAL

The results indicated that the F-test with a null hypothesis that there was no linear relationship between variables (R2=0).The F-test is highly significant and therefore it was concluded that there is a linear relationship between the variables in the model.

The results further indicated that the variance inflation factor or VIF was less than four as recommended by Pan and Jackson (2008) which was an indication that the independent variables had low level multicollinearity and therefore the results from multiple regression analysis were stable and reliable. It was therefore concluded that

technological capital, entrepreneurial skills and structural capital were having greater influence on innovation performance in youth enterprises (see Table 4.12) than the other variables which is demonstrated in model 3 in section 4.7.Human and customer capital had minimal influence on the level of innovation performance in youth enterprises in Kiambu County in Kenya as opposed to a study conducted by Ngari, Kamau & Gichira (2013), on pharmaceutical industry in Nairobi Kenya where human capital had the highest level of influence on innovation.

Table 4.12 Coefficients using stepwise method

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.876	.825		3.486	.001		
	TECHNOLOGY CAPITAL	.579	.061	.606	9.540	.000	1.000	1.000
2	(Constant)	-.189	.945		-.200	.842		
	TECHNOLOGY CAPITAL	.402	.065	.420	6.211	.000	.746	1.341
	ENTREPRENEURIAL SKILLS	.386	.071	.368	5.445	.000	.746	1.341
3	(Constant)	-.882	.978		-.902	.369		
	TECHNOLOGY CAPITAL	.334	.070	.350	4.775	.000	.618	1.617
	ENTREPRENEURIAL SKILLS	.354	.071	.338	4.965	.000	.717	1.394
	STRUCTURAL CAPITAL	.163	.070	.161	2.326	.021	.690	1.450

a. Dependent Variable: INNOVATION PERFORMANCE

4.7.2 The influence of Human capital on Innovation performance

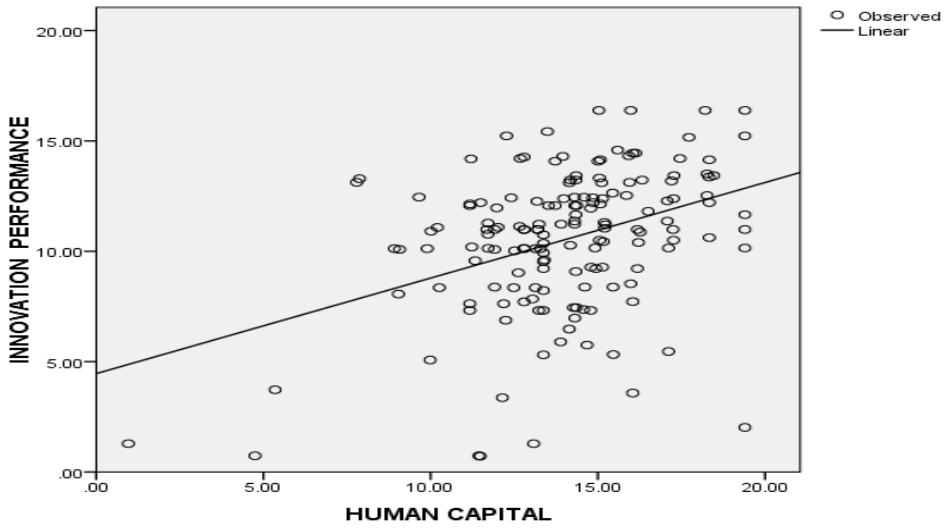


Figure 4.12 Scatter diagram for Human capital

This study was guided by six objectives and hypotheses as indicated in chapter one of the study. Each of these objectives and hypotheses were analyzed to test whether they were in agreement with what the researcher had hypothesized on not. Human capital was the first variable suggested to have a determining role in innovation performance in youth enterprise in Kenya. It was observed that the experience of the human resources was very key in determining how new products were introduced in the youth enterprises in Kenya. As the objective of the study sought to investigate the influence of human capital on innovation performance in youth enterprises in Kenya, it was observed that experienced human resources promoted innovation in the youth enterprises in Kenya by bringing their new ideas to improve on the existing products as well as introducing new ones that they have handled in their previous places of work. There was a positive linear relationship between human capital and innovation performance as illustrated in Figure 4.13 with a positive gradient of 0.380 (see Table 4.13) in Pearson's correlation analysis. It showed a positive gradient which is a clear indication that human capital as an

element of intellectual capital influenced the level of innovation in an enterprise which was the case in this study for the youth enterprises in Kenya. This also implied that increased human capital experience will lead to increased innovation performance, and the opposite is true that a low level of experience in human capital will lead to low levels of innovation performance. This is in conformity with another study done by Subramanian *et al*. (2008) in Turkish automotive firms where human capital as an element of intellectual capital was found to influence innovation in those automotive firms. This study finding is further supported by the fact that the creative capability of individuals and joint knowledge of workers is considered to be the fuel that powers innovation in firms. While creativity leads to the production of new and useful ideas in any domain, innovation is the implementation of those creative ideas within successfully. This is therefore how human capital determines the level of innovation performance in youth enterprises in Kenya.

Table 4.13 Pearson's Correlation analysis

Correlations

		HUMAN CAPITAL	INNOVATION PERFORMANCE
HUMAN CAPITAL	Pearson Correlation	1	.380**
	Sig. (2-tailed)		.000
	N	160	160
INNOVATION PERFORMANCE	Pearson Correlation	.380**	1
	Sig. (2-tailed)	.000	
	N	160	160

Correlation is significant at the 0.01 level (2-tailed).

The results indicated that there is a positive significant linear relationship between human capital and innovation performance in youth enterprises in Kenya. This has been illustrated by the correlation coefficient of 0.380 at 0.01 significant level (see Table 4.13). This implies that positive relationship exists between human capital and innovation performance in youth enterprises in Kenya. It was noted that human capital is an important determinant of innovation and competitive advantage as supported by previous studies done by Bontis 1998; Stewart 1999; Edvinson and Malone 1997.

Table 4.14 Coefficient for human capital

Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
HUMAN CAPITAL	.433	.084	.380	5.172	.000
(Constant)	4.458	1.196		3.728	.000

Hypothesis 1: Human capital determines the level of innovation performance in youth enterprises in Kenya intend to test whether it was true or not. In order to test this regression analysis was considered. It was revealed that there was a positive unstandardized beta coefficient of 0.433 as indicated by coefficient Table 4.14. For the regression line to be significant, the following alternative hypothesis had to be true.

Ho: $\beta_1=0$

Versus

$H_{1:}$ $\beta_1 \neq 0$

The study reveals as that P-value is less than 0.05 (see Table 4.14) and therefore in this case, the study failed to rejected the null hypothesis $\beta_1=0$ which implies that Human

capital has a significant influence on innovation performance in youth enterprises in Kenya. It was therefore concluded that the attributes of human capital in dimensions of skills, experience training were helpful in the getting new products, entering new markets in youth enterprises in Kenya. This was confirmed by an entrepreneur who stated that: Highly experienced staff have great potential to discover the hot-cake product in the new market through branding and blending the earlier original product thus creating more and high market.

$Y = 4.458 + 0.443\ X_1$ P-value (0.000) (0.000)

The results show that model $Y= \beta_0+ \beta_1+X_1+e$ is significant since the p-value is less than .05 The independent variable is HUMAN CAPITAL.

The variation was significantly explained by variation in human capital at $p<0.05$ and positively influenced innovation performance (see Table 4.15) in youth enterprises in Kenya

Table 4.15 Model summary for Human Capital

R	R Square	Adjusted R Square	Std. Error of the Estimate
.380	.145	.139	2.994

.

Objective 1 Goodness of fit

To test the research objectives, regression analysis was employed. The model equation $Y= \beta_0+\beta_1+X_1+e$ explained 13.9% as measured by the goodness of fit (R-square) in Table 4.15 (model summary).These results showed that human capital explained 13.9 % (adjusted R- square 13.9) of the variance in innovation performance as described by the model $Y= \beta_0+\beta_1+X_1+e$.It was therefore concluded that human capital determines the level of innovation performance in youth enterprises in Kenya consequently the more

empowered the human resources are the more likely that an enterprise will introduce new products, venture into new markets and where applicable original ideas will be commercialized. The findings conform to previous studies done by Ngari, Gichira & Waititu (2012) on intellectual capital and firm performance for pharmaceutical firms in Nairobi The univariate model was significant and, therefore, supports the objective that human capital determines innovation performance in youth enterprises Kiambu County in Kenya.

Table 4.16 ANOVA table for human capital

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	239.729	1	239.729	26.747	.000
Residual	1416.118	158	8.963		
Total	1655.847	159			

The independent variable is HUMAN CAPITAL.

The ANOVA results on which the test for significance is based indicated that the model was significant at p=.000,F=26.747 as illustrated in Table 4.16

Hypothesis 1

H_1 Human capital determines innovation performance of youth enterprises in Kenya.

4.7.3 Influence of structural capital on innovation performance

The results indicated that structural capital has influence on the level of innovation in youth enterprises in Kenya as illustrated in a scatter diagram in Figure 4.18.The scatter diagram shows a positive gradient which indicates that structural capital determined innovation performance in youth enterprises in Kenya according to the results from this study. For instance the study revealed that clear guidelines on innovation kept the entrepreneurs focused on doing things in a new way as a way of remaining competitive. Some of the entrepreneurs commented that;

Innovation guidelines enables members to improve the ideas that they already have and innovate others for better business performance as stated by one of the service providing group owned enterprise.

The project mentioned above is a hiring enterprise which is a group project which hires out tents and chairs and it is structured in a way that it motivate those group members

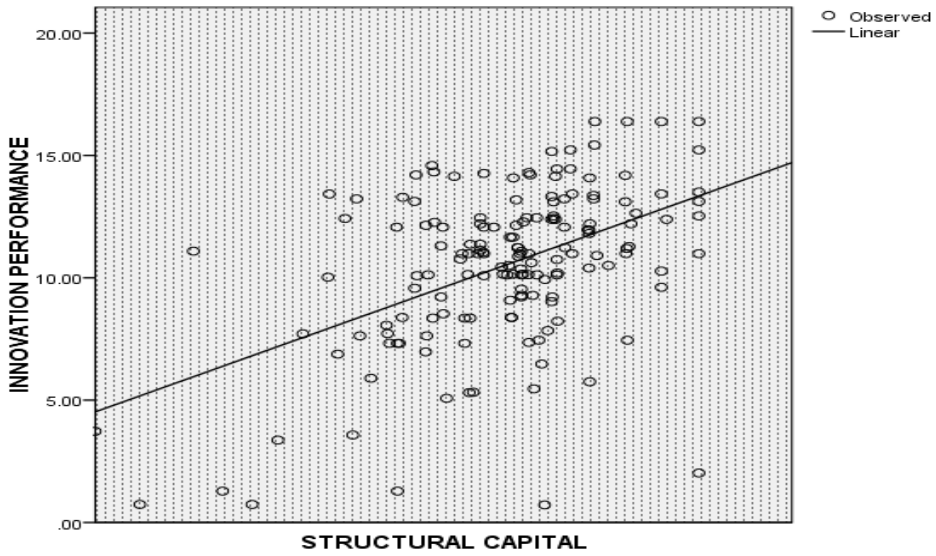


Figure 4.13 Scatter plot Structural capital

who were help their project to do their business in innovative ways. They ensure that getting new customers to hire the chairs and the tents was accompanied by a monetary reward in form of a commission. The rewarding structure also promoted a healthy competition among the group members and it kept them very active in the business for earning commissions.

The scatter diagram represents a positive correlation between structural capital and innovation performance. It was observed that innovation performance in youth enterprises was determined by the presence of proper and well laid structures in the youth enterprises in Kenya Each of these objectives and hypotheses was analyzed to

test whether they were in agreement with what the researcher had hypothesized on not. The structural capital was the second variable suggested to have a determining role in innovation performance in youth enterprise in Kenya.

The objective of the study sought to investigate how Structural capital determines innovation performance in youth enterprises in Kenya. As it is indicated in Figure 4.13, there was a positive linear relationship between structural capital and innovation performance with positive gradients of 0.484 (see Table 4.17). It showed a positive gradient which is a clear indication that structural capital as an element of intellectual capital influenced the level of innovation in youth enterprises in Kenya. This also implies that increased structural capital or where issues like staff training, reward systems were evident, an increase in innovation performance levels in terms of introduction of new products, venturing to new markets and patenting was also realized and the opposite was true that a decrease in structural capital led to low levels of innovation performance. This is in conformity with another study was done by, Leitner (2011) as argued that high amounts of both human and structural capital lead to a higher probability of a firm being innovative. In this study it was observed that the youth enterprises which had well laid structures and employees were able to give their views concerning the organization, new ideas on the products and the markets were enhanced as noted below by one of the youth entrepreneurs who commented on business meetings:

> Organizational meetings should be frequent and open for employees to brainstorm on challenges met, have business trainings and skill development frequently.

A system of empowering employees through training was highly recommended in the study as one way of raising innovation in youth enterprises in Kenya.

Correlation Analysis

Table 4.17 Correlations analysis for structural capital

		INNOVATION PERFORMANCE	STRUCTURAL CAPITAL
INNOVATION PERFORMANCE	Pearson Correlation	1	.478**
	Sig. (2-tailed)		.000
	N	160	160
STRUCTURAL CAPITAL	Pearson Correlation	.478**	1
	Sig. (2-tailed)	.000	
	N	160	160

**. Correlation is significant at the 0.01 level (2-tailed).

The results from the correlation analysis indicated that there was a positive significant linear relationship between structural capital and innovation performance in youth enterprises in Kenya (see Table 4.17). This has been illustrated by the correlation coefficient of 0.478 at 0.01 level of significance. This implies that there was a positive relationship between structural capital and innovation performance in youth enterprises in Kenya. It was confirmed that structural capital was an important source of innovation and competitive advantage. According to this study it was paramount to mention that with more empowerment of the youth entrepreneurs through training on clear policy guidelines and awareness in trademarks, copy rights and patents, more trademarks and patenting would be evident among youth entrepreneurs and intellectual property would benefit the specific innovators in Kenya. This was because many were interviewed and it was noted that they had original ideas which could be commercialized and create more

employment opportunities but since they did not understand the way to patent, the ideas remained at risk of being commercialized by those who did not originate with them. This was commonly observed in the areas of art and craft.

Table 4.18 model summary for structural capital

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.478[a]	.228	.224	2.84356

a. Predictors: (Constant), STRUCTURAL CAPITAL

The regression analysis conducted as shown in Table 4.18 indicated a strong relationship with R=0.228 while R2 =0.224. This pointed out that 22.4% of the corresponding change in innovation performance with an increase of one unit of structural capital, meaning for instance if proper reward system was executed in an enterprise those rewarded would be more motivated to look for new customers or venture into new markets. In one of the clothe selling enterprises ,the staff were given a commission for every item sold on daily basis and it was noted that some were as old as five years in the enterprise. The business had also grown over time with very loyal customers which created more employment opportunities and sustainability of the business was assured.

Objective 2: Goodness of fit

The model equation $Y= \beta_0+\beta_2+X_2+e$ was significantly fit for the study and it was therefore concluded that structural capital determined the level of innovation performance in youth enterprises in Kenya. The findings conform to previous studies done according to the existing innovation literature in which much have been written about the organizations and their structural characteristics. And according to Arad *et al.* (1997) and the CIMA Study Text (1996) a flat structure, autonomy and work teams will promote innovation, whereas specialization, formalization, standardization and

centralization will inhibit innovation. The univariate model was significant and, therefore, supports the objective that structural capital determined innovation performance in youth enterprises in Kenya.

Table 4.19 ANOVA table for structural capital

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	378.285	1	378.285	46.784	.000
Residual	1277.563	158	8.086		
Total	1655.847	159			

The independent variable is STRUCTURAL CAPITAL.

The ANOVA results for structural capital which formed the basis for significance test shows that the model was significant at p=0.000 F=46.784 as illustrated in Table 4.19.

Table 4.20 Coefficients for Structural capital

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
STRUCTURAL CAPITAL	.484	.071	.478	6.840	.000
(Constant)	4.520	.905		4.992	.000

There was a positive unstandardized beta coefficient of 0.484 as indicated by coefficient Table 4.20. For the regression line to be significant, the following hypothesis had to be true in this study.

Ho: $\beta_2=0$

Versus

H_2: $\beta_2 \neq 0$

Table 4.21shows that the P-value is less than 0.05. Therefore in this case the null hypothesis $\beta_2=0$ was not rejected which implies that Structural capital has a significant influence on innovation in the youth enterprises in Kenya.

Y = 4.520+0.484X_2, P-value (0.000) (0.000)

There is a positive unstandardized beta coefficient of 0.484 as indicated by coefficient Table 4.20. For the regression line to be significant, the following hypothesis had to be true in this study.

Ho: $\beta_2=0$

Versus

H_2: $\beta_2 \neq 0$

The results shows that the P-value is less than 0.05 as illustrated in Table 4.20. Therefore in this case the researcher failed to reject the null hypothesis $\beta_2=0$ which implied that Structural capital has a significant influence on innovation in the youth enterprises in Kenya.

Standard error being a statistical term that measures the accuracy with which a sample represents a population, in this study structural capital as an independent variable had a standard error of 0.071 indicating that the smaller the standard error the more representative the sample will be of the overall population. The results show that model $Y= \beta_0+ \beta_2+X_2+e$ is significant since the p-value is less than 0.05.

Hypothesis 2

H_2 Structural capital determines innovation performance of youth enterprises in Kenya.

Though the businesses were not very big to require complex information management systems, it was observe that simple record keeping and information management systems were very key in managing the youth enterprises as noted by one of the respondents below.

Proper information system helps in detecting the way your business is going i.e. whether growing or falling at the right time and you will be able to correct in time- Agribusiness manager Gatundu South constituency

4.7.4 Influence of customer capital on innovation performance

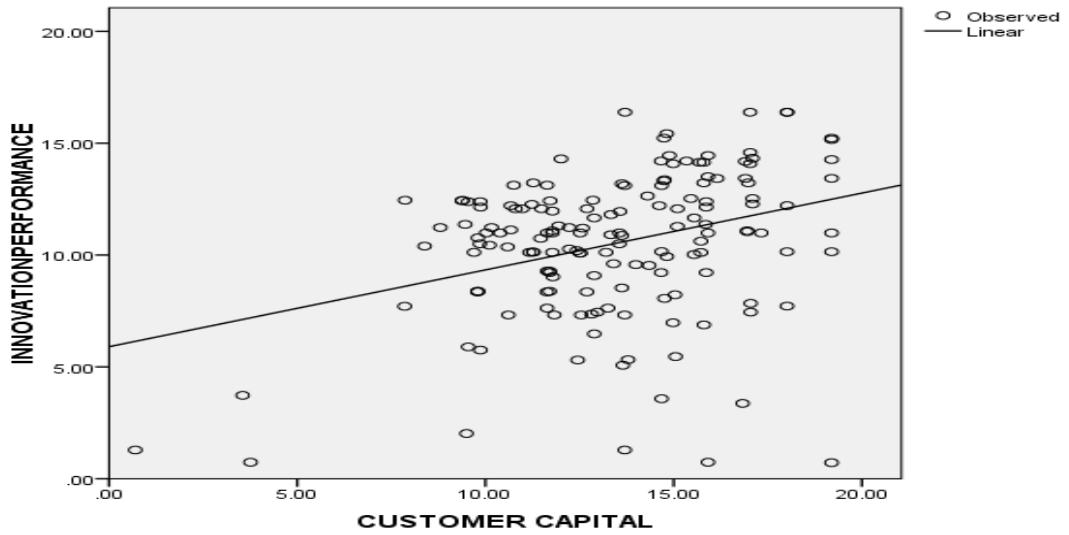


Figure 4.14 Scatter plot for customer capital

Customer capital was the third variable suggested to have a determining role in innovation performance in youth enterprise in Kenya. The objective of the study sought to investigate the influence of customer capital on innovation performance in youth enterprises in Kenya. In Figure 4.14 it is indicated that there was positive linear relationship between customer capital and innovation performance with a positive gradients of 0.343 (see Table 4.24). It shows a positive gradient which is a clear indication that customer capital as an element of intellectual capital customer capital being one of them influences the level of innovation in an enterprise. This also implies that increased customer capital will lead to increased innovation performance and the opposite is true that a decrease in customer capital will lead to poor innovation performance. One of the youth entrepreneurs dealing with a chemist, cosmetics and M-

pesa money transfer agent stated that products and new markets are demand driven since customer have a key role to play in it as one of the respondents stated below.

> "Since the staff interact well with the customers, they are able to identify customers demand and ideas which enables the company and the suppliers to meet their demands"

This is in conformity with another study done by Subramanian *et al*. (2008) in Turkish automotive firms where customer capital as an element of intellectual capital was found to influence innovation in those automotive firms.

Correlation Analysis

Table 4.21 Correlation analysis for customer capital

Correlations			
		INNOVATION PERFORMANCE	CUSTOMER CAPITAL
INNOVATION PERFORMANCE	Pearson Correlation	1	.332**
	Sig. (2-tailed)		.000
	N	160	159
CUSTOMER CAPITAL	Pearson Correlation	.332**	1
	Sig. (2-tailed)	.000	
	N	160	160

**. Correlation is significant at the 0.01 level (2-tailed).

The results showed that that there is a positive significant linear relationship between customer capital and innovation performance in youth enterprises in Kenya see Table 4.21 This has been illustrated by the correlation coefficient of 0.332 at 0.01 significant levels. This implies there is a positive relationship between customer capital and innovation performance in youth enterprises in Kenya. It was concluded that customer capital is an important source of innovation and competitive advantage as supported by

previous studies done by Wu, Chang and Chen (2008). They found that the effects of elements of intellectual capital which included human capital, customer capital and structural capital, on innovation exist at significant levels, suggesting a perfect mediating effect of intellectual capital on innovation. Inferences can, therefore, be made that tendency of a firm to join in and support new ideas, novelty, experimentation and creative processes results in new products, services or technological processes. Product innovation requires the firm to have competences relating to technology and relating to customers. An entrepreneur who has built a degree of social capital that can be successfully be used to build a network of support around the new innovation (Kanter, 1983, 1985; Nahapiet & Ghoshal, 1998).

Table 4.22 Model summary for customer capital

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.332	.110	.104	3.057

The independent variable is CUSTOMER CAPITAL

Objective 3: Goodness of fit

To test the research objectives, regression analysis was employed. The model equation $Y=\beta_3+X_3+e$ explained 13.9% as measured by the goodness of fit (R-square) in Table 4.22 (model summary). These results showed that customer capital explained 13.9 % (adjusted R- square 13.9) of the variance in innovation performance as described by the model $Y=\beta_3+X_3+e$. It was therefore concluded that customer capital determines the level of innovation performance in youth enterprises in Kenya. The findings conform to previous studies done by Ngari, Kamau and Gichira (2013) and Cabrita (2008). The univariate model was significant and, therefore, supports the objective that customer capital determines innovation performance in youth enterprises in Kenya.

Table 4.23 ANOVA table for customer capital

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	181.123	1	181.123	19.384	.000
Residual	1467.002	157	9.344		
Total	1648.126	158			

The independent variable is CUSTOMER CAPITAL.

The ANOVA results which formed the basis for test for significance indicated that the model was significant at p=.000, F=19.384 (see Table 4.23).

Table 4.24 coefficients for customer capital Regression Analysis

Regression Analysis

Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
CUSTOMER CAPITAL	.343	.078	.332	4.403	.000
(Constant)	5.903	1.072		5.504	.000

There is a positive unstandardized beta coefficient of 0.343 as indicated by coefficient Table 4.24. For the regression line to be significant, the following hypothesis has to be true.

Ho: $\beta_3=0$

H_3: $\beta_3 \neq 0$

Evidence on the table 4.16 again indicated that the P-value is less than 0.05. Therefore, in this case, researcher failed to reject the null hypothesis consequently it was concluded

that customer capital had a significant influence on innovation in youth enterprises in Kiambu County in Kenya.

$Y=\beta_0+ \beta_3+X_3+e$

$Y = 5.903 +0.343\ X_3$

P-value (0.000) (0.000)

The results show that model $Y= \beta_0+ \beta_3+X_3+e$ is significant since the p-values are less than 005.

Hypothesis 3

H_3 Customer capital determines innovation performance of youth enterprises in Kiambu County in Kenya.

4.7.5 Influence of Technological capital on Innovative performance

The technological capital was the fourth variable suggested to have a determining role in innovation performance in youth enterprise in Kenya. The objective of the study sought to investigate the influence of technological capital on innovation performance in youth enterprises in Kenya. In Figure 4.15 it is indicated that there was a positive linear relationship between technological capital and innovation performance with positive gradients of 0.579 (see Table 4.29). It shows positive gradients which are a clear indication that technological capital as an element of intellectual capital influences the level of innovation in youth enterprises in Kenya. This also implies that increased technological capital leads to increased innovation performance and the opposite is true that a decrease in technological capital leads to poor innovation performance. This is in conformity with another study done by Subramanian *et al.* (2008) in Turkish automotive firms where customer capital as an element of technology capital was found to influence innovation in those automotive firms.

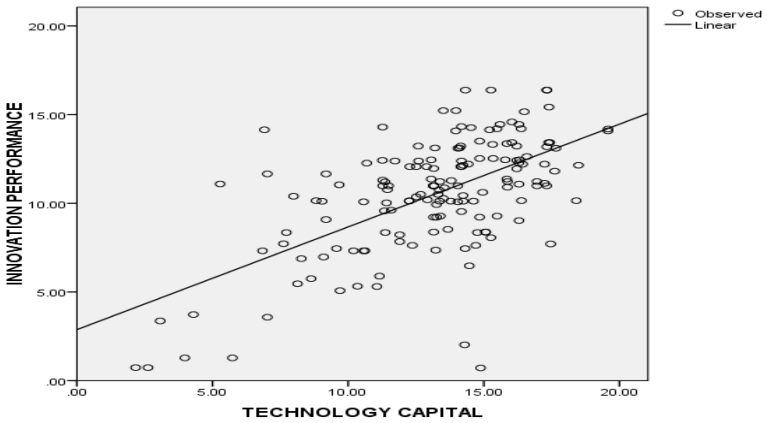


Figure 4.15 Scatter plot for Technology capital

Correlation analysis

Table 4.25 Correlation analysis for technological capital

		INNOVATION PERFORMANCE	TECHNOLOGY CAPITAL
INNOVATION PERFORMANCE	Pearson Correlation	1	.606**
	Sig. (2-tailed)		.000
	N	160	160
TECHNOLOGY CAPITAL	Pearson Correlation	.606**	1
	Sig. (2-tailed)	.000	
	N	160	160

**. Correlation is significant at the 0.01 level (2-tailed).

The study results indicated that there was a positive significant linear relationship between technological capital and innovation performance in youth enterprises in Kenya see Table 4.25. This has been illustrated by the correlation coefficient of 0.606 at 0.01 significant levels. This implies that a positive relationship exists between technological capital and innovation performance in youth enterprises in Kenya. It was therefore concluded that technological skills and available facilities alongside information management systems were influencing the introduction of new products and reaching out to new markets in youth enterprises County in Kenya as confirmed by previous studies done by Audrey (2016) in an empirical review concluded that technological innovation can be seen as a double-edged sword with respect to sustainable development. One of the respondents commented that:

> "Through inbound marketing our company has gained recognition all over the social media. Modern technology has saved us a lot of money as well as helped us get more clients. Also with adoption of modern technology, one can easily find out a lot of information within the shortest time possible."

The youth entrepreneurs appreciated the cost effectiveness in using technology in communication which gave them competitive advantage in a highly competitive market. One of the responded stated that:

> "Technology is important in advertising of products, knowing what is in demand and understanding your competition. We basically use modern tech on day to day basis since we acknowledge it and has greatly help our company grow."

Growth of business was attributed to the ability to use modern technology in the youth led enterprises in Kenya. This implied that more job creation was enhanced through the use of technology. It was concluded that the introduction of computers to primary school pupils which is a new development in Kenya's education system will greatly support entrepreneurship in the near future.

Table 4.26 Model summary for Technological capital

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.606	.367	.363	2.578

The independent variable is TECHNOLOGY CAPITAL

The regression analysis conducted as shown in Table 4.26 reflects a strong relationship with R=0.367 while R2 =0.363. This pointed out that there was 36.3 % of the corresponding change in innovation performance with an increase of one unit of technological capital.

Objective 4: Goodness of fit

In order to test the research objectives, regression analysis was employed. The model equation $Y=\beta_4+X_4+e$ explained 36.7 % as measured by the goodness of fit (R square) in Table 4.18 (model summary). These results showed that technological capital explained 36.7 % (adjusted R- square 13.9) of the variance in innovation performance as described by the model $Y=\beta_4+X_4+e$.It was therefore concluded that technological capital determines the level of innovation performance in youth enterprises in Kenya. The findings conform to previous studies done by Ngari (2012) and Cabrita (2008). The univariate model was significant and, therefore, supports the objective that technological capital determines innovation performance in youth enterprises in Kenya.

Table 4.27 ANOVA for Technological capital

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	604.843	1	604.843	91.021	.000
Residual	1043.283	157	6.645		
Total	1648.126	158			

The independent variable is TECHNOLOGY CAPITAL.

The ANOVA results which formed a basis for significance test shows that the model is significant at P=.000 F=91.021.

Table 4.28 Coefficients for technological capital

Regression Analysis

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Technology capital	.579	.061	.606	9.540	.000
(Constant)	2.876	.825		3.486	.001

There is a positive unstandardized beta coefficient of 0.579 as indicated by coefficient Table 4.28. For the regression line to be significant, the following hypothesis has to be true.

Ho: $\beta_4 = 0$

Versus

H_4: $\beta_4 \neq 0$

The P-value is less than 0.05 as illustrated in Table 4.20 therefore in this case, the study failed to reject the null hypothesis which implied that technological capital had a significant influence on innovation in youth enterprises in Kenya. Model $Y= \beta_0+ \beta_4+X_4+e$ with a constant 2.876 and unstandardized beta coefficient of 0.579 and p-values of 0.000 and 0.001 respectively was significant in this study since the p-values were below 0.05.

$Y =2.876+0.579\ X_4$, P-value (0.000) (0.001).

The p-values are less than 0.05 meaning the model $Y= \beta_0+\beta_4+X_4+e$ were significantly fit in this study.

Hypothesis 4

H4 Technological capital determines innovation performance of youth enterprises in Kenya.

Technological capital which comprises of the skills facilities and the information systems stood out in determining the ability to reach out to new customers especially through mobile phone technology the results in this study indicated that most of the youth entrepreneurs were able to transact their businesses from the comfort of their premises. They could for instance call customers and make arrangements on what and how to deliver to them after receiving the order and making the payment using their smart phones. Most of the youth enterprises were not big enough to warrant robust information systems but it was evident that they had very reliable ways of gathering and storing the details on their customers and they could easily retrieve any information needed through Google documentation as well as drop box.

It was also noted that however small the business was, almost all the youth entrepreneurs had a laptop for the managing of their business information. Customer information was well captured and this was used to looking for business through the

existing data base especially when new products were introduced bulk short messages were used to create the awareness and this raised the sales in a big way. This greatly enhanced the marketing exercise since they were able to constantly create awareness when they introduced new products using the social media. Face book, LinkedIn and Whatsapp were the most common ways of advertising their products.

4.7.6 Influence of Entrepreneurial skills on innovation performance

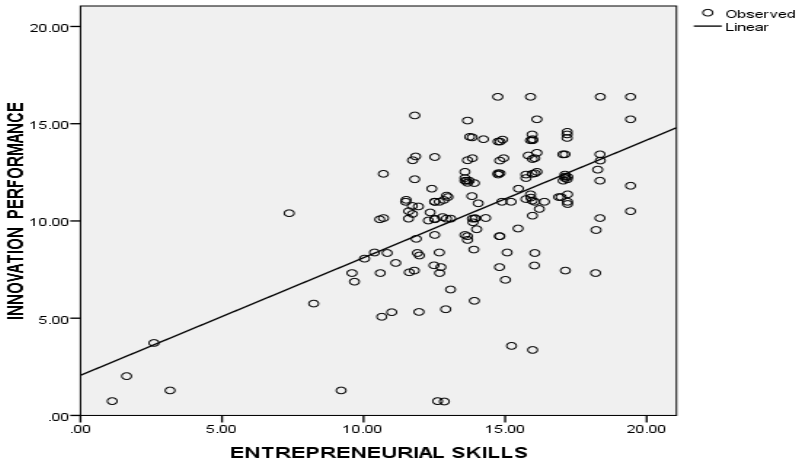


Figure 4.16 Scatter diagram for Entrepreneurial skills.

The Scatter diagram in Fig 4.16 represent the correlation between the dependent variable innovation performance and the independent variable entrepreneurial skills. It shows there strong positive influence of entrepreneurial skills on innovation performance in youth enterprises in Kenya.

Table 4.29 Correlation Analysis for entrepreneurial skills

Correlations			
		INNOVATION PERFORMANCE	ENTREPRENEURIAL SKILLS
INNOVATION PERFORMANCE	Pearson Correlation	1	.576**
	Sig. (2-tailed)		.000
	N	160	160
ENTREPRENEURIAL SKILLS	Pearson Correlation	.576**	1
	Sig. (2-tailed)	.000	
	N	160	160

In this study the results from correlation analysis for entrepreneurial skills indicated that there was a positive significant linear relationship between entrepreneurial skills and innovation performance in youth enterprises in Kenya (see Table 4.29).This has been illustrated by the correlation coefficient of 0.576 at 0.01 significant levels. This implies that there is a positive relationship between entrepreneurial skills and innovation performance in youth enterprises in Kenya. It was revealed that entrepreneurial skills for instance communication and decision making skills were a major determinant of how new products and new markets were available in the youth enterprises in Kenya. It raised their competitive advantage as supported by previous studies done by Bontis 1998; Stewart 1999; Edvinson and Malone 1997.

Table 4.30 Model summary for entrepreneurial skills

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.576	.332	.327	2.647

The independent variable is ENTREPRENEURIAL SKILLS

The regression analysis conducted in Table 4.30 shows a strong relationship with R=0.576 while

R^2 =0.332. This pointed out that 32.7 % of corresponding change in innovation performance with an increase of one unit of entrepreneurial skills. The statistics are supported by a comment that was made by one of the entrepreneurs who confessed that;

> Highly educated staff are more professional even in their handling of customers and solving disputes, thus they can penetrate through stubborn customer easily High level of education is helpful in getting different kinds of ideas that are helpful in handling challenges that develop in relation to the new products we introduce to the market. Education is knowledge and this has greatly helped in decision making.

Objective 5: Goodness of fit

To test the research objectives, regression analysis was employed. The model equation $Y=\beta_5+X_5+e$ explained 33.2% as measured by the goodness of fit (R square) in Table 4.30 (model summary). It was therefore concluded that entrepreneurial skills determine the level of innovation performance in youth enterprises in Kenya. One of the observations made was picked as below from one of the respondents.

> Experience and relevant skills is all that counts in areas of innovation and relevant education helps in development of strategies of marketing the said products and services.

The findings conform to previous studies done by Ngari (2012) and Cabrita (2008).The uni- variate model was significant and, therefore, supported the objective that entrepreneurial skills determined innovation performance in youth enterprises in Kenya through staff experience and relevant skills that help them enter into new markets and consistently venture in to new markets. It was noted that the entrepreneurs that had experience in their areas of operation were better placed in marketing their products or services in a more strategic way and therefore having experience ,relevant skills and being trained in a particular areas made the youth enterprises experience higher level of innovation.

Table 4.31 ANOVA for Entrepreneurial skills.

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	548.925	1	548.925	78.353	.000
Residual	1106.922	158	7.006		
Total	1655.847	159			

The independent variable is ENTREPRENEURIAL SKILLS.

The ANOVA results for entrepreneurial skills which for the basis for significance test showed that the model $Y= \beta_0+ \beta_5+X_5+e$ is significant at p=.000, F=78.353(see Table 4.31)

Table 4.32 Coefficient table for entrepreneurial skills

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
ENTREPRENEURIAL SKILLS	.605	.068	.576	8.852	.000
(Constant)	2.063	.978		2.110	.036

**. Correlation is significant at the 0.01 level (2-tailed).

There is a positive unstandardized beta coefficient of 0.605 as indicated by coefficient Table 4.32 For the regression line to be significant, the following hypothesis has to be true.

Ho: $\beta_1=0$

$H_{5:}$ $\beta_1 \neq 0$

Table 4.32 shows that the P-value is less than 0.05. Therefore in this case, the researcher failed to reject the null hypothesis and concluded that entrepreneurial skills had a significant influence on innovation in youth enterprises in Kenya. The model $Y= \beta_0+ \beta_5+X_5+e$ as shown in Table 4.24 had a constant beta coefficient of 2.063 and a beta coefficient of the independent variable of 0.576 with p-value (0.000) (0.036) respectively. The p-values are less than 0.05 meaning the model $Y= \beta_0+ \beta_5+X_5+e$ were significantly fit for this study. $Y=2.063+0.576X_5$,P-value (0.000) (0.036)

Hypothesis 5 H_5 Entrepreneurial skills determine innovation performance in youth enterprises in Kenya

4.7.7 Influence of entrepreneurial skills, technological capital and structural capital

The results indicated that the variables that contributed most to the levels of innovation performance in youth enterprises in Kenya were technology capital entrepreneurial skills, and structural capital.

Table 4.33 Optimum model Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	entrepreneurial skills	.744	.015	.970	50.426	.000
2	entrepreneurial skills	.378	.057	.493	6.652	.000
	technology capital	.397	.060	.491	6.629	.000
3	entrepreneurial skills	.322	.062	.420	5.210	.000
	technology capital	.322	.069	.398	4.692	.000
	structural capital	.144	.067	.168	2.155	.033

a. Dependent Variable: Innovation performance

b. Linear Regression through the Origin

In this study it was therefore noted that the introduction of new products, entry into new markets and patenting were mainly supported by the technological advancement among the youth entrepreneurs especially through mobile banking and online marketing as well as use of social media. On the other hand, the ability to communicate effectively and make prompt and correct decisions which was promoted by entrepreneurial skills, made the youth entrepreneurs to reach out to new customers and provide proper customer service thus promoting the growth of their enterprises as presented in this model $Y_i=\beta_0+$

$\beta_2X_2+ \beta_4X_4+ \beta_5X_5+e$ which is Optimum influence model whose results are illustrated in Table 4.33.

4.7.8 Human capital and loan processing

If loan processing mediates the human capital and innovation performance relation, then the following condition must hold.

-Human Capital predicts Innovation Performance

- Human Capital predicts Loan Processing

- Loan Processing predicts Innovation Performance

Step 1 $Y= \beta_{1+}cX_1+e$

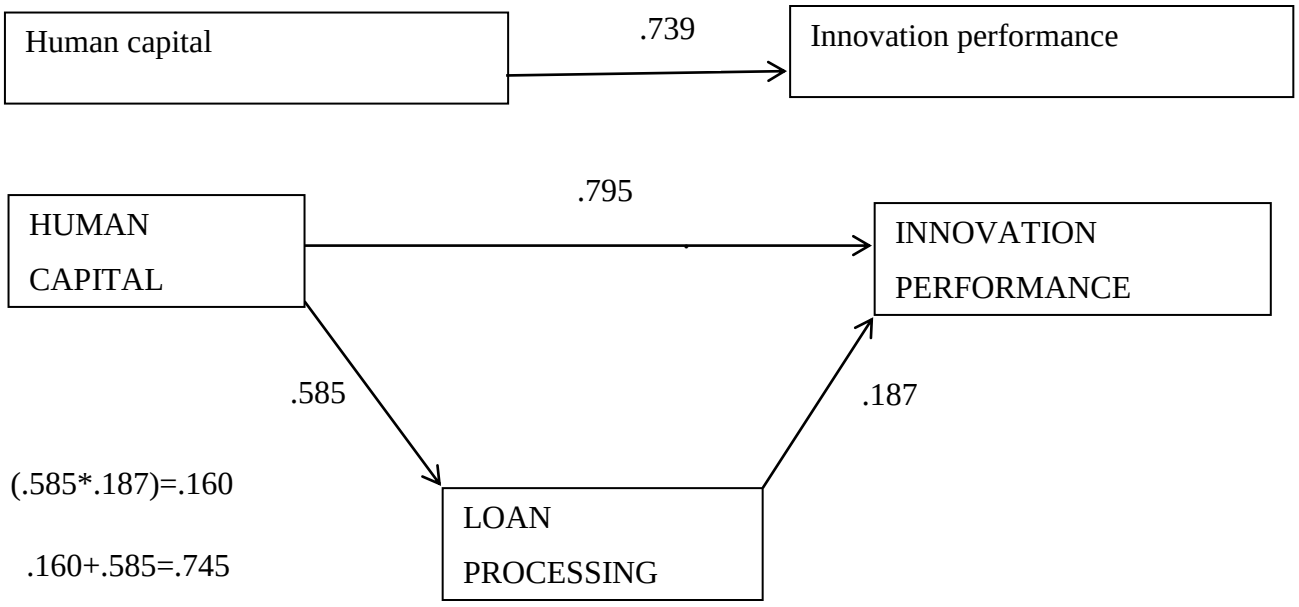
Step 2 $Y= a X +e$

Step 3 $Y= c'X + bZ +e$

When innovation performance was predicted by both Human Capital and Loan Processing:

The regression coefficient of Loan Processing (b) should be significant

The regression coefficient of Human Capital differently when Loan Processing was in the regression than when Loan Processing is not (c' is different from c)



The study showed that loan processing mediated in the relationship between human capital and Innovation Performance completely because the human capital predicted innovation performance coefficient .739 and p-value .000 (see Table 4.34), human capital also predicted loan processing coefficient .745 and p-value .000 and loan processing predict innovation performance when both loan processing and human capital are in regression a coefficient .187 and p-value .006 (see Table 4.35). It was therefore concluded that since the regression coefficient of human capital is different when loan processing is in regression from when loan processing is not in regression, there is complete mediation in this study. Loan processing procedures and requirement, therefore, played a mediating role in the youth enterprises in terms of innovation where human capital is in consideration as an element of intellectual capital. The support offered by the youth fund officers to the entrepreneurs in the course of getting the loans played a major role in introducing new products or venturing into new markets. Some

confessed that they were not aware of patenting until the loan officers mentioned it to them.

Table 4.34 Coefficients for human capital through the origin

Coefficients[a,b]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	HUMAN CAPITAL	.739	.017	.959	42.884	.000
a. Dependent Variable: INNOVATION PERFORMANCE						
b. Linear Regression through the Origin						

Table 4.35 Coefficients for human capital through loan processing

Coefficients[a,b]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	HUMAN CAPITAL	.585	.058	.760	10.054	.000
	LOAN PROCESSES	.187	.068	.209	2.760	.006
a. Dependent Variable: INNOVATION PERFORMANCE						
b. Linear Regression through the Origin						

4.7.9 Structural Capital and loan processing

If loan processing mediates between Structural capital and innovation performance relation, then the following condition must hold.

-Structural Capital predict Innovation Performance

- Structural Capital predict loan processing

- Loan Processing predict Innovation Performance

Step 1 $Y= \beta_{1+}cX_1+e$

Step 2 Y= a X+e

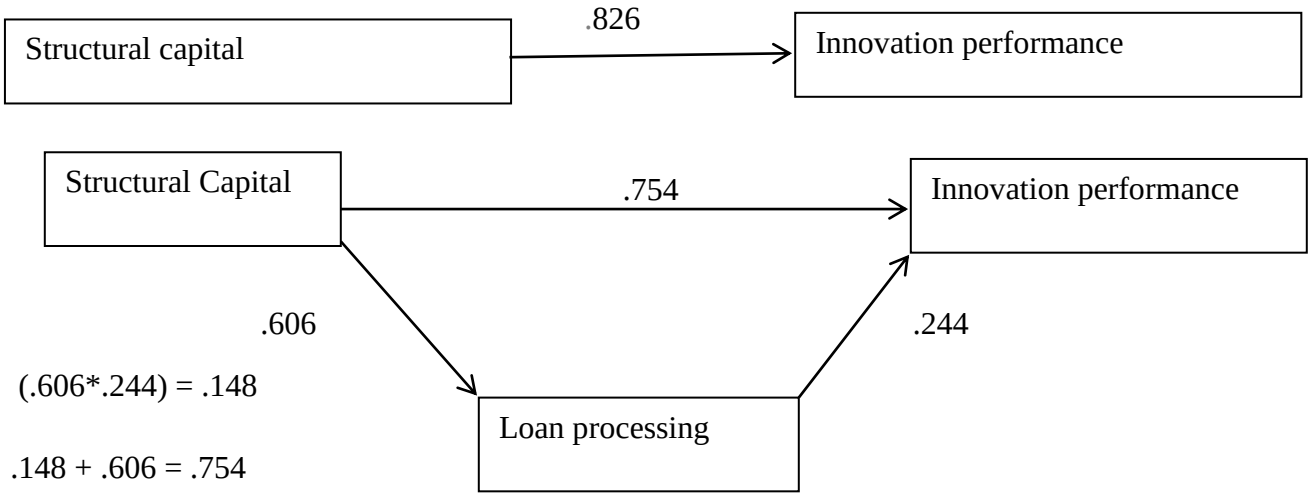
Step 3 Y= c'X +Bz +e

When Innovation Performance are predicted by both Structural Capital and loan processing :

The regression coefficient of loan processing (b) should be significant

The regression coefficient of Structural Capital differently when loan processing is in the regression than when loan processing is not

(c' is different from c)



The study showed that loan processing mediated the relationship between human Structural Capital and Innovation Performance. Structural capital predicted Innovation Performance coefficient .826 and p-value .000 (see Table 4.36), Structural Capital also predicted loan processing coefficient .606 and p-value .000 and Loan processing predict Innovation Performance when both loan processing and Structural Capital are in regression a coefficient.244 and p-value .000 as illustrated in Table 4.37. It was therefore concluded that since the regression coefficient of Structural Capital is smaller (.754) when loan processing is in regression than when Structural Capital is alone in

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	STRUCTURAL CAPITAL	.826	.019	.961	43.845	.000

a. Dependent Variable: INNOVATION PERFORMANCE

b. Linear Regression through the Origin

regression (.826), there is partial mediation in this study between Structural Capital and Innovation Performance by loan processing. Loan processing procedures and requirement, therefore, play a partial mediating role in the youth enterprises in terms of innovation where structural capital is in consideration as an element of intellectual capital or the intangible. With proper planning, youth enterprises would be more innovative. However, some youths commented that the processes involved worked against their intended plans thus hindered project development. The process need to be

looked into so as to enhance innovation. The structures in both youth enterprises and the youth fund as a government agency were not very motivating when it came to the processing of the loans. Some youths had a general feeling that:

> Many applicants do not have the necessary information and enough security hence making the process too costly and sometimes the loan processing time is too long making that some youths to give up on their business ideas because of unavailability of funds. The process is more tedious and therefore brings doubts whether the funds are available or not therefore discouraging youth to apply for the funds

Table 4.36 Coefficients for structural capital through the origin

Table 4.37 Coefficients of structural capital through loan processing

Coefficients[a,b]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	STRUCTURAL CAPITAL	.606	.053	.705	11.469	.000
	LOAN PROCESSES	.244	.055	.273	4.436	.000

a. Dependent Variable: INNOVATION PERFORMANCE

b. Linear Regression through the Origin

4.7.10 Customer capital and loan processing

If loan processing mediates the Customer capital and innovation performance relation, then the following condition must hold.

-customer capital predict innovation performance

-customer capital predict loan processing

-loan processing predict innovation performance

Step 1 $Y= \beta_{1+}cX_1+e$

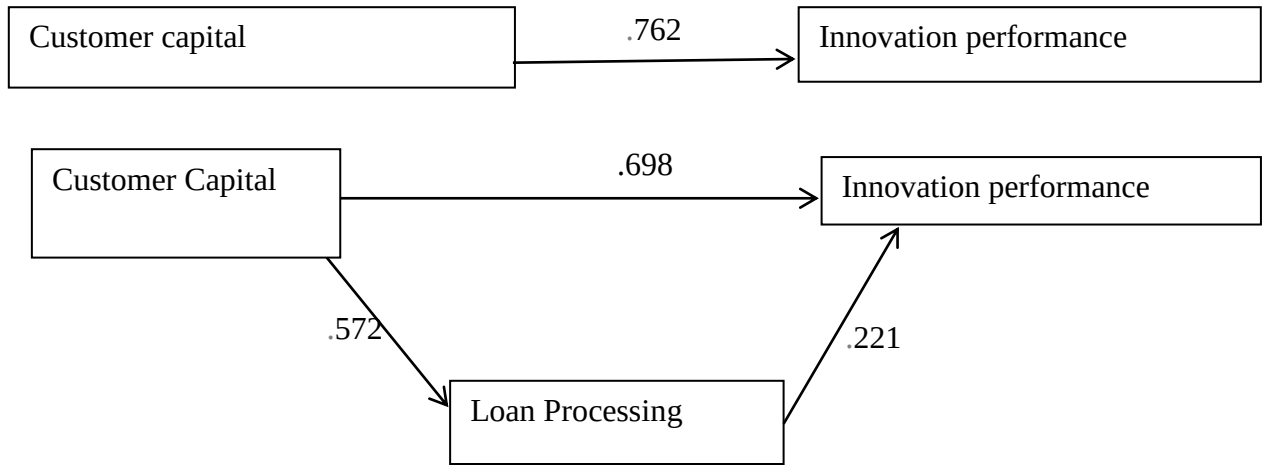
Step 2 Y= a X+e

Step 3 Y= c'X +bZ+e

When IP are predicted by both customer capital and LP:

The regression coefficient of Loan Processing (b) should be significant

The regression coefficient of Customer Capital Loan processing differently when Loan Processing is in the regression than when Loan Processing is not (c' is different from c)



(.572*.221) = .126

.126+.572=.698

The study showed that Loan Processing mediated the relation between human Customer capital and Innovation performance because the Customer capital predicted Innovation performance coefficient .762 and p-value .000 as illustrated in Table 4.38, Customer capital also predicted Loan Processing coefficient .572 and p-value .000(see Table 4.39) and Loan Processing predicted Innovation performance when both Loan Processing and Customer capital are in regression a coefficient .221 and p-value .004.It was therefore concluded that since the regression coefficient of Customer capital is smaller (.698) when Loan Processing is in regression than when Customer capital is alone in regression (.762), there is partial mediation in this study between Customer capital and Innovation performance by Loan Processing. Loan processing procedures and requirement, therefore, play a partial mediating role in the youth enterprises in terms of innovation where customer capital is in consideration as an element of intellectual capital.

Table 4.38 Coefficients of customer capital through the origin

Coefficients[a,b]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	CUSTOMER CAPITAL	.762	.019	.953	39.674	.000

a. Dependent Variable: INNOVATION PERFORMANCE

b. Linear Regression through the Origin

Table 4.39 Coefficients of customer capital through loan processing

Coefficients[a,b]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	CUSTOMER CAPITAL	.572	.068	.716	8.360	.000
	LOAN PROCESSES	.221	.077	.247	2.883	.004

a. Dependent Variable: INNOVATION PERFORMANCE

b. Linear Regression through the Origin

4.7.11 Technology capital and loan processing

If loan processing (LP) mediates the Technology capital (TC) and Innovation performance (IP) relation, then the following condition must hold.

-Technological capital predict Innovation performance

- Technological capital predict Loan processing

- Loan processing predict Innovation performance

Step 1 $Y= \beta_{1+}cX_1+e$

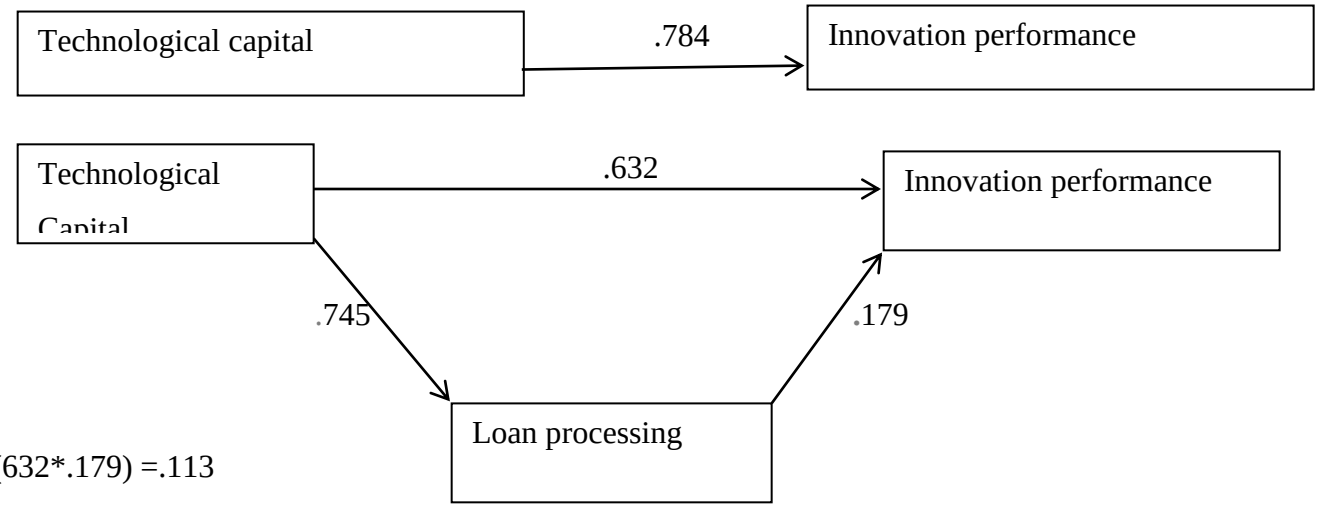
Step 2 $Y= a X+e$

Step 3 $Y= c'X +bZ+e$

When IP are predicted by both Technological capital and Loan processing:

The regression coefficient of Loan processing (b) should be significant

The regression coefficient of Technological capital differently when Loan processing is in the regression than when Loan processing is not (c' is different from c)



(632*.179) =.113

.113 +.632=.745

The study showed that Loan processing mediated the relation between human Technological capital and Innovation performance partially because the Technological capital predicted Innovation performance coefficient .784 and p-value .000(see Table 4.40), Technological capital also predicted Loan processing coefficient. 632 and p-value .000(see Table 4.41) and Loan processing predicts Innovation performance when both Loan processing and Technological capital are in regression a coefficient .745 and p-value .000. It was therefore concluded that since the regression coefficient of Technological capital is smaller (.745) when Loan processing is in regression than when Technological capital is alone in regression (.784), there is partial mediation in this study between Technological capital and Innovation performance by Loan processing. Loaning processing procedures and requirement, therefore, play a partial mediating role in the youth enterprises in terms of innovation where technological capital is in consideration as an element of intangible assets. The information about the youth funds and how to apply for the loans was quite available online but not many youths were able

to access it due to lack of awareness. Some of the managers who were interviewed made comments such as;

> Youths should be trained on how to use the modern technology to acquire information about the youth fund.

With the era of smart phones that are commonly in use among the youths, information accessibility would not be a challenge if proper awareness was created about the youth loan funds.

Table 4.40 Coefficients of technological capital through the origin

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	TECHNOLOGY CAPITAL	.784	.016	.970	50.385	.000

a. Dependent Variable: INNOVATION PERFORMANCE

b. Linear Regression through the Origin

Table 4.41 coefficients of technological capital through loan processing

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	TECHNOLOGY CAPITAL	.632	.044	.782	14.410	.000
	LOAN PROCESSES	.179	.049	.200	3.692	.000

a. Dependent Variable: INNOVATION PERFORMANCE

b. Linear Regression through the Origin

4.7.12 Entrepreneurial skills and loan processing

If loan processing (LP) mediates the Entrepreneurial skills (ES) and innovation performance (IP) relation, then the following condition must hold.

- ES predicts Innovation performance

– ES predicts Loan processing

- Loan processing predicts IP

Step 1 $Y= \beta_{1+}cX_1+e$

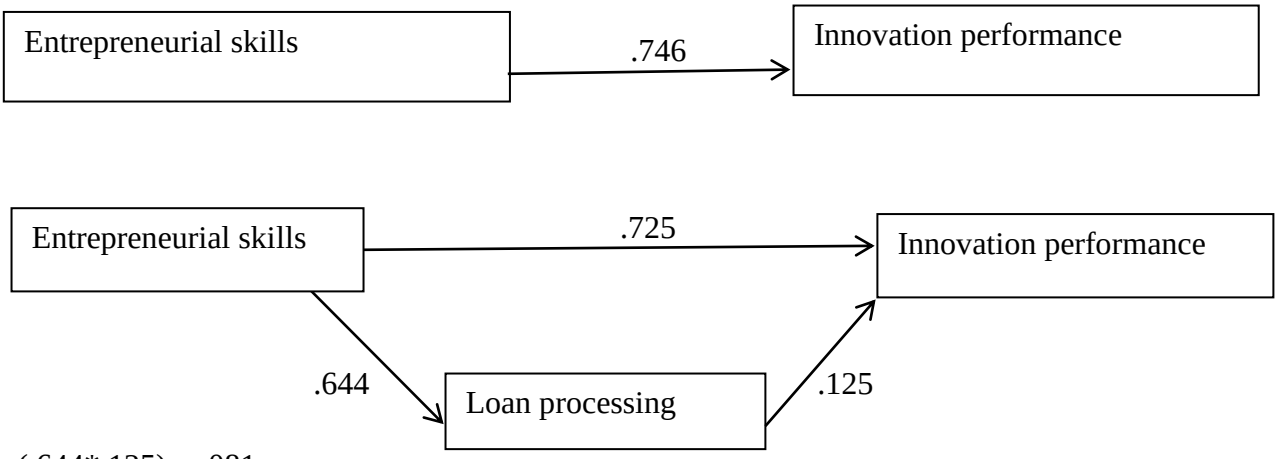
Step 2 Y= a X+e

Step 3 Y= c'X +bZ+e

When Innovation performance are predicted by both ES and Loan processing:

The regression coefficient of Loan processing (b) should be significant

The regression coefficient of ES differently when Loan processing is in the regression than when Loan processing is not(c' is different from c)



(.644*.125) = .081

.081 +.644= .725

> If there is enough time to get entrepreneurial training and better ways of marketing our products. We are also able to exchange ideas such that when the loan comes we are ready.

The study results showed that Loan processing mediated the relation between human Entrepreneurial skills and Innovation performance. Entrepreneurial skills predicted Innovation performance coefficient.746 and p-value .000 as illustrated in Table 4.42. Entrepreneurial skills also predicted Loan processing coefficient .644 and p-value .000 (see Table 4.43) and Loan processing predict Innovation performance when both Loan processing and Entrepreneurial skills are in regression a coefficient .125 and p-value .024. It was therefore concluded that since the regression coefficient of ES is different when Loan processing is in regression from when Loan processing is not in regression, there is partial mediation in this study because the coefficient of Entrepreneurial skills in the presence of Loan processing was smaller (.725) than when ES was in regression alone(.746).Loaning processing procedures and requirement, therefore, play a mediating role in the youth enterprises in terms of innovation where entrepreneurial skills in

consideration as an element of intellectual capital. The statement above was made by one of the youth entrepreneurs who strongly felt that with more training innovation levels in their enterprises would be realized.

Table 4.42 coefficients for entrepreneurial skills through the origin

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	ENTREPRENEURIAL SKILLS	.746	.015	.970	50.457	.000

a. Dependent Variable: INNOVATION PERFORMANCE Linear Regression through the Origin

Table 4.43 coefficients for entrepreneurial skills through loan processing

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	ENTREPRENEURIAL SKILLS	.644	.047	.838	13.694	.000
	LOAN PROCESSES	.125	.055	.139	2.271	.024

a. Dependent Variable: INNOVATION PERFORMANCE

b. Linear Regression through the Origin

Hypothesis 6

H_6 Loan access procedures and requirements play an intervening role in innovation performance in youth enterprises in Kenya.

4.8 Hypothesis results

The study sought to test six hypothesis as indicated in part 1.5 which is illustrated in Table 4.44 as the results of the hypothesis testing, the variables and the explanation of the results.

Table 4.44 Hypothesis test results

Hypothesis	Variable	Hypothesis results	Explanation
H_1	Human capital	Not rejected	HC has a positive and significantly determines innovation performance in youth enterprises in Kenya
H_2	Structural capital	Not rejected	SC has a positive and significantly determines innovation performance in youth enterprises in Kenya
H_3	Customer capital	Not rejected	CC has a positive and significantly determines innovation performance in youth enterprises in Kenya
H_4	Technological capital	Not rejected	TC has a positive and significantly determines innovation performance in youth enterprises in Kenya
H_5	Entrepreneurial skills	Not rejected	ES has a positive and significantly determines innovation performance in youth enterprises in Kenya
H_6	Loan processing and procedures	Not rejected	LP has a positive and significantly determines innovation performance in youth enterprises in Kenya

Note HC=Human capital SC=Structural capital CC=Customer capital TC=Technological capital

ES =Entrepreneurial skills and LP =Loan processing

4.9 Association of variables

Table 4.45 Correlations between the dependent and independent variables Correlations[b]

		INNOVATION PERFORMANCE	HUMAN CAPITAL	STRUCTURAL CAPITAL	CUSTOMER CAPITAL	TECHNOLOGY CAPITAL	ENTREPRENEURIAL SKILLS
INNOVATION PERFORMANCE	Pearson Correlation	1					
HUMAN CAPITAL	Pearson Correlation	.399	1				
	Sig. (2-tailed)	.000					
STRUCTURAL CAPITAL	Pearson Correlation	.486	.500	1			
	Sig. (2-tailed)	.000	.000				
CUSTOMER CAPITAL	Pearson Correlation	.332	.496	.334	1		
	Sig. (2-tailed)	.000	.000	.000			
TECHNOLOGY CAPITAL	Pearson Correlation	.606	.292	.532	.232	1	
	Sig. (2-tailed)	.000	.000	.000	.003		
ENTREPRENEURIAL SKILLS	Pearson Correlation	.580	.471	.410	.497	.504	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
List wise N=160							

In this study, the bivariate correlation was used to examine the association among variables. The correlation coefficient is the measure of the relationship between two variables. The correlation coefficients always range between -1 and +1 in value. If the correlation coefficient is -1, it means that the two variables have a perfect linear relationship that is negative. When it is 0, it indicates that there is no relationship between the two variables and when its value is + there is a perfect positive linear relationship between the two variables (GraphPad, 2011; Indiana, 2011). The

correlations between the dependent and the independent variables in this study are shown in Table 4.45.

As indicated in Table 4.45 all the variables have a positive linear relationship. Technology capital was having the highest Pearson correlation of .606 meaning technology capital contributed most to innovation performance in youth enterprises in Kenya according to this study. The second in rank was entrepreneurial skills which had a Pearson correlation of .580. The structural capital was third in rank with a Pearson correlation of .486 followed by human capital with a Pearson correlation of .399, and lastly, it was customer capital had very little influence in determining the level of innovation performance in youth enterprises in Kenya with a Pearson correlation of .332.

The results indicate that innovation performance was positively and significantly determined by technology capital (r=606, p=.000), entrepreneurial skills (r=.580, p=.000), structural capital (r=.486 p=.000), human capital (r=.399, p=.000) and customer capital with (r=.332, p=.000).These statistics translated to a confirmation that human resources in the youth enterprises in terms of their skills, knowledge, attitude ,experience among other capabilities contributed to the innovation levels evident in those enterprises. The staff were able to reach out to new customers and even develop new products out of their long experience in their areas of specialization. One of the youths running an information technology firm stated clearly that;

> Everyone brings his or her own expertise and it really gives the business an upper hand on service delivery and also getting more customers and also qualified staffs are mostly proficient so they know what to do and also in solving a problem in case it rises the qualified ones give correct and convenient information that builds you well and help to have the correct strategies.

According to the study findings, technology capital appeared as the most important determinant of the innovation performance of youth enterprises Kenya. This is in conformity to Fernandez et al. (2000) who argued that technology capital includes knowledge related to access, use of innovation of production techniques and products thus it is very crucial in innovation processes. According to Bueno *et al* (2006) Technological capital is the set of intangible assets which is based on innovation and technical processes meaning: for an enterprise to come up with new products or do things in a new way, technology is of essence. It is further described as a product of technological knowledge by Ramirez (2010) as a combination of knowledge related to the development and technical systems of an organization which brings forth innovations in an enterprise.

Entrepreneurial skills closely followed the technological capital in importance in regards to determining the level of innovation performance in the youth enterprises. These skills include the communication and decision making in this study. The study concluded that when youth entrepreneurs possess excellent communication skills they can make timely decisions for their enterprises which involved changing the way business is conducted thus promote the aspect of the innovation. This is supported by a study carried out by Ngari and Kagiri (2013) on intellectual capital or intangible assets which concluded that employee's knowledge and capabilities are very important sources of innovation.

The structural capital was ranked third in the ability to determine innovation performance of the youth enterprises in Kenya according to this study. It was concluded that structural capital being the supportive infrastructure that enhances other resources, Hosnavi (2011) stresses that Structural Capital consists of the supportive infrastructure, processes, and databases of the organization that enables human capital to function. Customer and human capital assumed little ability to determine the level of innovation in this study among youth enterprises in Kenya. Some respondents argued that staff education level may not very important for innovation to take place. He confessed that;

> Academic qualification is key but for me, I kind of think that innovation is something that comes from inside coz so many people are educated but they can't think of something or an idea, me I get new customers and I am not that educated.

The correlation between all the elements of intellectual capital and innovation performance were positive and significant at .05 significance (2-tailed).The results, therefore, support the hypotheses.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The purpose of the study was to establish the determinants of innovation performance among youth enterprises in Kenya in dimensions of human, structural, customer, and technological capital alongside entrepreneurial skills. The results of the study were indicated by the new products introduced in the business, the new markets that were reach into and the patents or trademarks obtained among the youth entrepreneurs. This chapter presents the summary, conclusion and the recommendations for further research on the determinants of innovation performance in youth enterprises in Kenya.

The ultimate goal was to come up with a model that would help the policy makers to make the appropriate decision in administering any financial support to the youth in order to make them promote innovation which will eventually enable the youths to run profitable and sustainable enterprises which will create more employment opportunities in Kenya

5.2 Summary

The study sought to establish the determinants of innovation performance in youth enterprises in Kenya. This was done based on how intellectual capital in dimensions of human, structural, customer, and technological capital alongside entrepreneurial skills determine the ability to introduce new products, enter new markets, get patents, and trade-marks among other forms of innovation in youth enterprises in Kenya. Therefore, the study was useful for the youth enterprises because they can solve problems that emanate from placement of intangible assets such human capital, structural capital, customer capital, technological capital, and entrepreneurial skills as determinants of innovation performance and the challenges encountered in providing reliable and

sufficient information to policy makers in regard to economic stimulant engines in creating more employment. The determinants of innovation performance from intellectual capital perspective were established by critically examining the six objectives in this study which included: establishing how human, structural, customer, technological capital and entrepreneurial skills determine innovation performance in youth enterprises in Kenya having loan processing procedures and requirements as an intervening variable.

Descriptive statistics, Pearson correlation and multiple regression analysis were used to analyze the six objectives. A sample survey of 223 youth entrepreneurs with a response rate of 72 percent was carried out among youth entrepreneurs so as to address the six objectives in establishing the determinants of innovation performance in youth enterprise in Kenya. A structured questionnaire with variable measures based on five-point Likert scale was used as data collection instrument. The social statistical package (SPSS) version 21 was used in doing explanatory correlation, regression, and principal component analysis. Human, structural, customer, technological capital and entrepreneurial skills were found to be significant within 95% confidence interval. Human, structural, customer, technological capital and entrepreneurial skills positively and significantly influenced introduction of new products, entry into new markets and patents in the youth enterprises with entrepreneurial skill, technological and structural capital forming the optimum model due to their high level contribution to innovation. The study results conformed to similar studies that were done in Turkey and Germany. The results for each of the six objectives were summarized as follows as per their specific findings.

5.2.1 Objective 1

To investigate how human capital determines innovation performance in youth enterprises in Kenya.

Human capital explained 13.9% variance of innovation performance in youth enterprises in Kenya. The research showed that human capital was second last in importance among six variables. Rather it was not a key determinant of innovation performance as far as youth enterprises in Kenya are concerned. This could be attributed to the fact that majority of the enterprises were ran by the owners and because of their sizes they were not having other employees. Many did not require specific skills and experience to run their businesses while these were the key things that the study was looking for regarding human capital. This was in disparity to a study done on pharmaceutical firms measuring the growth of the firms where human capital had the greatest influence on growth. In this case it was clear that specific skills were a must for people to work in a pharmaceutical firm as opposed to trade industry where a good number of the youths operated in this study. The study maintained that human capital has a level of ability to determine innovation performance through the level of education because the youths who had acquired a diploma and above displayed more knowledge in the market and could easily reach out to new markets especially with the support of technology.

Correlation analysis was done, and the results revealed that human capital and innovation performance had a weak positive linear correlation. The regression was significant since the alternative hypothesis that $\beta 1=0$ was accepted which implied that human capital had a significant influence on innovation performance in youth enterprises in Kenya. Basic education was of great importance to all the entrepreneurs. This is in conformity with O'Reilly and Tushman (2004) who suggested that investment in education may reflect a higher ability to create or improve new knowledge and skills. They also highlighted that knowledge and skills of employees are basic requirements for generating new and creative ideas. One of the respondents running a saloon business commented on her employees' level of education and said that:

The employees with high education are able to come up with new hair styles and satisfy the customers. They are also able to interact with the customers properly which ensures repeat business

It was therefore revealed that education enhanced communication skills. The results of study further indicated that those who had received formal training in hair dressing were more efficient and managed customer relations in a better way than those who were merely talented and had no formal training. Human capital in view of processes that relate to training, education and other professional initiatives to increase the levels of knowledge, skills, abilities, values, and social assets of an employee lead to the employee's satisfaction and performance, and eventually on a firm performance (Marimuthu, Arokiasamy & Ismail., 2009).This study has confirmed that knowledge is positively related to innovation success in the process of value creation, but there is a lack of sufficient information about the elements that mostly can contribute to this success Miguel *et al*. (2011).The exposure that the youth entrepreneurs have been given through the youth enterprise development fund through training has greatly changed their mind set in regard to running profitable and sustainable businesses.

5.2.2 Objective 2

To establish how structural capital determined innovation performance in youth enterprises in Kenya.

In this study structural capital had a relatively high influence on the level of innovation among the five independent variables in youth enterprises in Kenya. Structural capital in this study was relatively a key element of the intangible assets in determining the level of innovation performance in youth enterprises in Kenya. It explained 22.4% of the variance of innovation performance in youth enterprises in Kenya. Structural capital referred to the infrastructural support system that helped in the utilization of other resources, and therefore, the patterns of interaction between human capital, technology capital, and customer capital determined the innovation and creativity model of an

enterprise. The study established that structural capital determined innovation performance in youth enterprises through corporate culture, training programs, databases, and structural capital belongs to the enterprises even after the employees leave the organization.

Correlation analysis gave consistent results that indicated a strong positive correlation between structural capital and innovation performance. The regression was significant since the alternative hypothesis that $\beta 2 \neq 0$ was not rejected. This implied that the corporate culture, the training programs, databases had a significant role of facilitating the use of available knowledge resources thus determined innovation performance in youth enterprises in Kenya and helped the youths reach out to new markets as well as introducing new products in their businesses. This conformed to a study that was done by Moon and Kym (2006) who stated that structural capital facilitated the use of available knowledge resources. This support role played by structural capital can either support or inhibit creativity and innovation, depending on how they influence the behavior of individuals and groups.

5.2.3 Objective 3

To establish how customer capital determined innovation performance in youth enterprise in Kenya.

The study findings showed that customer capital was the least important element of intangible assets that determined the level of innovation performance in youth enterprises in Kenya. The results indicated that customer capital explained 10.4% of the variance of innovation performance in youth enterprises in Kenya. The study established that customer loyalty, customer knowledge, and basic marketing skills determined introduction of new products and entry into new markets very minimally in this study.

Correlation analysis results revealed that in this study, customer capital and innovation performance indicated relatively weak positive linear correlation. The regression analysis was significant because the alternative hypothesis was true that $\beta 3 \neq 0$.The

implication was, therefore, that customer capital has a significant ability to determine the level of innovation performance in youth enterprises in Kenya. These results conform to (Ngugi *et al* 2012:Kanter, 1983, 1985; Nahapiet & Ghoshal, 1998) in that product innovation requires the firm to have competences relating to technology and relating to customers. It is further stressed that someone who has built a degree of social capital that can be successfully used to build a network of support around the innovation.

5.2.4 Objective 4

To explore the role of technological capital in determining innovation performance in the youth enterprises in Kenya.

The results of this study showed that technological skills, facilities and information management systems were the most important among the intangible assets that were considered in this study as determinants of innovation performance in youth enterprises in Kenya. The results indicated that technology capital explains 36.3% of innovation performance in youth enterprises in Kenya. This established that technology capital determined innovation performance through technological skills, technological facilities and information management systems. It was noted that through devices like computers, phones, printers among others, it was very easy for the youth entrepreneurs to make easy payments for goods and service especially through money transfer agent like Mpesa, acquire new knowledge about the market and they were also able to introduce new products. Advertising of the products through social media platforms was a great boost to the enterprises due to the convenience enjoyed. However it was noted they were not able to get important information touching on patenting yet it is available in the internet. This was attributed to low level training and non-operational training programs by the youth enterprises development fund initiative.

Correlation analysis revealed the results of this study that technology capital and innovation performance indicated a strong positive linear correlation between

technology capital and innovation performance. The regression analysis was significant because the alternative hypothesis was true that $\beta 4 \neq 0$.The implication is therefore that technology capital has a significant ability to determine the level of innovation performance in youth enterprises in Kenya. It, therefore, conformed to a study done by Ramirez (2010) indicating that technology capital is a combination of knowledge related to the development and technical systems of an organization. Technological capital is based on the activities and functions of both internal and external scope which are linked to the development of products and services of the organization.

5.2.5 Objective 5

To establish the role of entrepreneurial skills determine innovation performance of the youth enterprises in Kenya.

Entrepreneurial skills in this study were ranked second most important determinant of innovation performance in innovation performance in youth enterprises in Kenya. It explains 32.4 % of the variance of innovation performance in youth enterprises in Kenya. Entrepreneurial skills are the support system that helped in the utilization of other resources regarding communication, decision-making skills and, therefore, the patterns of interaction between human capital, technology capital, and customer capital catalyzed Entrepreneurial skills by determining the innovation and creativity pattern of an enterprise. The study established that Entrepreneurial skills determined innovation performance in youth enterprises through communication skills, decision-making skills and ability to take risks. With great support of the technology the youths were able to make prompt decisions concerning their daily operations which translated to new products and new customer base thus expanded their market share consistently.

Correlation analysis gave coherent results that indicated a strong positive correlation between Entrepreneurial skills and innovation performance. The regression was significant since the alternative hypothesis that $\beta 5 \neq 0$ was not rejected. This implied that Entrepreneurial skills had a significant role in facilitating the implementation of

knowledge possessed by the employees and owners, thus determined the innovation performance in youth enterprises in Kenya. This conformity with a study done which established that Entrepreneurial skills enhance management of human capital in terms of skills, attitudes, and knowledge by (Ndirangu & Mukulu 2013; Prahalad & Hamel, 1990; Zack, 1999). This helps in empowering the human capital in an organization. The fact that the youths knew that entrepreneurship highly involved risk taking, it made them take calculated risks when entering new market or even engaging people they did not physically meet but were their customers in one way or another.

5.2.6 Objective 6

To investigate the role of loan accessibility procedures and requirements on innovation performance of youth enterprises in Kenya.

Loan processing requirements and procedures in this study had a unique role that was also important as an intervention between all other independent variables for the determination of innovation performance in youth enterprises in Kenya. It explained complete intervention of the relationship between human capital and the innovation performance of youth enterprises in Kenya. Loan processing is a key measure since the study involved only the youth enterprises that have benefited from the youth fund, and if the processing is done well, then it speeds the process of innovation as hypothesized. The study established that there was a complete mediation with human capital. All the others variables which included structural capital, customer capital, technology capital and entrepreneurial skills experienced a partial mediation with loan processing requirements and procedures in determining the level of innovation performance in youth enterprises in Kenya. The study established that loan processing intervenes in innovation performance in youth enterprises through access to the information, loan application processes and the time taken before a loan is disbursed.

Correlation analysis gave coherent results that indicated a strong positive correlation between human capital, structural capital, customer capital, technology capital and

entrepreneurial skills and innovation performance with the intervention of the loan processing requirements and procedures. The regression was significant since the alternative hypothesis that $\beta 6 \neq 0$ was not rejected. This implied that loan processing requirements and procedures had a significant intervening role in facilitating the accessibility of loan facilities which consequently supported innovation performance in youth enterprises in Kenya. This was conforming to a study done by Odhiambo (2012) which established that the number of successful applicants remained at 50% of the total applicants which concurred with the findings that accessing YEDF loan was still a challenge to young people and recommended more involvement for all stakeholders in mobilizing youths.

5.3 Conclusion

The objectives of the study were tested in this study and all the independent variables that are: human capital, structural capital, customer capital, technology capital, entrepreneurial skills and one intervening variables which are loan processing requirements and procedures. The results indicated that they all had a significant effect on the level innovation performance in the youth enterprises in Kenya.

5.3.1 Objective 1

To investigate how human capital in determining innovation performance in youth enterprises in Kenya.

The objectives of the study were achieved as indicated by the results. The study had human capital as the first independent variable which had education level, work experience, and skills as sub-variables. The results indicated that youth enterprises experienced more innovation due to the education level of the employees. However, there was more to count on their experiences and skills than in education level for both employees and the owner managers. It was therefore concluded that irrespective of the level of education the experienced and skillful youth had higher levels of innovation in

their enterprises. The need to improve the skills was reflected in the results since the human capital was ranked as the least important determinant of innovation performance.

5.3.2 Objective 2

To establish the role of structural capital in determining innovation performance in youth enterprises in Kenya.

The second variable was structural capital which had three sub-variables which included corporate culture, programs, and database. Regarding the corporate culture, the results indicated that youth enterprises had the freeway of sharing information which enables quick decision-making and problem-solving consequently resulted in better innovation performance in the enterprises. The culture of quick decision making was highly practiced in the youth enterprises which determined the level of innovation to a great extent. The programs in the youth enterprises especially training programs were not very established as the majority did not have any regular training programs. The majority had only received the training that was done before they were funded. The changes that have occurred in different industries are easily known through refresher trainings which were not evident and made the young entrepreneurs to remain behind in terms of new market trends and even the new ways of doing business especially protecting their intellectual property. The results for the next sub-variable showed the good influence of databases on the level of innovation. Whether electronic or manual database, the youth enterprises had an excellent report on the same. The need for digital databases was greatly observed from the results in this objective.

5.3.3 Objective 3

To establish the role of customer capital in determining innovation performance in youth enterprise in Kenya.

The third variable was customer capital which had three sub-variables which included customer loyalty, customer knowledge, and basic marketing capability. The results for customer loyalty indicated that most of the customers were regular, and a healthy

relation between youth entrepreneurs and their customer contributed very highly to the level of innovation regarding getting to new markets and new products. The frequent customers kept asking for new products so that they could do their shopping under one roof and this kept the enterprises introducing new products Customer knowledge also played a key role in determining how innovative youth enterprises were, in that, by calling them by their names they felt important and kept coming for repeat business. Since majority of them knew their customers by names and had their contacts, reaching out to their customers for repeat business or feedback was never a challenge. It was also easy to call the customers when a new stock was brought and they could select the best before other irregular customers could come to buy. This enhanced their marketing abilities .The results for basic marketing capabilities indicated that the youth enterprises were not short of this capability since they devoted considerable time to selecting suppliers and kept a good database for their customers. Constant feedback from the customers either by making random calls or calling specific customers helped the youth to be constantly aware of what the customers needed thus they kept on adding new products and got into new markets through referrals by the older customers. Training on how to conduct business research was however lacking, and the need to address the issues was spelled out through the results.

5.3.4 Objective 4

To explore the role of technological capital in determining innovation performance in the youth enterprises in Kenya.

The technological capital was the fourth variable in this study, and the results indicated that it had the highest influence in determining the level of innovation in youth enterprises in Kenya. It had three sub-variables which included technological skills, technological facilities and the information management systems. The results for the technological skills indicated that ability to use technology among youth entrepreneurs highly enabled them to be innovative. The ability to use smart phones and computers was evident among all youth enterprises, and this helped in diverse ways leading to high

levels of innovation in their enterprises. The results for technology facilities indicated that all were well facilitated technologically, thus were highly innovative. Smart phones, tablets and computers were the main facilities in youth enterprises as reflected by the results. The results for information management systems indicated that little was requiring information management in youth enterprises since the businesses were still small.

5.3.5 Objective 5

To establish the role of entrepreneurial skills in determining innovation performance of the youth enterprises in Kenya.

The fifth variable was entrepreneurial skills which emerged as the second best among all the variables in determining the level of innovation performance in youth enterprises in Kenya. It had three sub-variables which included the communication skills, decision-making skills, and propensity to risk-taking. The results for communication skills were indicating that when youth entrepreneurs are well equipped with communication skills they were able to share ideas and business information in a more timely and accurate way which consequently increased innovativeness in their enterprises. It also boosted their ability to get to new markets by establishing networks for business transactions. The results for decision making indicated that prompt and correct decision highly determined the ability to innovate among youth entrepreneurs. The decision to reward new ideas, outreaches had great influence in getting more innovations among staff. It was noted that the entrepreneurs who had experience in their areas of operation were better placed in marketing their products or service in a more strategic way and therefore having experience ,relevant skills and being trained in a particular areas made the youth enterprises experience higher level of innovation. Their ability to communicate effectively and decisiveness are clear basis of their expansion to new areas and acquisition of new customers.0The results for propensity to take risk indicated that

majority youths were only ready to take risks cautiously thus more training on entrepreneurship was required.

5.3.6 Objective 6

To investigate the role of loan accessibility procedures and requirements on innovation performance of youth enterprises in Kenya.

The last variable was an intervening variable which was loan processing procedures and requirements. It had three sub-variables as access to information, application process and disbursement time. The results for access to information concerning the loan fund indicated that it was easy since it was available through the internet, print media, and social media. The results for application process indicated some level of complexity. However, adequate support from the youth fund staff was availed and therefore, it was not a challenge. The time for disbursement was found to be uncertain, and eventually, it was concluded as long.

5.3.7 Dependent variable: Innovation performance

The results for the dependent variable which was innovation performance indicated that all the independent variables determined the level of innovation performance, while the intervening variable which was loan processing mediated their relationship completely as far as human capital was concerned. With the other four independent variables, there was partial mediation. Innovation performance had three sub-variables which included new products, new markets and patents and trademarks. The results for new products indicated that the young entrepreneurs were able to introduce new products in their businesses consistently due to their ability to create good networks through technological capital which took the lead in determining the level of innovation in this study. Use of technology also supported heavily in reaching out to the new markets as well. The results for patents and trademark indicted little knowledge on how to carry out the legal procedure to do patenting. Original ideas and product development was evident

especially in the arts and craft, but they had not patented. All the variables were significantly determining the level of innovation in the youth enterprises in Kenya

The study finally established that youth enterprises in Kenya were not creating as much employment since the majority were sole proprietors who were operating at owner-manager level. It was also established that technological, structural capital and entrepreneur skills were the key determinants of innovation performance in youth enterprise in Kenya forming the optimal econometric model but that did not rule out the role of other variables in determining innovation performance. The majority of the youths were in the service industry where technology and relevant knowledge and skills were quite important though many of them were not able to provide direct employment to others apart from themselves. Money transfer such as M-pesa and banking agencies which were a major class of the enterprises ran by the youths did not require very educated or very skilled workforce thus the human capital had very little contribution in determining the level innovation in youth enterprises.

The results of this study demonstrated that with youth enterprises human and customer capitals were not very important determinants of innovation probably because the sizes of their businesses were quite small. In this study structural capital takes the third position among five independent variables in determining the level of innovation in youth enterprises in Kenya. The role of structural capital was quite important as it is a supportive infrastructure. Technological capital and entrepreneurial skills scored highly in this study as determinants of innovation. The theory of knowledge spillover being a theory of entrepreneurship in which the creation of new knowledge expands the technological opportunities fully manifested as a true anchor for this study. The entrepreneurial activity does not involve the arbitrage of opportunities simply, but the exploitation of knowledge spillover not appropriated by targeted firms. The Knowledge Spillover Theory of Entrepreneurship shifts the fundamental decision-making a unit of

analysis in the model of economic growth away from exogenously assumed firms to individual agents with endowments of new economic knowledge.

The elements of intellectual capital which included human, structural, customer, technological capital and entrepreneurial skills were emphasized as determinants of innovation performance in varying degrees in youth enterprises in Kiambu County in Kenya.

5.4 Recommendations of the study

The results showed that youth enterprises need to embrace the intangible assets such as technology, entrepreneurial skills, structural capital, customer capital and human capital as an intervention for the promotion of innovation. This will ultimately boost expansion regarding new products, markets, and patents/trademarks. As a consequence chances of creating new jobs will be enhanced thus solving the problem of unemployment as envisaged in Vision 2030 in Kenya. On the contrary youth enterprises will continue operating at a survival level which will not help in solving the problem of unemployment which is currently facing the developing world Kenya included. The results and the findings of the study indicated that levels of innovation can be improved by the five components of intellectual capital because they all had a positive relationship with innovation performance in the youth enterprises.

5.4.1 Objective 1

To investigate role of human capital in determining innovation performance in youth enterprises in Kenya.

Results from human capital indicated that basic education was key to the operation of the enterprise irrespective of the sector. It was observed that the higher the level of education the more innovative the youth become. Skills such as decision making and commutation are directly affected by someone's exposure to education. It also helps them to understand a business concept in a clearer way and can take calculated risks.

5.4.2 Objective 2

To establish the role of structural capital in determining innovation performance in youth enterprises in Kenya.

Regarding structural capital the results indicated youth enterprises in Kenya need to improve on the training programs because they hardly had and training after they were given the loans. The study revealed that the training that was given was also very shallow and was given with an intention of making them qualify for the loans. The structured training program was therefore recommended to help to keep them updated in entrepreneurial skills. Corporate culture could not be clearly identified primarily because a vast number of enterprises were operated by the owners thus personal characteristics of the entrepreneur over-shadowed what would be termed as organization culture.

5.4.3 Objective 3

To establish the role of customer capital in determining innovation performance in youth enterprise in Kenya.

The findings and the results touching on customer capital indicated the need to improve on basic marketing ability so as to reach out to the new market at local and international level. This was particularly noted in the craft industry where very original ideas had not been patented, and the unique items were only sold locally. The majority of the youth enterprises were in the service industry which is customer sensitive due the direct involvement with the clients in daily operations. Improvement on customer knowledge was highly recommended to beat competition.

5.4.4 Objective 4

To explore the role of technological capital in determining innovation performance in the youth enterprises in Kenya.

Technological capital which involved technological skills, facilities and management information systems (MIS) emerged as the greatest determinant of innovation performance in the study but the need to improve on information management systems was clearly seen. Outsourcing the management system and cloud computing was recommended before the enterprises grow bigger to afford their information management systems. The need for the MIS was not evident in majority enterprises but the need to grow their businesses was recommended and as a result better ways of managing the information will be required. Through the growth, more employment opportunities will be created, and this will solve the problems of idleness, radicalism, and alcoholism and drug abuse among youths.

5.4.5 Objective 5

To establish the role of entrepreneurial skills in determining innovation performance of the youth enterprises in Kenya.

The results for entrepreneurial skills indicated the need to improve on risk taking propensity. Most of them were too cautious in venturing into new markets and even introducing new products. This could be traced from using the borrowed funds, and they feared that the business would fail which may lead to failure to pay the loans. More training after the loan disbursement was recommended to increase their ability to take calculated risks. This will help them make informed decisions without losing to their competition which has older and more experience but with less ability to use technology.

5.4.6 Objective 6

To investigate the role of loan accessibility procedures and requirements on innovation performance of youth enterprises in Kenya.

At the policy level, more funds need to be allocated for boosting entrepreneurial skills so as to enhance decision-making skills, communication skills and risk-taking propensity as found in the study. This was informed by the fact that youth enterprise

development fund as an economic stimulating initiative has emphasized more on disbursement, and little attention is given to training the youth entrepreneurs. The training given is pegged to disbursement and is done in a hurried way and some cases it was not even done. The support given by the youth fund staff was more inclined to application process as opposed to business advice. Bearing in mind the innovation requires extraordinary creativity, a culture of free sharing of ideas among youths need to be cultivated through exchange programs and exhibitions at county, national and international levels besides increase in the amount of funds was recommended in this study

5.5 Suggestions for further research

Youth enterprise specifically those that have benefitted from a state economic stimulating initiative was the focus of this study. Further research may be carried out to cover other youth enterprises or even other state initiatives touching other categories besides the youths. Other scholar may also use control variables such as the size of the enterprises which was not utilized in the study models. In this study, only the new products, markets, and patents/trademarks were used as the measures of innovation performance. Further research may be conducted using other measures such as diversification and firm sizes. The study involved the owner managers and their spouses and where applicable the general managers. This could have limited the information released due to the level of ownership. Further research may include the youth fund officers and the employees of the organizations, and this would enrich the quality of the data collected. Further research may also be carried out using other components (variables) of intellectual capital such as process capital, research, and development, the market capital. All the youth enterprises are recommended for any future research besides those that have been funded by the youth enterprises development fund.

The study recommends further research in other counties especially those which are in the rural areas as well as those that purely urban like Nairobi County. Further research

may also be done on the same but using other variables related to the intangible assets or intellectual capital other than human, structural, customer, technological capital and entrepreneurial skills which have been used in this study.

REFFERENCES

Acs, Z. J., Desai, S., & Hessels, J. (2008). Entrepreneurship, economic development and institutions. Small business economics, 31(3), 219-234.

Ahuja, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. Administrative science quarterly, 45(3), 425-455.

Alexander, N., & Colgate, M. (2000). Retail financial services: transaction to relationship marketing. European Journal of marketing, 34(8), 938-953.

Amenya S., Langat C., Maru, L., & Chepkwony J. (2012) Youth enterprise development fund (YEDF) and growth of enterprise at constituency level in Kenya. *European Journal of Economics, Finance and Administrative Sciences 54,*175-182

Amenya S., Onsongo O. & Guyo, H.O. (2006).An analysis of the challenges facing Youth Enterprise Development Fund: A case study of Nyaribari Chache Constituency Kenya. *A paper presented at the African Institute of Business and Management Conference, University of Nairobi.*

Amenya, S. (2011). An Analysis of the Challenges Facing Youth Enterprise Development Fund: A Case Study of Nyaribari Chache Constituency, Kenya. *International Journal of Education and Research 1* (5), 175-181

AMFI (2012). *Annual Report* .Nairobi.

Anne, L. (2012). Intellectual Capital, Innovation and Performance: a Systematic Review of the Literature. *Business and Economic Research 2 (1), 1-37*

Annelies U., Joris K. & Patrick V. (2014). Human capital and innovation in developing countries: a firm level study. Institute for Management Research Radboud University: Nijmegen Retrieved from https://www.amazon.com/Human-Capital-Theoretical-Empirical-Reference/dp/0226041204.

Argyris, C., & Schön, D. A. (1978). *Organizational Learning: A Theory of Action Perspective*. Sanfrancisco Jossey Bass .MA: Addison-Wesley.

Armstrong, M.A. (2004). *Handbook of Human Resource Management Practice*. London. Kogan Page.

Audrey P. N. (2016). The Impact of Technology and Innovation (Technovation) in Developing Countries: A Review of Empirical Evidence. *Journal of Business and Management Sciences 4* (1)7-11.

Ballot, G., Fakhfakh,F., & Taymaz, E. (2001). Firms' Human Capital, Research & Development and Performance: A Study on French and Swedish Firms. *Labor Economics, 8*(64), 443-462.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.

Barringer, B. R., & Bluedorn, A. C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal, 20,* 421-444.

Bartlett, M. S. (1937). Properties of sufficiency and statistical tests. Proceedings of the Royal Society of London. Series A, Mathematical and Physical Sciences, 268-282.

Becker, G. (1975). *Human Capital. (*2nd ed).New York: Columbia University.

Beer, M., Spector, B., Lawrence, P.R., Mills, D.Q., & Walton, R.E. (2008). *A Conceptual View of HRM. in Managing Human Assets.* New York: Free Press.

Berry, L.L. (1995). Relationship marketing of services: growing interest, emerging perspectives, *Journal of The Academy of Marketing Science, 23* (4), 236

Bollen, L., Vergauwen, P., & Schneider, S. (2005). Linking intellectual capital and intellectual property to company performance. *Management Decision, 43* (9), 1161-85.

Bontis, N., Know,W.C.,& Richardson, S.(2000). Intellectual Capital and Business performance in Malaysian industries. *Journal of Management Intellectual Capital .1* (1), .85-100.

Bueno, E., Salmador, M.P., Rodriguez, O., & De Castro, G.M.(2006). Internal Logic of Intellectual Capital: A Biological Approach, *Journal of Intellectual Capital, 7* (3), 394-405.

Bwisa, H., & Gathenya J. (2011). Influence of Entrepreneurial Orientation on Kenya's Manufacturing Firms Operating Under East African Region Integration. International *Journal of Learning and Development Retrieved http://search.conduit.com/results.aspx?q=professor+bwisa++and++Gathenya+2011+publication&Suggest=&stype=Results&FollowOn=True&SelfSearch=1&SearchType=SearchWeb&SearchSource=10&ctid=CT2475029&octid=CT2475029.*

Cabrita , M.,& Bontis, N.(2008). Intellectual capital and business performance in the Portuguese banking industry. *International Journal of Technology, 43*(1-3), 212-37.

Calvo G., Alejandro I, & Ernesto T (2006). Sudden Stops and Phoenix Miracles in Emerging Markets," *American Economic Review, American Economic Association, 96(2), 405-410.*

Cearns , K.(1999). Accounting for the Intangible *Accountancy* 124(1271), 82-83. Retrieved from http//proquest.umi.com.

Cheng, L.K., & Tao. Z. (1999). The impact of public policies on innovation and imitation: The role of R & D technology in growth models. *International Economic Review.40 (1),187-207* htt://dx.dol.org.

Chesbrough, H. (2003). *Open innovation. The new imperative creating and profiting from technology.* New York*:* Harvard Business School.

Chingunta, F. (2002).Youth Entrepreneurship: Meeting the key policy Challenges. *Dissertation* London: Oxford University.

Choudhury, J. and Mishra, B. (2010). "Theoretical and Empirical Investigation of Impact of Developmental HR Configuration on Human Capital Management".*International Business Research, 3*(4), 181–186.Retrieved on 27/09/2016 from http://www.iises.net/download/Soubory/IJOBM/V2N4/pp80-96_ijobm_V2N4.pdf

Cochran, W. G. (1977). *Sampling Techniques (3rd Edition).* New York: John Wiley & Sons.

Cohen, W., & Leviathan, D. (1989). Innovation and Learning: the two faces of R &D, *Economic Journal* 99(397), 569-596.

Cooper, R.D., & Schindler, P. (2006). *Business Research Methods* New York McGraw - Hill.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests, *Psychometrika, 16, 297– 334.*

Crossan, M. M. & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation*: A systematic review of the literature. Journal of Management Studies, 47(6), 1154-1191*

Crossan, M., White R.E., Lane H.W., & Klus L. (2006). The improvising organization: where planning meets opportunity. *Organization Dynamics*, 2006; 24(4), 20-34.

Detecoinnovation (2014). *Innovation performance measurement assessing and driving innovation performance of companies.* Retrieved from http://innovationcentre.deteconusa.com/articles/innovation-performance-measurement-assessing-and-driving-the-innovatin of-companies.

Drucker, P.F. (2004). *Innovation and Entrepreneurship: Practice and principles.* London Elsevier Butterworth Heinemann.

Eberhart, A.C., Maxwell, W.F., & Siddique, A.R.(2004). An Examination of Long-Term Abnormal Stock Returns and Operating Performance Following R&D Increases. *The Journal of Finance* 59(2), 623–650.Retrieved from http://onlinelibrary.wiley.com.

European Commission (2006). *Reporting Intellectual Capital to augment research, development and innovation in SMEs. Report to the commission of the high level expert group on RICARDS. Encourage corporate measuring and reporting on research and other forms of intellectual capital.* Europe Commission.

Fernández, E., Montes, J. M., & Vázquez, C. J. (2000). Typology and strategic analysis of intangible resources: A resource-based approach. *Technovation*, *20*(2), 81-92.

Fernandez, R. M., & Castilla, E. J. (2001). How much is that network worth? Social capital in employee referral networks. *Social Capital: Theory and Research*, 85-104.

Foil, C.M. (1996). Squeezing harder doesn't always work; continuing the search for consistency in innovation research. *Academy of Management Review,* 21 (4),1012-1021.

Fombrun, C., & Shanley, M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of Management Journal*, *33* (2), 233-58.

Fornel ,C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing, 56, 6-2.*

Frederiksen, B. F., & Munive, J. (2010). Young men and women in Africa: Conflicts, enterprise and aspiration. *Young*, *18*(3), 249.

Gakure , R.W. (2012). *Issues impacting on Growth of Women Owned enterprises in Kenya. Paper presented at Shifting Gears in Women Enterprises Conference.* Durham University, UK September 2001.

Gathenya J. (2012). Gathenya, J. W. (2013). *Entrepreneurial Strategic Planning Practices and Firm Performance among Women-Led Small and Medium Enterprises in Kenya* (Doctoral dissertation). Nairobi: JKUAT

Gibb, A. (2009), "The small business and entrepreneurship challenge to vocational education: Revolution or evolution?", paper presented at the OECD Conference

on SMEs, Entrepreneurship and Innovation, Udine, Italy, 22-23 October 2009, OECD LEED Programme, Paris.

Grant, R.M. (1991).The Resource-Based Theory of Competitive Advantage*:* Implications for Strategy Formulation. *California Management Review, Spring:* 114-135.

Grant, R.M. (1996a). Prospering in dynamically- competitive environments: organizational capability as knowledge integration. *Organization Science, l7,375-387.*

Grant, R.M. (1996b). Toward a knowledge-based theory of the firm. *Strategic Management Journal, 17,109-122.*

Griffith, R., Huergo E., Mairesse, J., & Peters, B. (2006). Innovation and Productivity Across Four European countries. *Oxford Review of Economic Policy, 22 (4), 483-498.*

Hemans,R., & Kauranen, I. (2005). Value Creation Potential of Intellectual Capital in Biotechnology-Empirical evidence from Finland. *Research and Development Management,* 35(2), 171-185.

Henrik, A., Susanne H., Leif-Magnus J., Veronika & P., Benedikte B., (2012). The development of extended service models through business relationships: A Swedish trucking industry study. *Paper presented at the 21st IPSERA Conference, Naples.*

Hill, T. (1987). *Small Business Production/Operations Management.* London: Macmillan Education Ltd.

Hosnavi, R., & Ramezan, M. (2011). Intellectual Capital and Organizational Organic Structure How are these Concepts Related?. *Trends in Applied Sciences Research*, *6*(3), 256.

Hosnavi, R., & Ramezan, M. (2011). Intellectual Capital and Organizational Organic Structure How are these Concepts Related?. Trends in Applied Sciences Research, 6(3), 256.

Integral Assets Consulting, Inc. (2006).Youth entrepreneurship: Theory, Practice and Field Development. Youth Entrepreneurship Background Paper Retrieved from http://extension.missouri.edu/exceed/documents/YouthEntrepreneurshipKellogg Foundation 2007.pdf

Kanyari, J. W., & Namusonge, G. S. (2013). Factors that influence the Kenyan youth entrepreneurs towards the youth enterprise development fund: a case study of Gatundu South District, Kenya. *International journal of Education and Research*, *1*(5), 97-128.

Khalique, M., Bontis, N., Abdul, J., Abu, S., & Isa, H. (2015). Intellectual capital in small and medium enterprises in Pakistan Journal of Intellectual Capital 16(1), 224–238

Kiraka R., Kobia M., & Katwalo,A.(2013). *Micro, Small and Medium Enterprise Growth and Innovation in Kenya: A Case Study on the Women Enterprise Fund*. Retrieved from http://www.strathmore.edu/pdf/Final-Research-Report-TA-11-056.pdf.

Kline, P. (1999). *The handbook of psychological testing* (2nd ed). London: Routledge. Retrieved http://www.montgomeryschoolsmd. org/departments/sharedaccountability/reports/2008/SafeSchools_2008-08-25.pdf

Kothari, C. R. (2007). *Research Methodology – Methods and Techniques*. New Delhi: New Age International Publishers.

Kothari, C.R. (2004). *Research methodology: methods and techniques,* New Delhi: New Age International.

Lerro, A., & Schiuma G. (2008). Intellectual Capital and Company's Performance Improvements in *Measuring Business Excellence*, 12(2), 3-9.

Lev, B. (2001). *Intangibles: Management, Measurement and reporting.* Washington DC: Brookings Institution Press.

Magnani, R. (1997). *Sampling guide. IMPACT Food Security and Nutrition Monitoring Project;* Arlington, Va.

Marimuthu, M., Arokiasamy, L. and Ismail, M (2009). Human capital development and its impact on firm performance: Evidence from developmental economics', *The Journal of International Social Research, 2 (8), 265-272.*

Mark, S., Philip, L. & Adrian, T. (2009). *Research Methods for Business Students* (5th Ed), New York: Pearson publishers.

Martin, J. A., & Eisenhardt, K. M. (2010). Rewiring: Cross-business-unit collaborations in multibusiness organizations. *Academy of Management Journal*, 53(2), 265-301

Matanda, M., (2007).The role of Human Capital and Entrepreneurial Orientation on Radical Product Innovation in Small Scale Carpentry Workshops in Nairobi .Retrieved from http://www.growinginclusivemarkets.org/media/publications/the_role_of_human _capital _and_entrepreneurial_orientation_on_radical_product_innovation

McClelland, D.C. (1961). *The Achieving society*. Princeton N. J. D. Van Nostrand Company, INC.

Meager, N., Martins, R., & Carta, E. (2011). Skills for self *-employment Evidence report 31, UK Commission for Employment and Skills (UKCES),August 2011* .Retrieved from http://www.employment studies.co.uk/publ/summary.php?-ukces31.

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science* 29 (7), 770-791.

Montgomery, D. C., Peck, E. A. and Vining, G. G. (2001). Introduction to Linear Regression Analysis. 3rd Edition, New York: John Wiley & Sons Retrieved 20/02/2016 from http://www.math.nsysu.edu.tw/~lomn/homepage/class/92/ DurbinWatsonTest.pdf

Muammer, Z., Selcuck B., & Mete S. (2008). Intellectual Capital and Innovation Performance. Empirical Evidence in the Turkish Automotive Supplier. *Journal of Technology Management and Innovation,* 3(4), 31-40

Mugenda, O. M., & Mugenda, A. (2003). *Research Methods – Quantitative and Qualitative Approaches.* Nairobi: ACTS Press.

Muthee M.W. (2010). *Tackling Youth Unemployment in Kenya*. Washington DC: Woodrow Wilson Center.

NACADA (2010). *Annual report* Nairobi: Government printer.

Nachmias, C. F. and Nachmias, D. (2009). Research Methods in the Social Sciences, London, Replika Pr

Nachmias, C.F., & Nachmias, D. (2008).*Research Methods in Social Sciences.*5th (Ed) London: Martin Press.

Narvekar, R., & Jain K. (2006). A new framework to understand the technological innovation process. *Journal of Intellectual Capital, 7,* 174- 186,

Ndirangu, A.N., & Mukulu, E. (2013). Effects of Entrepreneurial Training on the Growth of SMEs in Kangemi Kenya. *Journal of Human Resource and Entrepreneurship Development:* 5(1), 50-56.

Nelson, R.G., & Mburugu. J.B. (1999). Exporting Entrepreneurship. *Vocational Education Journal* 66(5), 34-55.

Ngari, J.M, Kamau, J.N., & Gichira, R.(2013).*Relationship between Intellectual Capital Accounting and Financial Performance: An empirical review of Kenyan ph armaceutical firms*. Retrieved from www.ijsse.org.

Ngari, J.M., Gichira, R.& Waititu A.G. (2012).*Relationship between Intellectual Capital Accounting and Financial Performance: An empirical review of Kenyan pharmaceutical firms*. Doctoral Dissertation): Nairobi: JKUAT

Ngugi, J. K., Gakure, R. W., & Kahiri, J. (2013). Influence of Intellectual Capital on the Growth of Small and Medium enterprises in Kenya. *International Journal of Arts and Entrepreneurship* Retrieved from http://www.ijsse.org Special Issue, 2013.

Ngugi, J.K., Gakure R.W., Were, M. S., Ngugi, P.K., & Kibiru, C. R. (2012). Influence of Intellectual Capital on the Growth of Small and Medium Enterprises in Kenya. *Journal of Business Management and Corporate Affairs* 1(1), 11-19.

Nicholas,W. (2011). *Social Sciences Research Methodology, the basics*. New York: Rutledge.

Nonaka, I.(1994). A dynamic theory of organizational knowledge creation. *Organizational Science. 5*(1), 14-37.

Nunnaly, J. (1978*). Psychometric Theory* (2nd ed). New York: McGraw Hill.

O Reilly, C. A., & Tushman, M. L. (2004). The ambidextrous organization. Harvard business review, 82(4), 74-83.

O Reilly, C. A., & Tushman, M. L. (2004). The ambidextrous organization. *Harvard business review*, *82*(4), 74-83.

Obonyo R., (2013). Reducing youth unemployment in Kenya. Retrieved on 25/04/2015 from http://www.worldpolicy.org/blog/2013/10/15/reducing-youth-unemployment-kenya.

Odhiambo ,O.,Oduol, S.O., Okelo,S., Aila,F. Awiti,A.O., Onyango,M. , & Ogutu,M.(2011). Effect of the Youth Enterprise Development Fund on Youth Enterprises in Kenya. *International Journal of Advances in Management. 2* (1), 111-116.

Orodho, J. (2005). *Techniques of Writing Research Proposals and Reports in Education and Social Sciences*. (2nded.). Nairobi: Kanezja HP Enterprises, Maseno.

Orwa, H. B. (2012). Evolution and Theories of Entrepreneurship: A Critical Review on the Kenyan Perspective .*International Journal of Business and Commerce 1* (11), 81-96

Pan, Y., & Jackson, R. T. (2008). Ethnic difference in the relationship between acute inflammation and serum ferritin in US adult males. *Epidemiology and Infection,* 136(3), 421-431. http://dx.doi.org/10.1017/S0950268807008 31X retrieved on 04/04/2016

Paola D., & Paola P. (2013) "Implementing an intellectual capital framework in practice", *Journal of Intellectual Capital, 14 (1), 69 - 83*

Polanyi, M. (1967). *The Tacit Dimension.* New York: Anchor Books.

Prahalad, C. K., & G. Hamel, (1990). The core competence of corporations. *Harvard Bus. Rev.* 68, 79-91.

Ramı´rez, Y. (2010).Intellectual Capital Models in Spanish Public Sector. *Journal of Intellectual Capital,* 11(2), 248 – 264

Ramírez, Y. (2010). Intellectual capital models in Spanish public sector. *Journal of Intellectual Capital, 11*(2), 248-264.

Republic of Kenya (1999). *National Micro and Small Enterprise – Baseline Survey. Nairobi: Central Bureau of Statistics (CBS), International Centre for Economic Growth (ICEG) and K-Rep holdings Ltd.* Nairobi: Government Printer.

Republic of Kenya (2005). *Sessional Paper Number 2 of 2005 on Development of Micro and small Enterprises for Wealth and Employment Creation for Poverty Reduction.* Nairobi: Government Printer.

Republic of Kenya (2008). *Economic Survey, 2008.*Nairobi: Government Printer.

Republic of Kenya (2009). *Kenya Economic Report, 2009,* Nairobi: Kenya Institute for Public Policy Research and Analysis.

Republic of Kenya (2012). *Economic Survey, 2012.* Nairobi: Government Printer.

Republic of Kenya (2012). *Economic survey report (2012).* Nairobi: Government printer

Republic of Kenya (2013).*Youth Enterprise Development Fund (2013), Status report*. Nairobi: Government Printer.

Robson, J.A.,Hellen M.&Benard O.(2008).Entrepreneurship and innovation in Ghana: *Enterprising African, small BusinessEconomics.*32, 331-350.

Roos, G., Pike S., & Fernstrom, L. (2005).*Managing Intellectual Capital in Practice,* Oxford: Butterworth- Heinemann.

Roos, J., Roos G., Dragonetti N., & Edvinson L., (2007). *Intellectual Capital: Navigating the New Business Landscape.* London: MacMillan Press.

Saleemi, N.A. (2009). *Entrepreneurship simplified. (East African Edition)* Nairobi: ACME press.

Schumpeter, J. (1934). *The Theory of Economic Development*. Cambridge, MAS Harvard University Press.

Schumpeter, J. A. (1936). T*he Theory of Economic Development*. London: Cambridge University Press.

Schumpeter, J.A. (1939). *Business Cycles: A Theoretical, Historical and Statistical Analysis of the Capitalist Process.* New York and London: McGraw-Hill.

Sekaran, U. (2003). Research Methods for Business: A Skill Building Approach (4th ed.). Hudson: John Wiley and Sons.

Senge, P.M. (1990).The Fifth Discipline: the Art of Organizational Learning Systems. New York: Bantam Doubleday Dell Publishing Group.

Singh, K. A., & Krishna, K. V. S. M. (1994). Agricultural Entrepreneurship: The Concept and Evidence. *Journal of Entrepreneurship, 3(1), 97-111*. Retrieved from http://www.ukessays.com/essays/management/relates-to-the-effect-of-change.php.

Souleh, S. (2014). The impact of Human Capital Management on the Innovativeness of Research Center: The Case of Scientific Research Centers in Algeria. *International Journal of Business and Management 2 (4), 2014*

Stewart, T.A. (1997). *Intellectual Capital: The New Wealth of Organizations*: New York. Bantam Doubleday Dell Publishing Group.

Subramanian, M., & Youndt, M.A. (2005). The influence of intellectual capital on the types of innovation capabilities. *Academy of Management Journal, 48* (3), 450-463.

Sullivan, P.H. (2000). *Value -driven Intellectual Capital; How to convert intangible corporate assets into market value*. New York: John Wiley & Sons, Inc.

Talukdar, A. (2008). What is Intellectual Capital. *And Why It Should Be Measured. Mumbai: Attainix Consulting*.

Thorn hill, A., Saunders, M., & Phillip L. (2009). Research Methods for Business Students (5th ed.). London: Pearson education.

Thurik, A.R.(2009). *Entreprenomics: entrepreneurship economic growth and policy in Entrepreneurship, Growth and Public Policy.* London: Cambridge University Press.

Tollington, T. (1997). When is an asset not an asset? Part 3 .*Management Accounting 75* (6), 52-53.

Trott, P. (1998). *Innovation management and new product development. Great Britain Financial Time.* London; Pitman Publishing.

Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of management journal, 44*(5), 996-1004.

Tsai,W.,& Ghoshal S. (1998). Social capital and value creation: The role of intra firm networks. *Academy of Management Journal 41*(4), 464-476.

Tseng, C., & Goo, Y.J. (2005). Intellectual capital and corporate values in emerging economy empirical studies of Taiwanese manufacturers. *Research &Development Management 35*(2), 187-201.

Van Auken, H., Madrid Guijarro, A., & Garca-perez-de-lema, D. (2008).Innovation and performance in Spanish manufacturing SMEs. *International Journal of Entrepreneurship and innovation 8(1) Management 36-56.* Retrieved from http://dx.dol.org.

Van Auken, H., Madrid-Guijarro, A., & Garcia-Perez-de-Lema, D. (2008). Innovation and performance in Spanish manufacturing SMEs. *International Journal of Entrepreneurship and Innovation Management, 8*(1), 36-56.

Venkatraman, N., & Grant, J. (1986). Construct Measurement in strategy research: A critique and proposal. *Academy of Management Review, 11*. 71 - 86.

William, G. Z. (2010). *Business Research Methods*: Indianapolis: Thompson publishers.

Wu, W.Y., Chand, M. L., & Chen, W. C. (2008). Promoting innovation through accumulation of intellectual capital,social capital and entrepreneurial orientation. *Research and Development Management, 38* (3), 265.

Zack, M.H. (1999). Developing a Knowledge Strategy. *California Management Review, 41(3), 125-145.*

Zerenler, H.M. (2008).Intellectual Capital and Innovation Performance: Empirical Evidence in the Turkish Automotive Supplier. *Journal of Technology, Management and Innovation. 3(4), 31-40.*

APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Anne Nyokabi Ndirangu,

Jomo Kenyatta University of Agriculture and Technology,

School of Entrepreneurship, Procurement and Management,

P.O Box 62000 00100

NAIROBI.

Date_____

Name_____

Dear Respondent,

I am a student at Jomo Kenyatta University of Agriculture and Technology, pursuing a PhD in Entrepreneurship. I am to carry out a research in Kiambu County. I kindly request you to participate in this research work through responding to the questions in these questionnaires. The data to be collected is on, **Determinants of Innovation Performance in Youth Enterprises in Kiambu County in Kenya.** The information given will be treated with confidentiality and for academic purposes only.

Thank you in advance.

Yours faithfully,

Anne Nyokabi Ndirangu

APPENDIX II: INTERVIEW GUIDE

1. Explain your work experience? ----------
2. How many workers are there in the organization? ----------
3. What do you learn and enjoy most in your work? ----------
4. Briefly describe the culture in your organization? ----------
5. Explain how innovation is rewarded in your company? ----------
7. Explain customer loyalty in the organization? ----------
8. Kindly tell how customer issues are handled in the organization? ----------
6. Briefly describe the kind of machines you use in your operation and payments.
7. Explain the technological skills required for you to perform your duties.
8. Please let me know whether there is any trainings you have received related to your business?
9. How would you describe your ability to take risk in the business? ----------
10. How did you come to know about the youth funds? ----------
11. What are the conditions given for you to access the loan? ----------
12. Explain how you are involved in product development in the organization.

    ---------- 13. How are new markets penetrated in the organization?

APPENDIX III: QUESTIONNAIRE

i. Name of the business----------
ii. Telephone Contact ----------
iii. Location of the business----------
iv. Age of the business----------
v. Services/products offered----------

vi. Number of employees----------

Please answer all questions *(Tick where applicable)*

vii. What is your gender? Male ☐ Female ☐

viii. What is your age (18-25) (26-30) (31-35)

ix. What is your highest level of academic qualification? Primary ☐ secondary ☐ Diploma ☐ Degree ☐ Masters ☐ PhD ☐

x. What is your marital status? single ☐ married ☐ separated divorced widowed ☐

xi. What is the legal status of the business? Limited company ☐ Partnership ☐ Sole proprietor ☐ any other ☐

xii. Which sub sector does your business belong Agro based { }Service Industry{ } Trade { } other Industries { } Specify.

xiii. What is your current position? Owner manager ☐ spouse ☐ General manager ☐

PART 1: HUMAN CAPITAL

Using a likert scale of

1 Strongly disagree

2 Disagree

3 Neutral

4 Agree

5 Strongly agree, what is your level of agreement with the following statements concerning human capital capabilities?

S/No	Statement	1	2	3	4	5
i	Employees and owners have the right skills for running the business.					
ii	Training of staff has contributed to the accepting of new ways of doing business in the organization.					
iii	Doing work in the right way has contributed to sharing of new ideas among the employees in product development.					
iv	Staff satisfaction is greatly influenced by their involvement in decision making in the organization.					
v	The employees in the company are highly experienced in their roles.					
vi	How well one understands his/her work determines the number of trademarks and patents in the organization.					

7) Explain how staff education level and experience contribute to innovation (the number of new products, entering to new markets or/and trademarks) in the company?

8) Please tick from the scale provided how much knowledge for the market has contributed to staff creativity and innovation.

{1-25%} {26-50%} {51-75%} {76-100%

9) Briefly explain how the academic qualification of the staff recruited determines the level of innovation in the company?

10) In your own opinion which areas of staff development need to be improved for better innovation performance in the company?

PART II : STRUCTURAL CAPITAL

Using a likert scale of 1-5

Strongly disagree

2 Disagree

3 Neutral

4 Agree

5 Strongly agree, what is your level of agreement with the following statements concerning Structural capital in the organization?

S/No	Statements	1	2	3	4	5
i	The company has training programs for those who are likely to take over when senior employees leave the company.					
ii	The motivation package in the business has direct effect of the level of innovation performance.					
iii	Staff involvement in decision making is a source of motivation. And this promotes innovation.					
iv	Employee's skills are regularly improved through internal and external training.					
v	The company recruits people that are well suited for the specific tasks at the right time.					
vi	The company is sure that their structures such as databases are good enough to promote innovation in the company.					

7) Briefly explain how availability of information in the company contributes to the level of innovation (the number of new products, entering to new markets or/and trademarks) in the company.

8) Please tick from the scale provided how much the reward system used in the company has contributed to the coming up with new ideas among the employees.

{1-25%} {26-50%} {51-75%} {76-100%

9) Explain how innovation guidelines contributes to innovation performance for your organization.

10) In your own opinion which areas of business arrangements need to be improved for better innovation performance in the company?

PART III: CUSTOMER CAPITAL

Using a likert scale of 1-5

Strongly disagree

2 Disagree

3 Neutral

4 Agree

5 Strongly agree, what is your level of agreement with the following statements concerning customers' relationship?

S/No	Statements	1	2	3	4	5
i	Most of the customers are regular and show that they are generally satisfied.					
ii	When it comes to new business the company's customers have increasingly selected company products verses competitors over the past few year					
iii	The company devotes considerable time to select suppliers.					
iv	The company maintains a good relationship with both					

	internal and external customers.
v	The company has greatly reduced the time it takes to solves customer problems in the recent past.
vi	The company is sure that her customers will continue to do business with it.

7) In your own opinion how does Company's relationship with customers and suppliers help in improving the staff ability to innovate (develop new products, entering to new markets or/and trademarks).

8) Please tick from the scale provided how much the new products developed in the company can be attributed to healthy relationship with customers and suppliers.

{1-25%} {26-50%} {51-75%} {76-100%

9) Briefly describe how customer/ supplier relations promote the level of innovation in the company?

10) In your own opinion which areas of customer /supplier relationship need to be improved for better entry into new markets, new products and/or trademarks in the company?

PART IV: TECHNOLOGICAL CAPITAL

Using a likert scale of 1-5

1 Strongly disagree

2 Disagree

3 Neutral

4 Agree

5 Strongly agree, what is your level of agreement with the following statements concerning Technological Capital?

S/No	Statements	1	2	3	4	5
i	High technological skills are highly demonstrated by majority of staff and the owner of the business.					
ii	Majority of the operations are using machines in this enterprise.					
iii	The kind of technology used in communication has greatly helped in sharing new ideas across the business.					
iv	High use of technology has greatly quickened decision making leading to higher innovation levels.					
v	The company uses technological knowledge and skills in rewarding new ideas that bring profit.					
vi	Slow acceptance of new technology has hindered ability to get new products, new markets and trademarks and patents in a big way.					

7) How do high technological skills help in getting new ideas for higher level innovation?

(The number of new products, entering to new markets or/and trademarks).

8) Please tick from the scale provided how much using of modern technology contributes to the company's ability to penetrate new markets.

{1-25%} {26-50%} {51-75%} {76-100%

9) Describe how adoption of modern technology acts as a driver to entering into new markets, new products and trademarks in the company?

10) In your own opinion which areas of using technology need to be improved for better innovation in the company?

PART V: ENTREPRENEURIAL SKILLS

Using a likert scale of 1-5

1 Strongly disagree

2 Disagree

3 Neutral

4 Agree

5 Strongly agree, what is your level of agreement with the following statements concerning Entrepreneurial skills?

S/No	Statement	1	2	3	4	5
i	Managerial skills are highly demonstrated by the staff and the owner of the business.					
ii	Taking reasonable risk has contributed to the getting into new markets					
iii	Good communication flow has greatly helped in sharing new ideas at all levels					
iv	Short procedures quickens decision making leading to higher innovation levels.					
v	The company appreciates staff knowledge and skills by rewarding new ideas that bring profit.					
vi	Frequency of training staff has greatly ability to venture into new markets, products and trademarks in the organization					

7) How do you think the level of education and experience helps in getting new ideas, products and new markets in the organization?

8) Please tick from the scale provided how much good communication skills contribute to the company's ability to penetrate new markets.

{1-25%} {26-50%} {51-75%} {76-100%

9) Explain the relationship between self-confidence among staff and the level of innovation and creativity in the company?

10) In your own opinion which areas of entrepreneurial skills need to be improved for better innovation levels in the company?

PART VI: LOAN ACCESS PROCEDURE AND REQUIREMENTS

Using a likert scale of 1-5

1 Strongly disagree

2 Disagree

3 Neutral

4 Agree

5 Strongly agree, what is your level of agreement with the following statements concerning Loan access procedures and requirements?

S/No	Statement	1	2	3	4	5
i	It is easy to estimate the time taken to process a loan.					
ii	YEDF information is easily available to all youths.					
iii	The requirements for getting the loans are easy to meet.					
iv	The documents used in application of loans are easy to understand.					
v	Support given by the youth fund staff is very encouraging to the youths.					

vi	Group formation is a necessary requirement in getting the YEDF

7) Explain why the time taken to process the loans has a lot to contribute to availability of the funds among the youths in Kiambu County.

8) Please tick from the scale provided how much the loans requirements have contributed to loans accessibility by the youths.

{1-25%} {26-50%} {51-75%} {76-100%}

9) The support given by the youth officer in applying for the loan sufficient in accessing the YEDF?

10) In your own opinion which areas of Youth Funds disbursement procedures need to improvement for faster getting of loans?

PART VII INNOVATION PERFORMANCE

Using a likert scale of 1-5

1 Strongly disagree

2 Disagree

3 Neutral

4 Agree

5 Strongly agree, what is your level of agreement with the following statements concerning Innovation Performance?

S/No	**Statement**	**1**	**2**	**3**	**4**	**5**
i	The organization has made rules and regulations guiding staff in coming up with new products, entering markets and getting trademarks and/or patenting					
ii	The enterprise has an environment that promotes					

	innovation and creativity.
iii	Large number of new products is introduced in the market by our enterprises compared to other businesses similar to ours.
iv	The market share has been increasing regularly over the last few years.
v	Patenting and getting new trademarks has been a frequent occurrence in this organization and is highly rewarded.

7) Explain how the company has utilized the knowledge possessed by the staff to the maximum to promote innovation (the number of new products, entering to new markets or/and trademarks).

8) Please tick from the scale provided what percentage of the new products, entry into new markets and trademarks in the company can be attributed to rules guiding innovation in the organization.

{1-25%} {26-50%} {51-75%} {76-100%}

9) Explain how the ability to protect ideas legally and getting trademarks contributes to the level of innovation (the number of new products, entering to new markets or/and trademarks) in the organization?

10) In your own opinion which areas of company's new ideas, products, new markets and patents and trademarks need to be improved for better performance in innovation?

APPENDIX IV: DESCRIPTIVE STATISTICS FOR INDEPENDENT AND INTERVENING VARAIABLES

	N	Range	Min	Max	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Human capital	160	18.43	.96	19.40	14.0019	.22424	2.83644	8.045
Structural capital	160	18.24	.00	18.24	12.3977	.25198	3.18737	10.159
Customer capital	160	18.50	.70	19.20	13.3934	.24727	3.1179	9.721
Technological Capital	160	17.41	2.16	19.58	13.1650	.268	3.378	11.4
Entrepreneurial skills	160	18.31	1.12	19.43	13.9838	.24291	3.07259	9.441
Loan Processing	160	17.77	.00	17.77	11.7666	.27835	3.52085	12.396

APPENDIX V: FACTOR ANALYSIS FOR INNOVATION PERFORMANCE

Component Matrix[a]

Statements	Component					
	1	2	3	4	5	6
HC training of staff has contributed to the accepting of new ways of doing business in the organization	.640					
HC doing work in the right way has contributed to sharing of new ideas among the employees in product development	.639					
HC staff satisfaction is greatly influenced by their involvement in decision making in the organization	.636					
HC how well one understands his/her work determines the number of trademarks and patents in the organization	.586					
HC employees and owners have the right skills for running the business	.529					
HC the employees in the company are highly experienced in their roles	.492					
SC employee's skills are regularly improved through internal and external training		.742				
SC the company is sure that their structures such as databases are good enough to promote innovation in the company		.700				
SC the company has training programs for those who are likely to take over when senior employees leave the company		.633				
SC the motivation package in the business has direct effect of the level of innovation performance		.628				
SC staff involvement in decision making is a source of motivation and this promotes innovation		.619				
SC the company recruits the people that are well suited for specific tasks at the right time		.537				

CC the company has greatly reduced the time it takes to solve customers' problems in the recent past		.720	
CC the company maintains good relationship with both internal and external customers		.680	
CC the company is sure that her customers will continue to do business with it		.653	
CC the company devotes considerable time to select the suppliers		.612	
CC most of the customers are regular and show that they are generally satisfied		.509	
CC when it comes to new business the company's customers have increasingly selected the company products versus competitors over the past few years		.506	
TC majority of operations are using machines in this enterprise			.743
TC high technological skills are highly demonstrated by majority of staff and the owner of the business			.730
TC the company uses technological knowledge and skills in rewarding new ideas that bring profit			.721
TC high use of technology has greatly quickened decision making leading to higher innovation levels			.700
TC the kind of technology used in communication has greatly helped in sharing new ideas across the business			.588
TC slow acceptance in new technology has hindered ability to get new products ,new markets and trademarks and patents in a big way			.541
ES taking reasonable risks has contributed to the getting into new markets			.763
ES good communication flow has greatly helped in sharing new ideas at all levels			.754
ES the company appreciates staff knowledge and skills by rewarding new ideas that bring profit			.700
ES frequency of training staff has greatly ability to venture into new markets, products and trademarks in the organization			.700
ES short procedures quicken decision making leading to higher			.643

innovation levels			
ES managerial skills are highly demonstrated by the staff and the owner of the business		.433	
ES taking reasonable risks has contributed to the getting into new markets		.763	
LP the requirements for getting the loans are easy to meet			.838
LP the documents used in application for loans are easy to understand			.828
LP YEDF information is easily available to all youths			.807
LP it is easy to estimate the time taken to process the loan			.685
LP support given by the youth fund staff is very encouraging to the youth			.659
LP group formation is a necessary requirement in getting the YEDF			.237

APPENDIX VI: CORRELATIONS BETWEEN DEPENDENT AND INDEPENDENT VARIABLES

Correlations[b]

			1	2	3	4	5	6
1.	Innovation performance	pearson correlation	1					
2.	Human capital	pearson correlation	.399	1				
		sig. (2-tailed)	.000					
3.	Structural capital	pearson correlation	.486	.500	1			
		sig. (2-tailed)	.000	.000				
4.	Customer capital	pearson correlation	.332	.496	.334	1		
		sig. (2-tailed)	.000	.000	.000			
5.	Technology capital	pearson correlation	.606	.292	.532	.232	1	
		sig. (2-tailed)	.000	.000	.000	.003		
6.	Entrepreneurial skills	pearson correlation	.580	.471	.410	.497	.504	1
		sig. (2-tailed)	.000	.000	.000	.000	.000	

b. listwise n=160