SOCIAL ENTREPRENUERSHIP STRATEGIES, SOCIAL INNOVATION AND RESILIENCE OF ONE-ACRE FUNDHOUSEHOLD LIVELIHOODS IN KAKAMEGA COUNTY, KENYA.

BY

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DECLARATION

Declaration by student

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

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DEDICATION

For my late Father Beri Lihanda, My mother Dinah, My wife Pamela and my children

ABSTRACT

One Acre fund programme a social entrepreneurship was introduced in Western Kenya to help improve maize production on one acre pieces of land. Reports indicate increase of 20% to 30% in maize production of 3000 to 4000 bags among One Acre fund households in the year 2017 to 2022 in Western Kenya. One Acre Fund households in Kakamega County remain in muddle and still suffer deficiency in meeting family obligations despite engaging all the social entrepreneurship strategies. Literature identifies five social entrepreneurship strategies that are seldom studied together in relation to resilience of household livelihoods with unknown impacts. Theoretically, literature indicates that social innovation moderates the relationship between social entrepreneurship strategies and resilience of One Acre Fund household livelihoods, extant literature does not present its empirical testing to ascertain its magnitude, direction and interaction effect. The purpose of this study was to examine the role of social entrepreneurship strategies and social innovation on resilience of One Acre Fund household livelihoods in Kakamega County Kenya. Specific objectives were: establish effect of social entrepreneurship strategies on resilience of One Acre Fund household livelihoods; determine effect of social innovation on resilience of One Acre Fund household livelihoods and analyse moderating influence of social innovation on the relationship between social entrepreneurship strategies and social resilience of One Acre Fund household livelihoods. The study employed the theory of social entrepreneurship, innovation diffusion and resilience theories. The study followed post-positivism research philosophy and used a correlational research design. Target population was 1390 households under One Acre Fund. Based on Leeuw sampling formula, 311 households were sampled using proportionate stratified random sampling technique. Pilot study was conducted on 31(10%) of sample size randomly sampled to test reliability. Validity was tested through content validity index and construct validity. Primary data was collected using questionnaires and secondary data was collected from magazines, books, diaries and pamphlets of One-Acre Fund. Found that social entrepreneurship strategies and social innovation had positive significant effect on resilience of One Acre Fund households (R^2=50.9%, $p<0.000$ and R^2=63.9% $p<0.000$ respectively). The interaction term results between Social entrepreneurship strategies and social innovation was R^2=64.5% (ΔR^2=0.6%, $p<0.01$) implying that social innovation moderates the relationship between Social entrepreneurship strategies and resilience of One Acre Fund household livelihoods. The study concluded that, if more emphasis is put in social entrepreneurship strategies and social innovation, more resilience of One Acre Fund household livelihoods would be realised. The study recommends that farmers should adopt One Acre Fund model as coping mechanism to food insecurity build resilience in any disastrous situation. The study may provide useful knowledge and growth in literature of social entrepreneurship that can benefit government, academicians and researchers.

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ABBREVIATIONS AND ACRONYMS

AA	:	Administration Assistant
BASES	:	Business Association of Stanford Entrepreneurial students
CARE	:	Cooperative for Assistance and Relief Everywhere
CBDE	:	Community Based Development Enterprise
CBO	:	Community Based Organizations
CGOK	:	County Government of Kakamega
CIC	:	Climate Innovation Centre
CSO	:	Central Statistics Community Assistance
CSV	:	Corporate Shared Value
DTI	:	Department of Trade and Industry
EASEN	:	East Africa Social Enterprise Network
EU	:	European Union
EUISS	:	European Union Institute for Security Studies
FAO	:	Food Agricultural Organization
FDIC	:	Federal Deposit Insurance Corporation
HHH	:	Household head
GOK	:	Government of Kenya
GDP	:	Gross Domestic Product
ICT	:	Information Communication Technology
IDT	:	Innovation Diffusion Theory
IMF	:	International Monetary Fund
JKUAT	:	Jomo Kenyatta University of Agriculture and Technology
KCA	:	Kenya College of Accountancy
KIE	:	Kenya Industrial Estates
KSIE	:	Kenya Social Investment Exchange
LM	:	Lower Medium
MBA	:	Master in Business Administration
MDGs	:	Millennium Development Goals
MMR	:	Moderated Multiple Regression
MOAB	:	Motivation-Opportunity-Ability- Behaviour
NGO	:	Non- Governmental Organization

OECD	:	Organization for Economic Co-operation and Development
RBT	:	Resource Based Theory
SMEs	:	Small and Micro Enterprises
SPSS	:	Statistical Package for Social Sciences
SRFD	:	Senior Regional Field Director
SWAP	:	Safe Water and AIDS Project
SWS	:	Safe Water System
UK	:	United Kingdom
UM	:	Upper Medium
UNESCO	:	United Nations Educational Scientific and Cultural Organization
USA	:	United States of America
VAT	:	Value Added Tax
WPA	:	Works Progress Administration

OPERATIONAL DEFINITION OF KEY TERMS USED IN THE STUDY

Households: These are individuals or a group of people living together in a house and are the main decision makers of that house**.** Members of the household work jointly on at least one common field under the management of a single decision-maker, and draw an important share of their staple foodstuffs from one or more granaries which are under the control of that same decision-maker.

Innovation: Innovation is the putting of a new ideas to benefit a business, often in a way that increases output or productivity; for this reason, it is broadly recognized that innovation is central to economic growth**.**

Livelihoods: This is connected with people who live together as a community and have a means of earning in order to live.

One-Acre Fund: One-Acre Fund is a social entrepreneurship practice that leads to sustainable intensification and land management. The organization was founded by Andrew Youn in 2006**.**

Resilience: This is the process of adapting well in the face of adversity, trauma, tragedy or threats such as environment related problems, serious land deterioration problems or adverse weather and climatic conditions. It means "bouncing back" from difficult experiences.

Social entrepreneurship: This is an approach that aims at addressing neglected or unmet societal problems by challenging the status quo and capitalizing on sub- optimal conditions through innovative business models that ultimately empower marginalized groups in the society by creating and delivering replicable sustainable solutions which impact people's lives.

Social Innovation: Social innovation refers to creation, development, adoption, and integration of new concepts and practices that lead to creation of both tangible and intangible assets which include production of goods and services for society and enhancing the community's capacity to act.

Sustainability: This is the ability to continue; it is how biological systems remain diverse and productive indefinitely. In more general terms, sustainability is the continuity of systems and processes. The ability that makes an item to continue or to be continued for a long time

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CHAPTER ONE
INTRODUCTION

This chapter presents the background of the study, statement of the problem, objectives of the study, hypotheses, and conceptual framework, scope of the study and justification of the study.

1.1 Background of the Study

Social entrepreneurship is a socially active and independent enterprise which provides service, products, and trade for social purposes (Department of Trade and Industry, 2006). Kerlin (2009) argues that the profit received from that business has two functions: one is to facilitate the fulfilment of social goals and, second, a desire to gain financial autonomy. One acre fund programme is one of the ventures that is for profit and fulfilment of social goal like providing a solution to food security situations. This programme supports rural farmers to maximize returns from their maize farming activities. The farmers are taught best farming methods, they receive farm inputs in the form of loans and receive field extension services until when they harvest their produce then they are facilitated to store and market their produce gainfully.

Globally, social entrepreneurship is increasingly recognized for providing quick fix to composite and persistent social draw backs (Kerlin, 2009). Gidron and Yekeskel (2012) stressed that social entrepreneurship in Czech Republic is assembled with a view to meet social or environmental goals, driven by social duties and apply marketing strategies. Social entrepreneurship has grown worldwide in recent decades as it attempts to create and implement innovative solutions to social and environmental issues through business strategies. For instance, six distilled social entrepreneurship strategies were uncovered in a study by Chandra *et al*. (2016). The strategies included: personal empowerment, collective action on the basis of evidence, system reform, development of physical capital and prototyping. The three key approaches most used (associated with the largest number of strategic issues) tend to be individual control, collective action and physical capital growth. The next three most employed strategies are system reform, evidence-based practices and prototyping. Among these, five social entrepreneurship approaches have been discussed or established. They include: individual empowerment, collective action, evidence based practice, physical capital development, system reforms and prototyping strategies.

Chandra *et al.* (2016) considered that each of these 6 meta-strategies can be considered as instruments for creating social change at different levels, such as families, communities, provinces, regions, nations, and the world. Individual empowering is intended to improve individuals and societies by using executive skills instructions and the strength of religious leaders to inspire and prepare healthy conduct, and to raise cognizance about the rights of individuals. The powers of collective actions such as communities, local companies and volunteers are used, thereby strengthening the empowerment of people and groups. Reform of the system by changing or increasing public cognizance of strong and dependable actors/institutions may lead to constructive change (Chandra *et al.,* 2016). This explanation shows that community efforts to reform a system enhances personal authorisation because collective action brings people together to effectively work, which successively intensify the sense of empowerment of players and can at the same time better the wider system or address a gap.

Chandra *et al.* (2016) confirms that building physical capital enables actors to turn resources deficiencies into resources - for instance by using ICT/mobile technology to provide health information to those who in need of medical assistance in rural areas. It enables building schools, community schools to educate and support marginalized groups of people. Evidential practices involve looking at social problems and scheming solutions using evidence and facts; they are also a mechanism to build the confidence and integrity of a group that supports the group's efforts to find a solution. Before an extensive solution is instigated prototyping needs the creation of sample schemes and designs (Chandra *et al.,* 2016). Chandra *et al*. (2016) in his study omits prototyping because of its uniqueness and concentrates on the first five. This study has however limited itself to explore the uniqueness of each social entrepreneurial strategy, compare social entrepreneurship strategies and build relationships with existing concepts. Additionally, the effect on resilience for household livelihoods of these social entrepreneurship strategies remains unknown.

On the other hand, the importance of social innovation in the field of entrepreneurship cannot be ignored. Most studies in social entrepreneurships or other business entities use general innovations. Different innovations suit different businesses and enterprises according to the type of the business. Lee (2009) asserts that to create social value, social entrepreneurship must have elements of entrepreneurship such as innovation, progressiveness and risk taking. Savoia and Copeland (2011) support Lee (2009) as an enterprise expands; the potential for innovation

grows as innovation is needed. The amount and type of innovations that an enterprise does in fact depend on its cultural, organisation, technical and innovation beliefs and practices. However, Savoia and Copeland (2011) and Lee (2009) only profile the need for innovation yet its interaction and relationship with other elements in social entrepreneurship ought to be realised. In addition, the type of innovation as cited by Lee (2009) and Savoia and Copeland (2011) has not been specified. There are different types of innovations that deal with different situations. For instance, technological innovation may be applied in any business since the world is a small world given the kind of ICT development and applications.

Mulgan (2012) defined social innovation, as the "innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly diffused through organisations whose primary purposes are social". Social innovation contributes to economic development, socio-economic problems of poverty and health, according to the (Organization for Economic Co-operation and Development OECD, 2012). There are also social issues addressed by many growth-enhancing social innovations.

Yossy (2017) used resource-based view (RBV) model or resource-based theory (RBT) of competitive advantage in the context of SMEs in Indonesia. This study focused to illustrate empirically that innovation moderates the relationship between strategy and financial performance of batik. Batik (hand-dyed garment) of Indonesia has been acknowledged by the UNESCO as the representative record of the intangible cultural heritage of humanity in the year of 2009 because of its unique role in the Indonesian's life from birth to die. After receiving this recognition, Indonesia must have obligation in preserving batik as the world heritage. Since there cognition of the UNESCO, batik business grows rapidly, especially in small and medium enterprises. One of centres of batik is Solo city in the Central Java. The study established that innovation exclusively moderates the strategy-financial performance relationship of the batik SMEs in Solo city. However the degree of moderation remains unclear. Besides this study was conducted in the Solo city, so the generalization was limited only for the Solo city and related to the batik business SMEs only. A simple research model was used to draw conclusion that only strategy and innovation influence financial performance. Furthermore, this study focused more on innovation as the present study has focused on social innovation. In addition, the element of resilience due to adversities was never a case for this study.

Despite a growing acknowledgment of social entrepreneurship, Bosma and Levie (2010) believes there is a lack of awareness about how entrepreneurship strategies, social innovation and sustainability can be utilized to cope with social economic developments and livelihoods by households following a crisis. Social innovation can be applied in any study as a variable. For instance, Anasweh *et al.,* (2022) did a study on impact of social innovation in its dimensions (increasing social capabilities, community need, changes in social relations) on sustainable development in its dimensions (environmental, economic, social, and technological). It also aimed to identify the level of social innovation at Al-Balqa Applied University and the level of sustainable development at the university. The results showed that the level of social innovation at Al-Balqa Applied University was average. It is also evident from the findings that the arithmetic means of the research sample member's views on the dimensions of social innovation came as follows. The dimension of "social need" came first with an average evaluation, followed by the dimension of "increasing social capabilities" with an average evaluation. The "changes in social relations" came in the last rank with an average evaluation score. This may be due to the degree of importance of social innovation and its diligent implementation through the practice of all services related to social innovation because of their importance in obtaining the service, while ensuring appropriate analysis of the internal and external environment of the university (Anasweh *et al.,* 2022). The results also showed that the level of sustainable development at Al-Balqa Applied University was average. The environmental dimension came first with an average evaluation score; the social dimension came second with an average evaluation score, while the "economic dimension" came last also with an average evaluation score; finally, the technological dimension came with average evaluation, as well. This can be explained by the nature of the university's work and its effort to raise its performance through sustainable development and its level of performance.

Therefore, sustainable development leads to raising the level of the university's work in a manner consistent with its vision and goals, which is reflected in the preservation of resources. Though the study applied social innovation, some of the elements of social innovation applied in these study are slightly different from the current study. However, the study used social innovation as a single independent variable. Therefore, this was an area where the present study applied social innovation as a moderator.

Additionally, resilience is the process and outcome of successfully adapting to difficult or challenging life experiences. This is especially through mental, emotional, and behavioural

flexibility and adjustment to external and internal demands or challenging life experiences. According to Adger (2000), adaptability in environmental science is progressively becoming a key concept for environmental research into how climate, economic or social change can be successfully handled. Adger (2000) says resiliency means the skills, skill, knowledge, and insight that build up over time while people fight to overcome adversity and to overcome challenges. Bach (2013) confirms the ability to respond and embrace change in a proactive, local capacity building and meeting critical needs. In addition to building the power to adapt to shocks and threats, resilience is about building the community's ability to react proactively and improving well-being even under stress.

Bernard and Barbosa (2016) did a study of resilience as a process and the study of the role of resilience as an employer. The duo recorded the lives of three robust entrepreneurs and analysed their experiences in detail, which included several key events. In their analysis, they developed a trauma theory-based model as a trigger for the process of resilience, underlining the key elements that drive the process. They thus concentrated on the resilience dynamics generated by major life events that caused trauma and which occurred before the decision to start an undertaking. On the displacement concept in Shapero and Sokol (1982) suggests that certain critical events relating to people's lives may lead people to decide to become entrepreneurs and act. But in literature elsewhere on entrepreneurship and the concept of resiliency has been understood as an answer to a difficult or even utmost backdrop (Danes *et al.*, 2009) or otherwise an entrepreneur's personality character, quality or capacity.

According to FAO (1997) in the context of food security, resilience is defined as “the ability of a household to keep with a certain level of well-being (i.e. being food secure) by withstanding shocks and stresses.” This depends on the livelihood choices available and how well households can manage risks. Livelihoods are referred to as subsistence activities and resources. The livelihoods, accessible to communities to yield material resources for their survival, are integral to the sustainability of livelihoods (Vercillo, 2016).

Maroyi (2009) asserts that the sustainable development process relies heavily on rural livelihoods resilience in areas where business activities are limited and poverty reduction challenges and acts as coping strategies for dreadful shocks and stresses. People's livelihoods cannot be sustainable unless they are resilient. A feasible way of living is possible when it is

able to face up to all the shocks and stresses and recovery, in the absence of subverting the natural resources base (Maroyi, 2009). It should be possible to improve capabilities and assets.

Empirically, several studies have given varying results in the relationships amongst study variables where social innovation is involved as a moderator. A study by Wenyuan *et al.* (2018) examined the moderating effect of social innovation on the economic-social value in Corporate Shared Value(CSV) relations in the educational sector in Ghana. The study aimed at broadening its concept of shared value. The study showed how profitable social enterprises are using social innovations that are novel to the education sector in order to attain a shared value creation in the particular indicators of social innovation. Wenyuan *et al*. (2018) asserts that the study has demonstrated how the company has allowed Corporate Shared Value (CSV) to be shifted to the educational department in Ghana by social and catalytic innovation capacities while responding to educational lacunae and financial advantage. The results of the study further illustrated that social and economic value are positive in the development of shared value in education. The consequences of the above results for educational managers and social enterprise organisations, are that social innovation is the accomplishment of shared value in education (Wenyuan *et al.* 2018).The study further established that business players use social innovation, hear students and educational managers' concerns using pragmatic mechanisms to solve educational challenges while enhancing their economic opportunities (Wenyuan *et al.* 2018). It is in the success of the new adopted model that is the strength of is this argument. However there is no argument about obstacles or hardships that led to the use of this model.

In Africa, a study conducted in Zimbabwe by Gwimbi (2009) evaluated the current disaster on livelihood issues and resilience of flood risk communities. Gwimbi (2009) concluded that several authors' views are the interaction and mutual consolidation of the relationship between the entrepreneurial dimensions and the livelihood resilience. In their argument, it is impossible to stop the forces of nature, but to understand them better and map their effects as people learn to reside with the forces. Livelihood resources are central to the debate on building resilience in rural livelihoods. Stretton (2017) argues that although flood dangers are more than warnings to natural resources and livelihoods, they affect their viabilities unless efficacious measures are taken to protect natural resources and livelihoods through adjustments and some other tactics. Such strategies should include management of natural resources using knowledge systems that are promptly available to the communities for vulnerable rural communities. However, while the study Gwimbi (2009) is silent on innovation, resilience has been revealed in the light of a

catastrophe unlike Stretton (2017) who only explains about one catastrophe but concentrates on protecting of natural resources while thinking of livelihoods.

In Kenya, Opati (2014) conducted a study in Kajiado County in Kenya on the influence of social enterprise strategy towards community empowerment. Three strategies used as community-based development, resources mobilizer, and community mobilization by faith-based organizations have been identified. The study found that this strategy has affected the empowerment of the community in Kajiado County among religious organizations. This study, however, employed three social entrepreneurship strategies for denominational organizations that do not address livelihood issues. Furthermore, given the small simple size of 42 respondents, the study would not give proper information for generalization.

While carrying out a study in Nairobi City County on the influence of entrepreneurial determinants on the performance of social enterprises, Kibe (2016) used cross-sectional research design with a mix of qualitative and quantitative analysis. Using a sample size of 107 registered social enterprises in Nairobi City County, the study found out that social capital, social innovation and entrepreneurial training has a positive influence on the performance of social enterprises. According to this study, social innovation is instrumental for scaling performance and achieving more sustainable outcomes though it has been combined with other determinants like social capital and entrepreneurial training.

Kibe (2016) concluded that social entrepreneurs need to apply social innovation in order to grow their social enterprises and create sustainable solutions, better business models and also adopt social capital as a reliable means to enhance capacity and resource acquisition. This study has analysed three aspects of social entrepreneurships strategies which are, social capital, social innovation and entrepreneurial training a strong contrast to the present study which will address several aspects of social entrepreneurship as far as One-Acre Fund is concerned. These include individual empowerment, collective action, system reform, physical capital development, evidence-based practices, and prototype. However, this study used cross sectional research design with few respondents as compared to the present study that has used sample methodology research design with more households. Importantly, Kibe (2016) has only applied social innovation as an independent variable as compared with the present study that has used social innovation as a moderator too. Furthermore, the aspect of adversity is not among the reason that may have prompted the study.

Finally, several attempts by different scholars have been made to study social entrepreneurship strategies, social innovation and resilience differently. While some of the attempts have similar but few elements on variables such as social entrepreneurship strategies and social innovation, the issue of resilience has focused more on natural disaster. Therefore, studies on ways of using a social enterprises to cushion households in the light of livelihoods has not been fully explored. It is this background that the current study has been anchored.

1.1.1 One Acre Fund social entrepreneurship

Andrew Youn the architect of one acre fund shared his vision on why investing in young farmers is key to addressing the challenges face in farming today. Challenges ranging from sustainably feeding the world's growing population to finding lasting solutions to resilient, profitable agriculture (Youn and Gachunga, 2018). The core activities of the One Acre Fund have been successively expanded over the years to other countries in Africa since 2006, the One Acre Fund started with 40 Households in western Kenya – and today include Rwanda, Tanzania, Burundi, Malawi, and Nigeria in addition to Kenya. The rapid growth is linked to the basic idea that only a steady expansion of activities can make a relevant contribution to the fight against hunger and poverty. Coupled with the fragmentation of agricultural land and very low mechanization, this leads to a stagnation in productivity in maize cultivation at an extremely low level. In the period 1992 to 2006, production even declined slightly to 1116kg/ha (Jena *et al.,* 2020). One Acre Fund monitoring was able to record an average productivity increase of 24% among One Acre Fund clients in all countries for 2006 to 2020, despite the market disruption caused by the Covid-19 pandemic (Youn and Gachunga, 2018).

Spreading in Africa, starting as a pilot serving 150 farmers in 2018 in Niger State, One acre fund in Nigeria has been hugely successful (One Acre Fund, 2021). In 2022, it served over 24,000 farmers. One acre fund rapidly scaling and expanding its work, which has the potential to transform the livelihoods of hundreds of thousands of Nigeria's smallholder farmers over the next decade. Farmers from Tanzania are determined to send their children to school. They leveraged credit from One Acre Fund to buy high quality farming inputs leading to a 20% increase in his harvest. Their success means that they have been able to expand their farming, now growing potatoes and fruit tree seedlings. Diversification like this helps protect him against climate shocks (One Acre Fund, 2021).

One-Acre Fund which delivers inputs, extension services, storage advice and access to markets to farmers in remote areas is one of the social entrepreneurships in Kakamega County. One-Acre Fund is a social entrepreneurship practice that leads to sustainable escalation and land management. The organization was established by Andrew Youn in 2006 when he visited western Kenya in August 2005 and interviewed smallholder farmers about their quality of life. Majority of the farmers were encountering an annual "hunger season" and unable to feed their families from their one acre pieces of land. Some households had been hard hit by the closure of Mumias Sugar Company and the twinkling of the other remaining, the closure of Webuye paper mill, and prolonged long periods of drought due to changes in weather patterns coupled with population explosion and the 2008 post-election violence. In April 2006, the One-Acre Fund was awarded the Social Entrepreneurship Category of the Yale 50 K Business Plan Competition and the Social E-Challenge of the Business Association of Stanford Entrepreneurship Students (BASES). Beyond their core program model, the One-Acre Fund also offers smallholder farmers opportunities to purchase additional credit products and services. That includes solar lights and reusable sanitary pads (Youn and Gachunga, 2018).

During the 2016/17 financial year, Kenya produced 37 million bags of maize against a requirement of 52.8 million bags for the same year. Smallholders among them one acre fund households produce around 75 per cent of the country's food – generally for their own use. Over the years, rigorous impact assessments consistently showed that farmers working with One Acre Fund improve their bottom-line profits by at least 40%, even after repaying program fees and controlling for what they would have earned without participating in the program. It is reported that in 2021, farmers who participated in One Acre Fund full-service program each generated approximately $104 in additional profit, representing a 45% increase in income on activities supported by One Acre Fund in Kakamega County. The harvest increase was able to generate an additional income from supported agricultural activities of US$80 per household in 2021 (One Acre Fund, 2022), as well as a 12% reduction in moderate to severe food insecurity and a 22% reduction in severe food insecurity in 2020 (One Acre Fund, 2021). One Acre Fund's work in Kenya continues to directly address Pillar One of the Big Four Agenda on food security and nutrition by providing quality products and services to help farmers increase their harvests and prosper. Reports indicate an increase of 20% to 30% in maize production of 3000 bags to 4000 bags among one acre fund households in the year 2017 to

2022 in Western Kenya. One Acre Fund households in Kakamega County remain in mix ups where households still suffer deficiency in meeting (Rieber, Kiplagat & Gaesing, 2022). Financial pressure and the associated risk of indebtedness in Kakamega County is the main reason why poorer households are inhibited in taking up the One Acre Fund offer. Households in particular those that lack a regular income are quickly overwhelmed by the constant pressure to repay (in instalments). The One Acre Fund offer – albeit for understandable reasons – does not envisage repayment of the (bulk of the) loan(s) through additional income from the harvest, but through steady small repayments. Only 32.2% of current clients report also using income from maize harvesting (among other sources). One Acre Fund has invested more than 800 million in Kakamega County. If there is no other income, e.g. from casual work, returns or the sale of vegetables, it is difficult to make use of the offer. It is not so much the amount of income that is decisive, but rather the regularity. Generally, with regard to this view one acre fund households remain financially unchanged (One Acre Fund, 2022).

One Acre Fund has various strategies it uses that are not elaborated. The study focused on One-Acre Fund programme in Kakamega County as the main social entrepreneurship because one acre fund relocated its main programmes to Kakamega which had small holder farmers than Bungoma and that Kakamega had reliable rainfall with good fertile soils. Furthermore, many sugarcane farmers had resorted to maize farming after the key sugarcane factories collapsed. These was a real challenge that households were to cope with. Therefore, it is with this background knowledge that the study investigated how social entrepreneurship strategies along with social innovation as a moderator leads to resilience of household livelihoods focusing on One-Acre Fund programme in Kakamega County.

1.2 Statement of the Problem

Food insecurity is an extant major concern for numerous rural households in Kenya who rely on agriculture as their main source of livelihood. During the 2016/17 financial year, Kenya produced 37 million bags of maize against a requirement of 52.8 million bags for the same year. Smallholders produce around 75 per cent of the country's food – generally for their own use. One Acre Fund reports indicate an increase of 20% to 30% in maize production of 3000 to 4000 bags in the year 2017 to 2022 to mitigate in food security following the collapse of their main economic activity of sugar farming. As a social enterprise, One Acre fund programme was introduced in western Kenya to help improve maize production on one acre

pieces of land occupied by many households. However, One Acre Fund households in Kakamega County still suffer deficiency in income growth, job creation, meeting health and education obligations of their families, food security and payment of other family bills despite engaging all the social entrepreneurship strategies. Globally social entrepreneurship strategies have been carried out in relation to poverty alleviations. Previous studies identified five key social entrepreneurship strategies that includes collective action, system reform, individual empowerment, physical capital development and earned income strategy. Trends in the previous studies have shown that no study has integrated all the five social entrepreneurship strategies in relation to resilience of household livelihoods. Therefore, the impact of the five social entrepreneurship strategies on resilience of household livelihoods remains unknown. Moreover, social entrepreneurship takes innovation as a supportive agent. Innovation studies in connection to social entrepreneurship and resilience of household livelihoods have focused on either general innovation or technological innovation or business innovation. Theoretically this leaves social innovation that would suit resilience. The current study was set to establish how to integrate all the five social entrepreneurship strategies in relation to resilience of household livelihoods and deal with how social innovation can interact in a relationship between social entrepreneurship and resilience for household livelihood. Therefore, generating information to fill this gap will increase the understanding of how households cope with the impacts of life-related problems. It is with this view that this research was essential in bringing about proper understanding of how social innovation as a moderator relate in a relationship between social entrepreneurship strategies and the mission of resilience of One-Acre Fund household livelihood in Kakamega County. Furthermore, critically, any influence noticed through social innovation activities will help to open up new understanding of resilience theory.

1.3 Main objective of the study

The main objective of the study was to investigate the influence of social entrepreneurship strategies and social innovation on resilience of One-Acre Fund household livelihoods in Kakamega County. The study was guided by the following specific objectives:

i. Establish the effect of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood in Kakamega County.
ii. Determine effects of social innovation on resilience of One-Acre Fund household livelihoods in Kakamega County.

iii. Analyse the moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods in Kakamega County.

1.4 Hypotheses

The study was guided by the following null hypotheses

i. **(H0):** Social entrepreneurship strategies have no significant influence on resilience of One-Acre Fund household livelihoods in Kakamega County.
ii. **(H0):** Social innovation has no significant influence on resilience of One-Acre Fund household livelihoods in Kakamega County.
iii. **(H0):** There is no significant moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of household livelihoods in Kakamega County.

1.5 Scope of the study

The study was conducted in Kakamega County on One-Acre Fund households. Limiting the scope to Kakamega country was based on the fact that majority of social entrepreneurial entities are in Kakamega County particularly One-Acre Fund. There are two main ecological zones in the county which are the Upper Medium (UM) and the Lower Medium (LM) (County Government of Kakamega, 2018). In the Upper Medium, maize, tea, beans, horticulture, mainly on a small scale, is practiced in the central and north regions. These areas include Ikolomani, Lurambi, Malava, Navakholo and Shinyalu; then Lugari and Likuyani, with large-scale farming. A large part of the southern section, which includes Butere, Khwisero, Mumias East, Mumias West and Matungu, is covered by the Lower Medium (LM), the second ecological zone. Production of sugarcane is the main activity in this area, with some farmers doing maize, sweet potatoes, tea, soil nuts and cassava. The county receives an annual rainfall of between 1280.1 mm and 2214.1 mm per year (Kakamega County, 2018). The research was conducted using a social entrepreneurship fund that has existed for more than five years (One-Acre Fund). The research analysed responses from 311 recipients from target population. This provided sufficient information on the performance data collected taking into account the operational period after start-up.

The study examined how the social innovation plays the role of a moderator in a cause-effect relationship between social entrepreneurship strategies as independent variable and resilience for households as dependent variable. Adequate time was required to conduct the study in the whole county given its terrain. The results of this study would be of importance to the government and policy makers, academicians and donors. As a regulator, the government can do much more by concentrating on performance assessment and implementing standards and technology support, which encourage innovation, improve the environment and boost competitiveness. This would reduce failure of the social enterprises and alleviate poverty among the residence of the county. The study would also contributes new knowledge to the existing literature. It will stimulate further research particularly in the areas of social entrepreneurship and small business management. The study may also be useful to donors in shaping out social entrepreneurship and sustaining the small business enterprises that helps communities.

1.6 Justification of the study

The uniqueness and contribution of this study is of great importance. Unlike studies reviewed which focus on established social enterprises, this study articulates and studies the strength and direction of social innovation on the relationship of social entrepreneurship strategies and resilience for One-Acre Fund beneficiaries. OECD (2012) reveals that any successful social entrepreneurship is driven by social innovation. It is with this reason that the study adopted social innovation as a moderator in this study. The western part of Kenya particularly Kakamega County is of great importance in this study because it has been hit by adversities in the recent past. This prompted the commencement of One-Acre Fund project. Many farmers struggled to feed their families from their one acre of land and tolerated annual "hunger season." Some households had been hard hit by the closure of Mumias Sugar Company and the twinkling of the other remaining sugar factories. The closure of Webuye paper mill, and prolonged long periods of drought due to changes in weather patterns coupled with population explosion and the 2008 post-election violence are some of the adversities that left households vulnerable. The recent outbreak of Covid-19 is another pandemic that has also added a lot of pain to the suffering households in the county.

Beltrami (2020) posits that while food and agricultural sector are assumed to be less strained by the pandemic than other sectors, this may not be the case for this county. The transport

disruptions, illness-related labour shortages, quarantine procedures, restricting activities on farms, as well as access to markets and supply chain engendered food insecurity. Households' vulnerability to natural and or manmade shocks resulting from climate change, pandemics, wars, terrorism and political instigations is a global concern resulting in various mitigation measures to build resilience and sustainability. Resilience is the ability to bounce back after a period of such shocks. Entrepreneurial activities, especially social entrepreneurship, are acclaimed to foster resilience. Some households choose to build resilience by engaging One-Acre Fund way of farming to be food secure. One-Acre Fund is a social entrepreneurship practice that leads to sustainable intensification and land management.

According to Youn and Gachunga (2018), One-Acre Fund is a social entrepreneurship practice that leads to sustainable intensification and land management. In February 2006 One-Acre Fund was launched as a social business enterprise for 38 family farmers in Bungoma County, Kenya. It essentially deals with farmers in remote areas in Western Kenya particularly Kakamega County by making them access farm inputs, extension services, storage and storage advice. It has gradually extended to most parts of the country and other countries like Uganda and Rwanda. Kakamega County was chosen because of its arable lands and good climatic conditions of which one acre activities picked at a very high rate. Social entrepreneurship is a swift developing sector in Kenya. If this sector is well taken care of has the potential of helping the country address the problem of food security, imbalance between vulnerable and less fortunate through One Acre Fund.

This study strived to demonstrate that one acre-fund farmer households are liable to change and that they should be managed as active partners, rather than beneficiaries. The study was undertaken on the premise that one acre-fund farmer households are coherent producers and consumers, who desire to be in control of their own destiny. The study would enable them to participate in co-creation of knowledge and innovative practices, get ability to benchmark best practices in the region, reflect on their current situation thus influencing policy direction as "a voice where the rubber meets the road" and have an opportunity to affirm their resilience. Ultimately, the study would confidently and meaningfully improve the livelihoods and wellbeing of the One-Acre Fund farmer households. The study will also help the government achieve its Big 4 Agenda making Kenya attain the broader goals outlined in Vision 2030 thus becoming self-sufficient.

1.7 Conceptual Framework

A research model was developed on the basis of the literature review to establish the influence of social entrepreneurship strategies on resilience of One-Acre Fund household livelihoods; to determine the influence of social innovation on the resilience of One-Acre Fund household livelihood and to analyse the influence of social innovation in moderating the relationship between social entrepreneurship strategies, and resilience of One-Acre Fund household livelihood. Moderating variable in a study implies that there is an interactive effect which changes the direction or magnitude of the relationship. Figure 1.1 displays the conceptual model and the relationship between the variables. The conceptual model shows how variables in this model have been used to formulate the study objectives that guided the current study. Sub variables within each variable were used to measure the respective variables as identified from theoretical literature and included in the framework. Sub variables are vital in measuring each of the variables and further guided the formulation of data collection instruments.

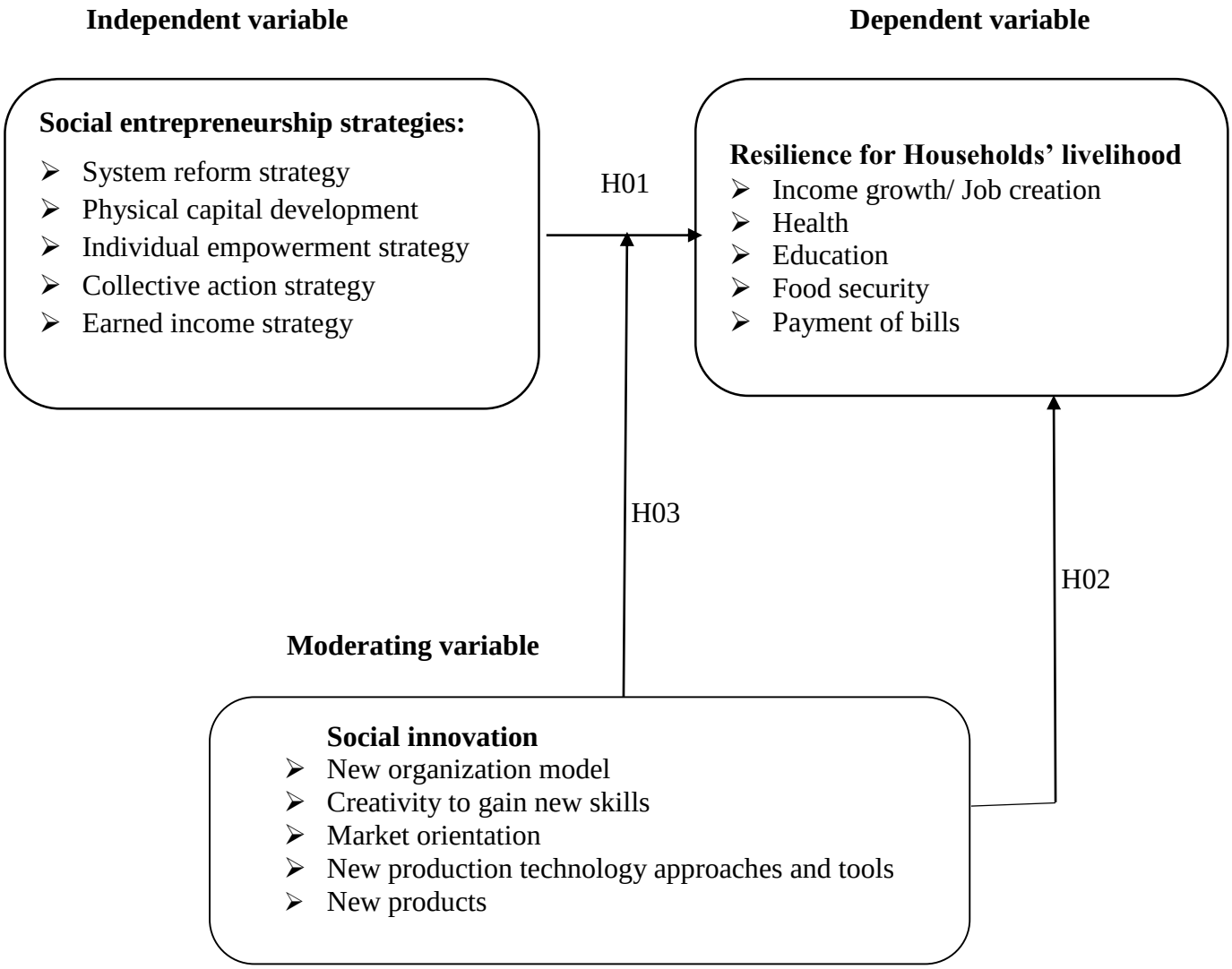

Figure 1.1: Social entrepreneurship strategies and social innovation on resilience of One-Acre Fund household livelihood. Source: Adapted and modified from (Aziz and Samad, 2016).

CHAPTER TWO

LITERATURE REVIEW

This section provides an overview of both theoretical literature review based on the theoretical frameworks with social entrepreneurship theory; social innovation theory and social resilience theory and empirical literature review based on the themes of specific objectives of the study. Various scholarly literatures are reviewed in line with their relevance to this study.

2.1 Theoretical Literature Review

The use of multiple theories on attempting to understand the interactive effect of social entrepreneurship strategies, social innovation and resilience of One-Acre Fund household livelihoods will explore their relevance to the current study.

2.1. Theory of Social Entrepreneurship

Extant literature related to sustainability and social change has used the theory of social entrepreneurship. Explaining the concept of social entrepreneurship requires advanced research on different characteristics and typologies for creating sustainable public wealth rather than focusing on business performance and private wealth. The theory of social entrepreneurship developed by Schumpeter in 1943 focuses on economic growth and highlights the importance of social entrepreneurship for social development via viable models and economic sustainability (Yahchouchy and Dzenopoljac, 2022).

According to this theory, social change, social transformation, and social impact are brought by social entrepreneurs. This theory also explains that social entrepreneurship is a significant factor that boosts economic development, and it also plays a vital role in bringing innovation to the country. It makes it perfect for the current study because it carries the component of social entrepreneurship. The present study focuses on social entrepreneurship strategies, social innovation on resilience of One-Acre Fund household livelihood. Based on the social entrepreneurship theory, social entrepreneurship significantly impacts sustainable growth and innovation for bringing about social change and prosperity for society. Social entrepreneurs are driven primarily by a motivation to create value for society. Therefore, the theory of social entrepreneurship is a complementary economic approach that is based on value creation and operates by its own rules and logic. The theory guides the study in an approach that seems to address some of the most pressing problems (hunger) by use of social entrepreneurship

strategies in addressing proper methods of maize production that make members of the society adapt to difficult situations in our modern society (Kakamega County). This suggests that social entrepreneurship influences public welfare to improve the living standards of the citizens.

Theory of social entrepreneurship uses two extreme ends to define social entrepreneurship as a hybrid organization that lies between not-for-profit organizations and traditional business enterprises. Dees (2001) added his voice on the theory of social entrepreneurship. He stated that the theory looks at social entrepreneurs as agents who marry financial independence and social mission. The theory identified social entrepreneurship as a continuum which pursues both financial and social goals with the latter being the most dominant objective. Social entrepreneurship makes development possible and promotes even where large manufacturers see no business opportunities.

Jean-Baptiste Say defines an entrepreneur in the 19th century as a person making value by moving "economic resources from lower areas into higher productivity and higher returns" (Martin and Osberg 2007). The contractor in 20th century was described by Joseph Schumpeter as an agent of change. Now the most common claim for contemporary discourse is Latvian social entrepreneurship (Dees, 1998; Dees, 2001; Schumpeter, 2005). For example, some researchers refer to the social enterprise as a non-profit project pursuing alternative strategic funding options and management schemes of social benefit (Boschee 1998). Others describe this as the socially responsible practice of intersectoral corporate partnerships (Sagawa and Segal, 2000). Social entrepreneurship also includes definitions which emphasize the importance of the organizational environment and its social development process as a way of relieving social problems and catalysing social change (Alvord 2004).

In addition, various views exist on the effect of the contexts of social entrepreneurship. Some scientists are convinced that the personal characteristics of a certain entrepreneur are more important than their environment, and only a person with unique characteristics becomes a social contractor (Dees, 2001; Thompson, 2000). On the other hand, other authors emphasize that social entrepreneurship depends primarily on the social contexts and surroundings. In Dorado (2006), though the mainstream and social enterprise are connected, the social enterprise should not simply be implemented and treated in ordinary terms of business. The current study focuses on the individual characteristics of social entrepreneurs, especially in developing

countries. Social entrepreneur's purpose is to exploit and improve social transformation opportunities. In the context of optimizing revenue as a capitalisation process, the focus of the concept of social entrepreneurship is becoming ever less significant (Zahra *et al.* 2009).

In his contributions, Dees (1998) states that social enterprise descriptions are typically called "processes" or "comportment," while social entrepreneur descriptions are often addressed to the founder of the project and social entrepreneurs' descriptions are referred to as the tangible outcome. Analysis of business processes in action provides the basis for all facets of social enterprise to be described and explored in an increasingly common sense of social enterprise (general environment) by affiliating social enterprise entrepreneurs with social enterprises (general environment) (Dees, 1998).

The main interest in social initiatives, compared to the achievement of private gains such as profit, private personal or shareholder wealth (Dees, 1998), and customer satisfaction (Dees and Anderson, 2003), is in establishing and sustaining social value. This term "double bottom line" or "dual bottom line" describes the social enterprise's mutual effort to achieve a financial and social return on investment (Dees, 1998). The idea involves social entrepreneurs in achieving social impact on the one hand and becoming self-sustaining or even profitable on the long term, on the other, on the one hand. In the literature, this aspect is frequently used for distinguishing between social enterprise and traditional non-profit organizations, which restrict their task to social contribution and rely fully upon external grants, whilst the goal of social enterprise is to achieve economic values mainly as a prerequisite for achieving economic viability (Mair and Marti 2006). Financial and social priorities contribute to decision taking and to assessment of the success or failure of a social entrepreneur (Dees and Anderson, 2003). These aims are likely to be hierarchically arranged, placing social objectives above the financial ones, but the aim of a social venture is generally agreed to achieve the right balance between the two (Dacin *et al.*, 2011). Briefly, literature demonstrates that social entrepreneurship definitions of today agree to the goal of a mutual effort to realize the social and financial value that gives earned income. Although this argument describes one of the goals of social enterprise, earned income is one of the strategy for social entrepreneurship which few scholars recognize and are to be used in the current research.

Dacin *et al.* (2011) claim that the breakthrough brought by the theory of social entrepreneurship is its ability to bring the provision of resources of general interest and social solutions to an

entrepreneurial and commercial level. These organizations can operate in an area that has previously been believed to be in the public sector across the globe. Social entrepreneurship has enabled the provision, in an economically sustainable and in many ways, of social and general interest services to be more effective than what the public sector alone could do. A traditionally created social entrepreneur or founding community of people sharing a common, well-defined social objective revolves around social enterprise (Dacin *et al.*, 2011). Such priorities can be transformed into a new company with other main characteristics. The work that it does is of general attentiveness and is done in a business way to ensure that the social and economic aspects are properly balanced, which ultimately comes through a given reform of the system with the facts. This argument refers to the present one-acre funds for social entrepreneurship used in the report.

Therefore, looping in the research topic and its dynamics, theory of social entrepreneurship is thereby used to consider the role of social enterprises development and their success in mutual attempt to realize social and financial value that provides an earned income. They struggle to maintain a persistent balance between the social and the economic dimension. Consequently, One-Acre Fund a social enterprise in Kakamega County has borrowed ideas of the theory of social entrepreneurship in attempting to change social and economic dimension of people in Kakamega County. Few areas have been highlighted in the social entrepreneurship theory that are correlated with social entrepreneurship strategies which forms the first objective of the study. In view of this, social entrepreneurship theory guides the first objective of this study.

2.1.2 Rogers' Innovation Diffusion Theory

"What is Innovation?" Damiano, Jr. (2011) refers to the Merriam-Webster dictionary definition which defines it as "the introduction of something new" where that something could be an idea, process, or product. Straub (2009) describes adoption as when an individual integrates a new innovation into their life and diffusion as "the collective adoption process over time."

Innovation diffusion theory was introduced by Everett Rogers in 1962 in which it has been referenced often in case analysis since. It provides a foundation for understanding innovation adoption and the factors that influence an individual's choices about an innovation. Rogers' theory is broad in scope which lends itself to being flexible across many contexts but also difficult to use as a process model when planning for organizational change due to adoption of an innovation (Straub, 2009). There are four main components in Rogers' innovation diffusion theory: the innovation, communication channels used to broadcast information about the innovation, the social system existing around the adopters/non-adopters of the innovation, and the time it takes for individuals to move through the adoption process. The interaction of these components helps one understand why an individual chooses to adopt an innovation or not (Straub, 2009).This theory is well adopted for the current study because the tenets are well explained. The first tenet on innovation is well connected with social innovation and its sub variables (new organizational model, creativity to gain new skills, market orientation, new production technology approaches and tools and new products on product line. The component of communication channel helped the study to explain sub variables in social entrepreneurship while the social system existing around the adopters/non-adopters of the innovation, and the time it takes for individuals to move through the adoption process helps the study to understand the social component in the social enterprises and time it takes to realise favourable outcome.

A sub-process of diffusion in Rogers' theory is the innovation decision or process which leads to adoption or rejection of the innovation. Rogers presents five stages potential adopters move through in this process. The first is seeking knowledge about the innovation and its function. The second is persuasion when the potential adopter formulates an opinion about the innovation. The third stage is when a decision is made to adopt or reject the innovation. The fourth stage occurs when the adopter implements the innovation. Finally, the adopter reaches the confirmation stage where they seek reinforcement of their decision to adopt the innovation. Here they may continue implementing the innovation as they experience its benefits or they may change their decision and reject the innovation (Rogers, 2003).

Rogers extends beyond the adoption process by identifying five attributes that affect whether an innovation is adopted or not: relative advantage, compatibility, complexity, trialability, and Observability. Relative advantage refers to how much greater or lesser the benefits of the innovation are compared with the alternatives. How well the innovation fits with a potential adopter's existing process or workflow is its compatibility. The more difficult to learn and

implement an innovation is perceived to be, the less likely it is to be adopted. This is because its complexity is perceived to be too high. Potential adopters are more likely to accept innovations they have an opportunity to experiment with and test out before making a decision whether to adopt or not; this refers to their trialability. Observability occurs once an innovation has been adopted and diffused across enough people within a culture system that those who previously had not thought about adopting it, change their minds or at least begin considering adopting the innovation (Rogers, 2003). Many personal technologies such as the smart phone and FitBit type devices have experienced widespread diffusion due in part to their high observability. Some universities have waited until there was high visibility of others implementing online courses before they began doing the same. This allowed them to see the success or failure of the strategy along with learning from the challenges of the early adopters. This example also demonstrates the impact of time on diffusion which Rogers (1962/2003) discusses in more depth in his book *Diffusion of Innovations*.

"An innovation diffusion approach was used to examining the adoption of social media by small businesses in Australian. The study was conducted in Australia around small business adoption of social media. Researchers used Rogers' theory to help understand the experiences of small businesses using various social media platforms and where they stood on the adoption continuum and what factors impacted their decisions to either adopt or reject the use of social media in their business practices (Burgess, Sellitto, Cos, Buultjens, & Bingley, 2017).

Social innovation is a sub-concept of social entrepreneurship based on the theory of innovation diffusion and plays a role in persuading changes in communities. The current study has similar themes in their definitions of social innovation so as to confront deeper social problems, involving new ideas, programs or processes. Social innovation is therefore developing new ideas to alleviate certain societal challenges. Social innovation will offer the possibility of providing solutions to social issues which are not sufficiently addressed in a single acre fund by existing products and services. Relevant goals have been set for One-Acre Fund. Instinctively, a key component of achievement is that customers are committed to a value proposition. But is One-Acre Fund just as critical for its services to evolve to meet hundreds of thousands of customers? What this study strived to answer is this question. Social innovation is measure that is extremely attractive for the communal transformation and economic development (Meister *et al.*, 2021; Phills *et al.*, 2008). However it is important to mention that

in social sector not each innovation can be considered as a social innovation except if it serve the basic objective of satisfying the communal needs, development and alter the social associations. Therefore, the prevailing social issues are assumed to be resolved productively by social innovation specifically in bottom of pyramid economies (Schubert, 2018). Social innovation is described as the introduction of novel products, models and services that fulfil both social and enterprise needs and develop new social collaborations and associations (Oeij *et al.,* 2019). Social innovation can be differentiated from the economic innovation on the basis of emphasis of profit maximization later on (Ayob *et al.,* 2016).

In the fields of social entrepreneurship social innovation is undertaken as an important and relevant notion. Its significance is rooted in the suggestions that there is need to separately theorize the social entrepreneurship and social innovation (Phills *et al.,* 2008). Introduction of novel solutions pursued by the social enterprises for social and financial value creation can accomplish the dual performance goals (Oeij *et al.,* 2019). The communal transformation by addressing the problems requires the novel and innovative solution that need the accumulation of knowledge resources (Meister Broekema *et al.,* 2021). This enduring flow of the knowledge resources by mobilizing the prevailing networks can results in innovative consequences that in turn enhance the performance of social enterprises. Nevertheless, as a surrogate for general innovation, social innovation is a related concept in the field of social entrepreneurship.

The conclusive empirical outcomes of social capital and enterprise economic, social and environmental performance (Montgomery, 2016). It is anticipated that social capital further strengthen the association of social innovation and resilience of One-Acre Fund livelihoods. The subsequent hypothesis was developed based on the above arguments. The strength and direction of the interaction between social entrepreneurship and the resilience of the beneficiaries of one acre of the fund is therefore to be developed by associating the relationship with social innovation. The findings will contribute immensely to social innovation theory. Thus the theory is used to guide the second objective of this study.

2.1.3 Resilience Theory

Resilience became more predominant in the 1940s, when a Canadian ecologist, Crawford Stanley (Buzz, Holling), applied the idea of resilience to ecology (Holling, 1973). In 1973 it was becoming increasingly common in social psychology and psychiatry. The theory of

resilience is embedded in the study of adversity and the interest in the impact of difficult life on individuals (Holling, 1973). Initially, Norman Garmezy, a clinical psychologist who studied adversity in mental illness life effects, introduced the theory of social resilience (Garmezy, 1974). According to Garmezy (1974), the first publication of the first research finding on resilience was in 1973.He created tools to look at systems that support resistance development a year later. Garmezy (1974) states that resilience is the ability to rebound back to withstand hardship and repair self. The concept of social resilience is more than responding to bad and difficult conditions. It is the realisation of cognitive capabilities, self-regulating behaviours and building of social support network.

The first definition of resilience was provided by Adger (2000) who considered social resilience "as the ability of communities to withstand external shocks to their social infrastructure". Others like, Longstaff (2005) believes that social resilience is "the ability of individuals, groups or organizations to continue their existence, or remain more or less stable" when confronted with some sort of disorder (Longstaff, 2005). The capability of an individual, social groups or objects to make up for damages or restore the functioning they had lost-that is, the capacity to be flexible in reaction to the hazard (Longstaff, 2005). As defined by Hans-Joachim Bürkner, social resilience is "the ability for people to cope with crucial events," and his partners agree that social resilience is an innate building on many levels and shows the capacity of individuals and groups of individuals to prepare, draw and support positive social ties.in addition to survive, recover from stressors and from social isolation (Longstaff, 2005). Based on the available literature, three important dimensions of resilience theory have been identified. The dimensions together take into consideration the following social actors: capacities to cope with and to withstand all sorts of immediate adversities (coping capacities); their capacities to learn from past experiences and adjust themselves to pressing new challenges in the future (adaptive capacities) and their capacities to craft institutions that foster individual welfare and sustainable societal robustness as a result of present and future crises (transformative capacities).

Resilience is defined by Norris *et al.* (2008) as a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance. Resilience is a paradigmatic shift in people's behaviour as they view others and their problems, and thus needs a new outlook on interventions which will increase the likelihood of a resilient outcome. Resilience is a multi-layered structure as it represents both group characteristics and individual

characteristics in the group. Marshall and Marshall (2007) suggested that perception of risk should be included in future conceptual models of resilience. This study illustrates how Ranch Argentines over-estimate the capacity of Australia and the United States to deal with and respond to climatic instability, and the susceptibility to harsher climatic events.

In order to highlight its social structure and the associated subjacent mechanisms, he talks about the "myth of resilience" (Olwig, 2012). Olwig (2012) showed that resilience can become a powerful tool to build and strengthen new ties as a discourse training in his study of water management in a German municipality. According to Olwig (2012), resilience theory as used in South Africa is of great importance at a time when social development theory continues to be put into practice, striving to overturn poverty and underdevelopment and addressing the challenges and opportunities for decolonizing the thinking and practices of the community. Social resilience, intelligently applied and critically applied, contributed to a new comprehension of how South Africans are working for their growth and development in a resource-constrained environment and how social inequality and opportunity structures mobilize for the development of a socially flourishing society. In another study carried out in Northern Ghana, Olwig (2012) pointed out that local resilience has been put in place in several different locations as the result of large global organizations working within the local communities. As such, resilience is a product of imaginary and speech, both local and global.

All these studies highlight the importance of asking who and for what purpose and with what consequences the concept of resilience carries various points of view. In this regard, the theory of resilience must recognize the role and the action by which legitimate visions of resilience are generated, including in a much more explicit manners, of stakeholder agencies (Larsen *et al.* 2011).

Southwick *et al.* (2014) however, claims that all this refers to three different types of skills needed to understand the full signification of the notion of resilience. These are: capacity coping, adaptation capacity and capacity transformation. Further look at these capacities will give more meaning in the following: Persistence or capacity to cope (rehabilitation and stability) refers, after events, to a person's ability to come to terms with shocks, to the household or to the resilient system to restore well-being. It is the first way of responding after calamity by households, mainly with the blocking of stressors. The main goal of the strategy for coping with households' occupations is to preserve their health and nutritional status and to improve

their work conditions. A steady path of healthy functioning after a highly adverse event as cited in (Southwick *et al.* 2014) and Individuals who adapt to extraordinary circumstances, achieving positive and unexpected outcomes in the face of adversity (Walsh, 2006). These definitions edge their awareness on the 'state of being resilient' in the face of a crisis, thus resulting in construction of resilience. The amplitude to rebound from adversity strengthened and more resourceful" (Walsh, 2006). In this case, resilience focus on the mediating factors or processes that give positive results in the wake of adversity.

Definitions of process also include long-term preventive strategy / action of adaptive resilience (incremental and flexible adaptation) that involves ex ante (before the shock). Theron (2016) states that adaptive strength is mainly meant to create new assets and capabilities through increasing livelihood modifications where this involves steps that will lead to a final increase of household and community assets standards. Theron (2016) also argues that adaptive resilience aims at creating household and public investments to reduce their impact. Co-learning between households and individuals, collective actions collaboration and networking to share resources are considered critical aspects in building adaptive capacity at the local community level. The present research includes this narration.

The third level is the raised level of adaptation processes. Transition potential (transformative response and change). Most challenging at the local community level is building transformative capacity (Jeans *et al.*, 2017). Families and communities are required to have access to political funds, initiate relationships and association with various sources, mainly formal entities such as banking institutions, insurance companies, rescue organizations and cooperatives. Transformative capacity is applied in this study to identify connections between households and access to external resources (Jeans *et al.*, 2017).

However, Lennart *et al.* (2017) explains that there are challenges in using resilience as a universal concept despite the impermeable attractiveness of its original coherence, simplicity and apparent completeness. It certainly has analytical potential, in particular with a view to promoting integrated perspective across scales, sectors and spaces, but not everyone finds it useful to combine resilient thought with resistance (static) in a single concept of framing. Furthermore, Lennart *et al.* (2017) think that theory of resilience aims to avoid transitions — or to avoid a production structure from collapsing. Lennart *et al.* (2017) believes that one need to recognise" the politics of resilience" although resilience appears traditional when extended

to social change and social relations. Therefore, as exhaustively expressed by Cote and Nightingale (2012), this can be done by asking specific questions "of what" and resilience "for whom". The resilience of one person can be the vulnerability of another person. In addition, Cote and Nightingale (2012) acknowledge that subsequent reasoning becomes particularly a problem when facing poor conditions in which resilience is serious. It is not a pro-poor concept; there is no automatic connection between building resilient conditions and reducing poverty. Lennart *et al.,* (2017), however, limits their assertion on deprivation, not applying the three separate mechanisms, such as coping, adaptive and transformative ability.

With this mind-set, social resilience can thus be interpreted as the capability for actors not only cope with and adjust to difficult conditions, but also look for and create options, to use collectively owned capital. The options created develop increased competence in dealing with a threat or disaster (Keck and SakdaPolrak, 2013). Keck and SakdaPolrak, 2013) results of their study were positive. More specifically, the study used to recognize the ability of an individual, household or community to access varied resources based on those definitions of social resilience theory. Keck and SakdaPolrak (2013) claim that the assets are further utilized to adapt to specific survival stressors and proactively reduce the risk of future shocks and their ability to persevere, adapt and transform their survival. Because the ultimate objective of resilience thinking is to explain the manner in which human society addresses changes and risks in a linked social and ecological system. These classifications are intended to further examine in this study the mobilization of social entrepreneurship strategies and its relationship with social innovation by individuals and households so as to deal with and adjust to the important consequences of shocks in the study area.

According to Kim and Lim (2017) social entrepreneurship, which generates social value for the most vulnerable in society through job growth, initiates developments in new goods and services to meet unsatisfactory social needs, is crucial in economic development. Braunerhjelm (2010), sees innovativeness as a particular instrument of enterprise, differs from this claim in terms of innovation theory. Innovation is the specific instrument of entrepreneurship-the act that endows resources with a new capacity to create wealth. Nonetheless, the two theories may be in agreement because there is a notion that social entrepreneurship does not necessarily entail starting a business to solve a social problem, neither is starting a business sufficient to be labelled as ' social entrepreneurship'. In essence, this explains why innovation will exist with entrepreneurship and entrepreneurship will take place with innovation.

Therefore, the theory of social entrepreneurship and the Innovation Diffusion Theory were therefore used to guide the first and second goals. However, the resilience theory interacts in both theories and shows unique features. For example, social entrepreneurship with social innovation were utilized to enable the study understand how one acre fund households maintain their existence and/or remain more or less stable following the adversities especially when the sugar industries, coffee industry and pan paper were failing. Equally the two theories explained the capability of fostering, involving and maintaining positive social connections and of surviving or recovering from stressors. From this development the establishment of One-Acre Fund was to help households suffering from various adversities use it as a social entrepreneurial structure to cope with life situations. This is argument that quantifies, the theory of social entrepreneurship and the Innovation Diffusion Theory and resilience theory as the main theories that were used to guide objectives of this study.

2.1.4 Moderation effect of social innovation

Moderation is a notion that the extent of a precedent's impact. For instance, organizational structure or strategy on company results is conditional on factors such as environmental uncertainty and instability, and the products and services the company produces (Chandler, 1962; Schoonhoven, 1981; Thompson, 1967). Mitigation occurs when the influence on a variable based on the level of a third variable known as the moderator variable interacting with the independent variable (Edwards and Lambert, 2007). Lai (2013) observes that a moderator is a separate variable which affects a connotation strength and/or direction between an independent variable and dependent variable. Therefore, moderation refers to the influence of an external factor (in this case, social innovation) on the relationship between two other variables (social entrepreneurship strategies and household resilience).

European Commission (2012) notes that as a catalyst to social transformation, the degree to which social innovation benefits society depends upon the degree to which social entrepreneurs apply social innovation as a core factor that may drive sustainable change in the society. Social innovation results and impacts as common goods to a large extent influence how demand is perceived and met (European Commission, 2012).Entrepreneurial orientation, technological turbulence and organizational structure are moderators used in various studies. In one study, entrepreneurial orientation (innovativeness and pro-activeness) moderated the relationship

between market orientation and business performance (Li *et al.*, 2008; Merlo and Auh, 2009). Similarly, entrepreneurial orientation moderated in the relationship between entrepreneurial skills and entrepreneurial intention (Ibrahim and Masud, 2016). In another study entrepreneurial orientation negatively moderated the relationship between family involvement and risk of business failure (Revilla *et al.*, 2016). Technological turbulence moderated the relationship between market orientation and business performance in several studies like in (Pulendran *et al.*, 2003; O'sullivan and Butler, 2009). In addition, technological turbulence positively moderated the relationship between market orientation and organizational innovation (Han *et al.*, 1998) and the association between total quality management, market orientation and hotel performance (Wang *et al.*, 2012). However, it did not moderate in market orientation performance relationship in other studies like in (Kirca *et al.*, 2005; Aziz and Yassin, 2010). Organizational structure is another moderator. Various business studies have used organizational structure as moderator. Organizational structure was a moderator in the relationship between knowledge management capability and job performance (Lai, 2013). Similarly, it acted as a moderator to enhance the influence of servant leadership on creative behaviour as well as patient satisfaction through nurse job satisfaction (Neubert *et al.*, 2016).

Consequently, it is believed that choosing a moderator variable is based on other studies, experience and when the moderator has no relationship with the constructs under study. The significant effect of moderating variable will help the One-Acre Fund organization to explore and integrate the identified social entrepreneurship strategies based on empirical evidence. Social innovation is recommended as a moderator variable for this study. The essence was to check and understand the strength social innovation adds to the relationship of social entrepreneurship and resilience of one acre fund household. Inclusion of social innovation as a moderator was expected to change the main relationship indicating a great influence. Therefore, drawing from the innovation diffusion theory and other similar studies, it holds that the impact of social innovation depends on whether social innovation strategically fits the needs of the society, the degree to which the outcomes of the social innovation directly or indirectly achieve the goals intended, how current and future impact of efficiency in the innovation is, and how realistic the implementation of the project is with regards to strength and weaknesses of implementation and assimilation of the innovation to the society (European Commission, 2012).

It was expected social innovation to moderate the effect of social entrepreneurship strategies on household resilience in different ways. Among these ways is amplification where innovative strategies may enhance the positive effects of social entrepreneurship efforts, leading to greater resilience among individual. Social innovations can help us create new business models that promote social and environmental responsibility, or develop new approaches to addressing social issues like poverty, education, or human rights.

Social innovation can serve as moderator to mitigate the negative consequences of the traditional strategies, safeguarding household livelihoods. Social innovation is a dynamic and multifaceted concept that transcends traditional problem-solving approaches. It represents a departure from the status quo, challenging existing norms and structures to address pressing societal issues.

Socially innovative practices allow adjustments based on changing contexts, improving overall resilience among households Therefore, social innovation is considered a moderator for several studies. Aziz and Samad (2016) contacted study on innovation. This study assessed the influence of innovation on competitive advantage in foods manufacturing SMEs in Malaysia. The study further extended to explore the moderating effects of firm age on innovation-competitive advantage relationship. The results revealed that SMEs should invest in innovation to gain competitive advantage. The study also found out that the positively firm age moderated the influence of innovation on competitive advantage. Aziz and Samad (2016) assert that the study findings may be used as a guideline for entrepreneurs to establish network with research organization and other institutions for innovative ventures or program which eventually may acquire competitive advantage in the marketplace. However, this research worked on innovation in general and not a particular type of innovation.

Li *et al.* (2018) carried out a study in Ghana on ways in which social innovation moderates social and financial value from a shared value-building perspective. The study examined the moderating impact of social innovation on the shared value generation perspectives in Ghana's education sector. The results showed that social innovation cannot play a moderating role of economic value role and the creation of common value. This study was conducted in a school environment. However, the current study was conducted on social environment far from the school environment. This is on entrepreneurship strategies and resilience of one acre fund households. Therefore, social innovation is to be used in the current study as a moderator. This

makes social innovation a key item as a moderator in the current study. Therefore, the inclusion of social innovation as a moderator is expected to change the main relationship indicating a great influence.

2.1.5 One-Acre Fund Social Entrepreneurship

Rural small farmers across East Africa, who make up the majority of the regions poor, are in need of food from their small farms to feed their families (Harlam and Hazeltine, 2014). They always lack agricultural components (hybrid seeds and fertilizer), expertise and market access though they are some of the most hard-working people in the world, One-Acre Fund, an East African social enterprise, is trying to change the challenge. It is currently working intensively with small farmer groups, providing modern farming inputs, training, delivery, financing and support for post-harvest activities on credit (Harlam and Hazeltine, 2014). The business element believed to be a social entrepreneurship structure in this arrangement is when smallholder farmers and households get farm inputs on credit and pay from their proceeds from what they sell.

One-Acre Fund strengthen funding and training components of the chain by arranging its farmers into groups of 5-8 who are generally trained, plant and refund as one unit. This is an area where one acre fund has put in place innovation practices to supports households use modern ways of farming to realise high yields. Harlam and Hazeltine (2014) believe that the transaction costs are lowered. This group structure serve as a social "credit check" for customers and ensure that planting methodology training is integrated into the agriculture community. Effective rural dispersion is the main innovation in One-Acre Fund’s core program model. One of the main factors that contribute to its customers' persistent poverty quickly became clear to One-Acre Fund that they live in remote areas beyond the reach of most businesses, non-governmental organizations and governmental farming (Harlam and Hazeltine, 2014). One-Acre Fund has developed a network of "rural markets," which is believed to be an element of social innovation of which it has put its entire range of services a short distance away from farmers.

One-Acre Fund was set to help farm families in Western Kenya survive (Manfre, 2017). One-Acre Fund started in 2006 with a pilot in Western Kenya to raise earnings by financing 40 farm families from their fields to use high-quality agricultural inputs and non-agricultural products.

The organization supported more than 445,000 farmers in six eastern and southern African countries over the following ten years (Manfre, 2017). The organization now continues to serve more than 200,000 farmers in Kenya alone (Manfre, 2017). This growth was achieved through unending impact, measured by higher rates of yield and agricultural profit; by scale, with emphasis placed on increasing the number and financial sustainability of farmers served in each farm. In this regard, One-Acre Fund therefore was selected as the best social entrepreneurship in rural and private households in this study.

2.1.6 Resilience of one acre-fund Household Livelihoods.

Resilience is defined as the capacity to adapt to adversity and shield or avoid harm (Pelling, 2003). Resilience is a confluence of the planned preparation for potential hazards and spontaneous or conscious acclimatization of hazards in response, including relief and rescue. The resilient systems can absorb shocks and maintain both the chosen lifestyle and long-term development plans at the same time. Resilient structures can recover and reorganize in times of crisis, such as drought or fire. A vulnerable system contrasts with a resilient system. As a system becomes weak, small changes could lead to disastrous effects if it loses its resilience (Pearson, 2008).

Niemistö's (2011) study of the resilience of rural Ethiopia from the Hararghe region, Eastern Ethiopia, has been aimed at understanding the issues faced by peasants in rural Ethiopia at present. Another objective was to focus on local people’s strengths to prevent, cope and recover. The study focused on the situation of malnutrition and coping strategies used in the food insecurity by the villagers and their communities. This research also looked at the role and the most efficient and most necessary support of external aid in villages. The problem of resilience of the rural communities in Hararghe in Eastern Ethiopia (Niemistö, 2011) has all been linked to these issues. The results have shown that, because of the severe shortage of water, the studied villages were little of and fragile in resilience and the sustainability. Extreme climate conditions have caused negative ecological and economic sustainability relations. Dry conditions were not recovered in the villages and the survival strategies are currently being used. From the findings it could be also summarised that forms of foreign assistance should be credit- or development based instead of temporary food aid.The current study considers the outcome of household livelihood resilience upon its interaction with One-Acre Fund social entrepreneurship. Social innovation applied in this relationship was expected to improve

households' resilience outcomes like income growth, create more jobs, improve financing health and education expenses, improve food security and enhance payment of other bills.

2.2 Empirical Literature Review

Empirical literature review was discussed according to the three specific objectives of this study. These are: influence of social entrepreneurship strategies and resilience of household livelihoods; influence of social innovation and resilience of household livelihoods and social innovation, social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods.

2.2.1 Social entrepreneurship strategies and resilience of household livelihoods.

The plan on strategy was early initiated in business management by the Greek writer Xenophon who said that strategy knows the business you proposed to carry out, an implication that what is critical to strategy is knowledge of the business (Ellis, 2011). Mintzberg and Waters (1985) believe that different types of strategies may apply in social entrepreneurship. Social entrepreneurship uses various ways for growth depending on their stage of growth and whether they have aspiration for quantitative or qualitative added value. It is a question of seeking the optimum organizational dimension and the best way to grow, rather than growth, in the interests of growth (Ellis, 2011).

According to Ellis (2011) one of the following seven growth policies for social enterprise is usually modelled as follows: remain small in organizational size and focus on other growth parameters, for instance (employee happiness, environmental improvements or building local economies) for example (through systematic franchising or 'amoebic' multiplication of small independent units); build a movement, for example(by spreading the core idea and principles so that governments, mainstream businesses, local communities or other entrepreneurs decide to work in support of the same purpose); collaborate or merge with other social ventures in the same cluster to develop processes, products and services or engage in 'network production', for example. (Social micro-entrepreneurs can join forces to supply large companies); enter into partnerships with actors in the private, public or civil sectors, for example. (To gain access to knowledge, skills, infrastructure and/or capital) and sell parts of or the entire social venture to a mainstream, commercial business, for example. (To increase the knowledge and impact of the concept or so it goes mainstream). The choice of growth strategy is closely linked to

financing the social venture. However, Ellis (2011) does not express how any of the seven growth policies for social entrepreneurship will help a social entrepreneurship work after a crisis or a re-bound after a crisis and a social enterprise strategy to avoid a tempest.

A study by Chandra *et al.* (2016) in Czech Republic revealed six distilled social entrepreneurship strategies. The strategies included: individual empowerment, collective action, system reform, physical capital development, earned income strategy (evidence-based practices) and prototyping. The three most used major strategies (associated with the highest number of strategic topics), individual empowerment, collective action and physical capital development appear to be. The next three most widely used approaches are program improvement, earned income strategy (evidence-based practice) and prototyping (Chandra *et al.* 2016) One of these has not been examined and identified in the past social entrepreneurship research. This 'prototyping' social enterprise strategy. This is because of its uniqueness. Social change at different levels-family, community, provincial, regional, national and global can be brought about by each of the first five meta-strategies. That is the reason of applying them in One-Acre Fund social entrepreneurship and in this study.

2.2.1.1 System reform strategy

Change of systems requires often new organizational skills and capabilities not necessarily available to an organization. Organizations focused on the provision of services do not always have coalition building experience or expertise, legislative reform negotiations or technical assistance and capacity building. Each studied organization had to recruit people or develop capacity internally for these skills. This has been usually an iterative process with successes and errors in Europe (EC, 2007). It’s believed that various stakeholders – including governments, local industry, the labour market and politicians focus on the creation of a corporate culture and the development of business skills. The main competences of lifelong learning across Europe were business information, skills and attitudes (EC, 2007). At the same time, scientific consensus is reached that employers are not "born" but can (partly) be learned from business thinking and doing (Kuratko, 2005). This narration explanation explains why companies allow employees undergo short courses and capacity building for change in knowledge and approaches in the work place. Many programs and courses are therefore developed within the framework of entrepreneurial learning (Kuratko, 2005). This strategy will

arguably interrogate the question on how social entrepreneurship in Kakamega County was established and for what purpose.

Related studies like that of Shahidullah (2016) addressed System reform strategy. The study focused on community-based entrepreneurship development that was linking microfinance with cross-sectional ecosystem services in Canada. The study explains the character and the complexities of relationships between communities and local ecosystems with the contact of a link between social and ecological structures, i.e. the showing of agriculture modernization of micro-enterprises in a developing world context; it explores how community-based businesses turn the green microfinance strategy through the implementation of a reform strategy. The study found out that the green microfinance strategy catalyses, both short and medium-term, business and social innovations and combines the classic microfinance's embedded economic and social objectives with new ecological sustainable targets. The microfinance approach implemented by community companies transformed the businesses and helped them go green thus limiting emissions of greenhouse gasses.

The research proposed a structure in which the 'community-based developmental enterprise (CBDE)' was established in this light and analysed by means of it. The ecosystem services and wellbeing components in entrepreneurial design and actions should be considered by community level entrepreneurial ventures, associated NGO-MFIs, CBOs and other development partners suggested by the framework (Shahidullah, 2016). The study analysed the system reform strategy on community-based developmental entrepreneurship using cross-sectional study and introduced eco-development. However, major issues that led to the development of this strategy are not established. This is a concern of the current study which applied a sample methodology method in checking how system reform strategy is used in One-Acre Fund to address the adversities that led to its establishment and built resilience.

2.2.1.2 Physical capital development strategy

Human capital include health, experience, expertise, intellectual capacity, inspiration and ability to communicate. Human capital also includes joy, ambition, spirituality and empathy. Companies also need a safe, empowered and professional employees to rely on. They need a strong workforce (Sanders and Nee, 1996). Sanders and Nee (1996) argues that, through human relations, alliances and collaboration, social capital adds value to an organization's activities

and economic performance. For instance networks, means of communication, families, societies, labour unions, businesses, schools and voluntary organizations and social norms, values and trust. Generated capital is owning wealth and infrastructure, rented or managed by an organization, which contributes to, but is not part of, production or service provision. Buildings, services like network, transport, communication, waste collection are core components of this project (Aldrich and Moody, 2000). Financial capital are assets of an organisation that exist in form of currency that can be owned or traded. These include but not limited to shares, bonds coins and banknotes.

Oparinde & Hodge (2011) did a study on factors affecting farm households' adoption of coping and adaptive strategies in rural Nigeria. The study provided information on those areas of asset poverty that can be improved upon for reducing the impacts of HPAI outbreaks on rural livelihoods as well as for enhancing household's resilience to future livelihood shocks. These assets included physical capital like improving ownership of better poultry housing, natural capital like farm land area, and improving access to market and social capital like enhancing poultry association membership.

Xiaoqing (2005) carried out another study on Physical capital strategy. The aim of this research was to explain the development of China while taking into account the effects of investment in financial capital and investment in health. Understanding of the effects of investing in health as a part of human capital on the growth specific characteristic of the analysis in the China case. By use of the modelling Cobb-Douglas production function which includes physical capital and health, he investigated the effects of investment in physical capital and investment in health and economic growth (Xiaoqing, 2005). Annual data for the period of 1978-2002 was used, the study estimated a regressive model of economic growth and the results indicated the share of investment of GDP was increasing which provided insights about policy formulation and implementation (Xiaoqing, 2005). However, this study relied on the use of two of the identified physical capital to realise the growth of the GDP. These were human capital and human health. This study contradicts that of Garzarelli and Limam (2019). At company level, Garzarelli and Limam (2019) assume that any company, in order to produce its goods, must need five forms of resources. Rather of depleting or diminishing these stocks of resources, a sustainable company should preserve and develop them where possible. It helps companies to expand their perception of financial sustainability by exploring how wider environmental and social concerns can impact competitiveness in the long term. Garzarelli and Limam (2019)

listed the five capital forms as The energy and matter (natural resources) and operations needed for the growth and distribution of their goods and services by organizations are environmental and ecological capitals (natural capital). This comprises sinks collecting, neutralise or recycling waste (e.g. wood, oceans); resources that are renewable (wood, grain, fish and waters); and processes that allow life to continue in a healthy manner, such as climate control and carbon cycles. The issue of production growth decomposition and the sources of profitable growth is a crucial question that got the concern of various theoretical and empirical studies during the recent decades (Garzarelli and Limam, 2019).

Garzarelli and Limam (2019) carried out another study on physical capital, total factor productivity (TFP) and economic growth in sub-Saharan Africa. The study explored the comparative significance of physical capital accumulation and TFP in explaining production growth in 36 Sub-Saharan African (SSA) countries over 1996–2014. In order to better assess the role of TFP in total production development, the likelihood of TFP-induced input effects is tested presenting a decomposition of output growth in 36 sub-Saharan countries over the period 1996–2014 (Garzarelli and Limam, 2019). The findings reveal that, on average, real GDP growth in the region over the period is guided primarily by physical capital accumulation (in the total 36 countries, only 14 list TFP as the main driver of growth). In this discussion, literature identifies five physical capital development that emerge as key for the current study. Sanders and Nee (1996) identified human capital and generated or manufactured capital, Aldrich and Moody (2000) discusses about financial capital while Garzarelli and Limam (2019) comes up with natural capital with five resource and social capital.

While examining the sustainability of social enterprise in contemporary Korea, Lee, (2014) chose a mixed-method strategy for his study. This research explained that sustainability is understood in three aspect as profit, social mission, and continuity of business without public money. The research revealed that stakeholders acknowledged that organizational sustainability influenced by structural and agency factors. The use of profit made by an organization in sustainability is a financial capital development that is used in adding value to an organization (Lee, 2014). The study used a mixed method and explored this study on sustainability of the social enterprises. Although sustainability is key in maintaining good livelihood, the study has not mentioned any difficulty experienced by households that may lead to use of physical capital development in sustainability and in particular, coping with life challenges. The study has identified financial and social capital as key items that drive

sustainability. Moreover, the study has not explored resilience of household livelihoods or economic growth. The current study analyzed the use of various physical capitals which was a major concern. These were natural capital like sun, water and recycled wastes; human capital like casual laborers, skilled and unskilled labor; manufactured capital like machinery; tools and equipment are used on our farms; financial capital like group loans, soft loans and grants; social capital like networking, communication channels, families, voluntary organizations and networking. However, all these studies differ in terms of the number of physical capital development.

2.2.1.3 Individual empowerment strategy

Individual empowerment has been commonly referred to as a big phenomenon in the future (Graf *et al.,* 2016). To date, however, the concept of 'empowerment' has not been widely adopted and no concise way is needed to demonstrate how different organisations view and direct their policies. For example, European Union Institute for Safety Studies considers that 'individuals are empowered by social and technological progress of the last decades. Global growth of the middle class in Asia with special force, a nearly-universal access to education, ICT empowerment and the improvement of women's status are the main drivers of this pattern worldwide (Graf *et al.,* 2016).

The World Bank (2013) argues that empowerment requires improving people's or groups capacity to make choices and turn these choices into practice and performance. The acts that create individual and collective assets as well as enhance the efficiency and equity of the organizational and institutional framework regulating use of the assets are essential to this process. Self-determined transition is basically empowerment. This means putting together the business dimensions of supply and demand, transforming the world in which the disadvantaged work and encouraging them to create and capitalize on their own characteristics. The World Bank (2013) introduces the cross-cutting issue of empowerment. This actions is aimed at empowering the vulnerable which is expected to increase development opportunities, enhance development outcomes, and enhance people's living standards, from education and healthcare to governance and economic policies. The ability of workers to make choices without regard to bosses or managers is employee empowerment .It includes the provision of expertise and the ability for workers to make choices that managers determine historically.

Strzelecki (2012) studies on individual and community empowerment enhancement in sustainable tourism development were done in post-communist Poland. The study investigated social and political features of participatory tourism growth in a post-communist background. The practice of local democracy through empowering individual stakeholders and communities in Pomerania, Poland could be encouraged through the demonstration of tourism decision-making. This was the principal task of this work. The unique post-communist conditions provided a chance to consolidate knowledge from varied disciplines and to go far off a single outlook in order to advance a more enlightened mastery of decision-making in Poland. Therefore, the perspective of local stakeholders for this study became analytical to comprehending the community operations and perceived individual empowerment within a community sphere (Strzelecki, 2012). Strzelecki (2012) thought that contemporary developments of rural sustainable tourism on post-communist societies would most probable give on to an expansion in a number of studies centred on interactions and patterns of relationships in rural areas. This study exposed an aspect of decision making in individual and community empowerment to sustainable tourism by use of social interaction in individual empowerment contrary to the current study that dealt with all the aspects of individual empowerment.

A study was conducted by Nyaribo (2012) on employee empowerment strategies used by Kenya's Africa Nazarene University. He used an empirical case study. Research reveals that Africa Nazarene University implements different employee empowerment techniques for encouraging its workers, in order to allow them to function creatively and individually, but in a certain way (Nyaribo, 2012). The strategies included among others: positive reinforcement and giving feedback, have access to information, co-workers support, coaching and mentoring employees. This study used different types of individual empowerment strategies in an education institution set up which is not a social entrepreneurship. This study give mixed findings as for individual empowerment. These were the aspect of sustainability, effectiveness, independence in decision making feature in these study. The use of individual empowerment strategy in building resilience of household livelihoods is lacking. Furthermore, literature reviewed on individual empowerment strategy give mixed out comes that range from sustainable effectiveness. However, the current study dwelt on how individual empowerment helped one acre fund household build resilience after using the one acre fund model.

2.2.1.4 Collective action strategy

Collective action is taken jointly by a group of people focusing on improving their status and achieving a common objective. This term is used in many fields of social science, including psychology, sociology, anthropology, political science and economics, in terms of formulations and hypotheses (Myatt, 2016). Myatt (2016) notes further that collective action often becomes a condition for long-term development ownership. This is seen as a requirement for extending individual strategies. This is also seen as a result of individuals who come together and thus embrace the constraints of collective action to accomplish some common goal.

Studies by Ireland and Thomalla (2011) examined the role of collective action in assisting rural communities to cope with and adapt to environmental risks in Nepalgunj, Nepal and Krabi Province, Thailand. Using two case studies, they explored the role of collective action in building adaptive capacity, paying particular attention to the role of social networks. They came up with three key observations. The first one was that collective action plays a vital role in building adaptive capacity and thus it should be more strongly considered in the change of climate adaptation strategies development. The second one is that social networks are a particularly significant component of collective action for the building of adaptive capacity. Finally, the mandate, capacity, and structure of local government agencies can influence the effectiveness of collective action, both positively and negatively. Therefore, collective action is carefully thought as an important tool in helping communities to cope with and put up with environmental risks which is similar to the current study. However, this is built on environmental risks. Ireland and Thomalla (2011) paid more attention to two elements: building capacities and social networks leaving other elements such as cooperation.

During their studies in Italy, Alonso-Población and Susana (2018) decided to learn about the workings of the policy of collective action implemented by the involvement of women and their leadership in fisheries folk organizations. The main objectives of the study were to identify constructive examples and lessons learned from the drivers, as well as identified participants and organizations that play a crucial role in promoting increased involvement and leadership of women in fisheries collective action. The key facilitators of women's participation in collective action were identified among state institutions, social movements and civil

societies, development and conservation projects, religious groups, academia, endogenous mobilization, charismatic people and coincidences.

The key factors described as catalysts for the participation of women in collective action are the reduced resources and the need to ensure management position, transformation, and distribution of fisheries rights, economic change, family welfare and women's rights. The study concluded that there appears to be consensus on the positive consequences for women as a result of their contribution to collective modes of practice. These are some of the areas that are relevant and comparable to those of the current study that tackle resilience. Therefore, Alonso-Población and Susana (2018) confirm the positive results that women can achieve by combining for common objectives. Finally, this means that the full participation of women in fisheries folk organisations, and the collective action taken by women, is an essential tool to combat gender inequality. In the fishermen's organization this strategy worked to combat gender equality rather than the current study, which will addresses resilience in the fight against adversities.

2.2.1.5 Earned Income Strategy

Income generation and distribution in the social business are the main aspects of earned income strategy. Social businesses have been identified as using earned income approaches for generating revenue in order to operate their ventures instead of relying on charitable or government grants to address social problems (Bosma *et al.,* 2004). This revenue logic can be described as the processes by a social company to create free-market products and services (Anderson and Miller, 2003). The aim of the income logic is to find a solution to the imperfect match of private and public capital. Non-profit and charitable organizations traditionally raised money from donors and government subsidies. However, these organizations started finding other ways to support their operations as the flow of these external income began to slow down. Addressing the application processes and reporting criteria for receiving, maintaining and sustaining grants and contributions, could be preferable to earned income approaches (Anderson, 2003).

The income logic received according to Dees (1998) helps social enterprises to be less donation based and financially more stable. Processes of revenue generation received can be related to missions such as when social corporations accept public contracts for the delivery of social

services and charge recipients or businesses directly for services that were previously free of charge (Dees, 1998). Processes of income generation that are received may also be attributed to goods or services that are not associated with the social purpose but merely to income generation (Kerlin, 2006). In summary, the earned income logic helps the social ventures to remain independent of both donations and volunteers' loopholes while also ensuring that all profits generated are exclusively used for the social mission (Kerlin, 2006).

Reeve and McClish (2018) using earned income carried out a study on the secret to success for the non-profit seeking financial sustainability. They argue that Non-profits need to raise income for operations but still face an ending demands for programming, evaluation, and transparency. In a wider competitive funding environment, they question how non-profits should diversify their income streams, add earned income initiatives or pursue other efforts to achieve financial sustainability. This qualitative study adopted a narrative of subject matter of experts' perceptions on earned income, resource diversification, and properties of financial sustainability of non-profit ventures. Reeve and McClish (2018) believe that non-profits are not businesses but the appeal of adding a business line of profit-making is essentially attractive. This study demonstrated that while funding does continue to be a problem for traditional non-profits, by adding an earned income item is not necessarily a remedy for financial sustainability. SMEs indicated that being able to reshape to meet changing needs of the market place as well as effectively estimating organizational successfulness may be as well as factors that lead to financial sustainability. However, based on the key perceptions emerging from the in-depth interviews, an over-arching theme was that there is no one criteria or variable that makes one non-profit or social enterprise more sustainable than another. SMEs suggested that the factors for success were different for every organization and depended on that organization's specific situation and external influences (Reeve and McClish, 2018).

Studies by Ferrari (2014) explores social entrepreneurship from a business point of view. This study started off with the perusal of the phenomenon's definition, discarding the concept's inaccurate synonyms of corporate social responsibility. While proceeding with a thorough examination of relevant subject matters, it not only reviewed the various schools of thought, but also gave an account of the social entrepreneurs and their endeavour to address society's most critical needs by means of a market-based approach. Above all, this study focused on social business models and their respective earned income strategies. In addition, it touches upon performance measurement and impact assessment methods as well as future exit

strategies of the studied social businesses. Incidentally, most organizations operate in the tourism industry which is considered to be the main catalyst for social entrepreneurship. Ferrari (2014) shows that the findings provide the reader with unexampled perception into the field of social entrepreneurship. For example, some of the participant organizations manage to combine external and or internal income flow consisting of for-profit and non-profit subunits. Finally, they become relatively successful because of this earned income strategy (Ferrari, 2014).

In a study carried out in Kajiado County in Kenya, Opati (2014) examined the impact of social entrepreneurship strategies on community empowerment among religious organizations. The study used descriptive research design survey and the development strategies of the community, mobilizing resources and mobilizing the community. The study found that these approaches affected group cohesion in the Kajiado County faith-based organization. The study found out that community based service provision strategies influenced community empowerment among faith-based organization in Kajiado County since social entrepreneurship strengthen public infrastructure and facilities that provide public services that contribute to human, social, and economic development. Economic development empowerment though limited was identified. This is an equivalent of earned income strategy. Social entrepreneurship also provide the necessary support for skill development to help communities to identify and/or address their concerns, deliver social services in the community (Opati, 2014). However, this study used three social entrepreneurship strategies that were carried out on denominational organizations which does not address livelihood issues. Furthermore, given the small sample size of 42 respondents, the study did not give proper information for generalization. In conclusion, no study has integrated all the five social entrepreneurship strategies in relation to resilience for household livelihoods. Therefore the impact of the five social entrepreneurship strategies on resilience of One-Acre Fund household livelihoods remains unknown.

2.2.2 Social innovation and resilience of household livelihood.

Innovation helps advance economic growth and address socio-economic gaps such as poverty and health OECD (2012). Many technologies that promote development solve social problems, too. Poverty-related impacts, for example, can greatly affect incentives to participate in entrepreneurial practices (e.g., poor health decreases the future productivity of workers), and addressing social problems can also promote growth processes. It is worth noting that innovation in companies exists with new characteristics: value-constructing with clients,

international knowledge collection and collaborative networks, and as drivers of innovation global challenges and public sector issues (Prahalad, McCracken & McCracken, 2009).

Doh and Acs (2010) and Lundström and Zhou (2011) distinguish the developments in technology, business and social innovation. The former focuses on the generation of information and ends with research and development results (new ideas). The second focuses on company gains, including market share or profit levels, from enterprise innovation. The latter focuses on social benefit as the solution to limited-resource social issues, political recognition, financial assistance, charitable work and philanthropic commitments. As the organization's capability to be open to innovative concepts and to regard that as a measure of its innovation orientation, Hurley and Hult (1998) introduced the concept of innovation. These scholars also introduced the concept of innovation capacity as the capacity of the organization to successfully adopt new ideas, processes or products. Innovative approaches represent a company's willingness to participate in innovative concepts, experiments and research and development activities that lead to new products and processes (Lumpkin and Dess, 1996).

Social innovation is defined as the "innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly diffused through organisations whose primary purposes are social" (Mulgan, 2012). Compared to technological innovation, this is relatively under research. In the context of a particular period in history, social innovations are created, adopted, and disseminated (Phills *et al.,* 2008). This concept of social innovation surpasses time, the mechanisms of social innovation as society evolves and institutions transforms the pattern of encounters and events (Phills *et al.,* 2008). Phills *et al.,* (2008) explains the elements that drive one of America's most fruitful times of social innovation during the great depression, which differed from those that drive social innovation today. While technical innovation cycle has been well studied, Phills *et al.* (2008) believe that very few comprehensive empirical studies are carried out on the mechanism of social innovation and the focus on resilience.

Taylor (1970) in particular pointed out that social innovation includes social entrepreneurial activists to address social needs in a new way. Holt (1971) emphasized that the application of new technologies is technological innovation, while the application of new social designs of human interaction is a matter for social innovation. In his contribution Drucker (1987) presented social innovation as a complement to technical innovation, including education,

hospital management, and productivity-related marketing practices. Mulgan (2006) seems to agree with Drucker (1987) that social innovation involve "innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organizations whose primary purposes are social", which can be complemented by the definition of Phills *et al.,* (2008) as "a novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions, and for which the value created accrues primarily to society as a whole rather than to private individuals". Sandu and Anghel (2016) states that social developments contribute to the use of collective means to accomplish social goals and mutual economic and social interest (inventiveness of people, civil society organizations, local societies, companies and government agents). While Mulgan *et al.* (2007) is considered to be market-driven and consumer innovation, shares are expected to meet human and corporate needs and desires in order to be successfully met.

Abernathy (1978) points to another twist that there are two forms of innovation-incremental and embedded in or disruptive-that we have seen with regard to social entrepreneurship. The argument is also made by Christensen (1997), who describes how many social changes (because they apply to current ones) can only be gradual, whereas other approaches and circumstances that are innovative, disruptive and generative are shifting, like new customers or low-income customers with low-cost products. Christensen and Raynor (2003) demonstrate that the overall aim of social innovation is structural change linked to disruptive innovation. Systemic reform includes the interaction of social movements, market practices, laws and regulations, information and technology, and entirely different ways in which Mulgan *et al.* (2012) thinks and does stuff. Technical creativity, in tandem with Phillis *et al.* (2008) combines concepts that create more social capital than social entrepreneurship, both of which are aimed at individuals or organizations.

Phillis *et al.* (2008) see financial and social entrepreneurship as rooted in voluntary and non-profit sectors, which in turn are largely focused on social benefits. They claim, however, that, at the end of the day, it is innovation that gives rise to every social good, where social entrepreneurs and social enterprises are active in developing and delivering innovation. Social innovation, though benefiting greatly from the voluntary and non-profit sector, which is most specifically associated with the term, may also be created within private companies or government as a means of generating social value that generates public benefit (Phills *et al.*, 2008). According to the European Commission (2013), both business and social innovation are

required to improve the quality of life in Europe and to facilitate the sustainability of welfare state social structures In particular , social innovation sought new approaches to social problems, involving conceptual, method, product and organizational improvements, based on new relationships with stakeholders and territories (OECD, 2010).

Goldenberg (2010) initially found the voluntary and non-profit sector to be the key catalyst for realizing the potential of social innovation in Canada. Nevertheless, as the field has grown in recent years, Goldenberg (2010) later noted that while the position of the sector remains significant, it must also be recognized that social innovation spans all sectors and often comes about through collaboration. Canada has seen a range of social developments introduced by the government, such as universal health care or a registered disability savings fund, all of which relate to the value of creating space for a versatile public sector capable of innovation. Goldenberg (2010) explain that the private sector has also housed many social innovations, including social media, where customers are developing and discovering new ways to connect on a regular basis, and with results that were unthinkable to the people who first developed such web services. Considering that social developments frequently tackle some form of market problem or need in which the private sector cannot effectively engage itself, and that government frequently faces revenue or policy constraints, it is often up to the voluntary and non-profit sector to come up with solutions that other actors cannot (Goldenberg, 2010).

In the US, Abrar (2018) did a study and explored how financial institutions like Microfinance provide services like banking, lending, and insurance to poor and vulnerable people who do not otherwise have access to such services (Abrar, 2018). Abrar (2018) added that the poor can better their lives and even elevate themselves out of poverty by saving money, investing, and insurance. This is an investment technique that strives to optimize both financial and social returns. Socially responsible investing is a social innovation; Abrar (2018) recapitulated that investors usually favor businesses and other organizations whose practices advance environmental sustainability, human rights and consumer protection. The proposition in this study is to help the poor better their lives, in contrast to the current study, which examined the influence of social innovation on social entrepreneurship in the face of adversity.

Many of such social advances include developing alternative market structures that can address the demands of underserved communities more quickly, economically and, if not profitably, at least sustainably (Lüdeke-Freund and Boons, 2013). They achieve so by providing lower cost

systems and more effective distribution networks, and also by mixing business and non-market strategies, in particular by integrating corporate income with public or philanthropic financial funding. Such hybrid market structures require trade-offs and are stressful, however they resolve much of the challenges that solely commercial or voluntary organisations encounter when addressing societal issues and needs (Lüdeke-Freund and Boons, 2013).

In another case of social innovation, while transiting to Argentina in 2006, Blake Mycoskie discovered that many people in developing countries often do not have the resources to afford shoes. Mycoskie returned to the U.S. to create TOMS Shoes. The company aligned every pair of new shoes that had been bought with pairs of new shoes assigned to children in need. Mycoskie made this innovation an immediate success. He used this model to buy shoes which he distributed to over a million children in need all around the world as at September 2010. This kind of innovation seems to support the current study on resilient, however it does not highlight this resilient on the part of the beneficiaries. This kind of innovation has not highlighted any new model, new market skills, new products or services but rather worked what was already produced. Furthermore, the maintenance of this programme is not highlighted since it contradicts Westley and Antadze (2010) version that social innovation strives to change the way a system operates (standard) and sometimes they are radical bringing totally new products, old elements in new way.

Workman (2004) did a study on market orientation, creativity, and new product performance in high-technology firms. He notes that the ability to generate and market creative ideas in new products and related marketing programs in response to changing market needs is key to the success of a firm. The research examined the mediating role of new product and marketing programs creativity between market orientation and new products success. The findings indicate that new products and marketing programs creativity mediates the relationship between market orientation and new products success. Workman (2004) also show that the meaningfulness dimension, rather than the novelty dimension, of creativity is of greater importance in explaining the link between market orientation and new products success. However, this study differ from Studies by Hazel (2015) on the role of relationships in building capabilities for social innovation with the case of social enterprises in England. The study presented a conceptual model that displayed social innovation process in two stages as “seizing and selection” and “scaling and implementation.” The model then outlined the external relationships engaged by social enterprises to utilise the capabilities required for social

innovation. The study finds that the process of social innovation occurs in two distinct stages which supports the conceptual model. Hazel (2015) further notes that, the study identified a varied range of external organisations that are crucial to accessing the capabilities required for social innovation mapping these external relationships to each stage of the innovation approach. The study goes on to point out the hurdles social enterprises face during the trailing of social innovation. However, this study has two elements of social innovation that are new organization model and market orientation that feature most unlike the current study with five elements.

Aziz and Samad (2016) contacted another study on innovation. This study assessed the influence of innovation on competitive advantage in foods manufacturing SMEs in Malaysia. The study further extended to explore the moderating effects of firm age on innovation-competitive advantage relationship. The results revealed that SMEs should invest in innovation to gain competitive advantage. The study also found out that the positively firm age moderated the influence of innovation on competitive advantage. Aziz and Samad (2016) assert that the study findings may be used as a guideline for entrepreneurs to establish network with research organization and other institutions for innovative ventures or program which eventually may acquire competitive advantage in the marketplace. However, this research worked on innovation in general and not a particular type of innovation.

A study by Njuguna (2015), on factors influencing sustainability of social entrepreneurship projects, The 'Iko Toilet' is another alteration that has changed the lives of many people in Nairobi and other towns in Kenya. According to Bluenow (2012) 'Iko Toilet', meaning 'there is a toilet*'* is a product of Ecotact which was started in 2007 as a social enterprise working with the new innovative ideas for the cause of helping slum residents have decent latrines in Kenya. This study adopted case descriptive where the researcher studied IKO Toilets projects situation to draw a conclusion. It collected information from 57 respondents and established that the social entrepreneurship projects addressed the most pressing need. The real problem addressed was sanitation problem. Iko Toilet a social innovation addressed this problem thus resilience. However this has only taken place in few major towns which should not be the point of focus. Further, the study does not establish the type of innovation and how this innovation has helped the entrepreneur. Further, the study has only established few element of social innovation like creativity and market orientation that has customer value and how this innovation has helped the entrepreneur.

Similarly, Kibe (2016) conducted another research on the influence of entrepreneurial determinants on the performance of social enterprises in Nairobi County. The thesis used cross-sectorial research methodology with a combination of qualitative and quantitative analysis. The research showed that financial capital, social innovation and entrepreneurship skills had a positive significant effect on the success of social enterprises. The study concluded that as a means of creating social value, making social capital relevant to the performance of social enterprises, majority of social entrepreneurs used networks, trust, reciprocity, collaborations and partnerships to a greater scope. Kibe (2016) further noted that entrepreneurial training and education largely influences how the enterprises achieve the social mission while social innovations are instrumental when applied through modern organisational models and processes as a driver for scaling performance and achieving more sustainable outcomes. Kibe (2016) further concluded that in order to grow their social enterprises, create sustainable solutions and better business models, social entrepreneurs need to apply social innovation. This study has analysed several social entrepreneurships, a strong contrast to the present study with a single social entrepreneurship. However, the study has identified three essential elements of social innovation. These are new organizational models, processes which are production technology and outcomes which are new products.

Importantly, these empirical literatures on social innovation give mixed outcomes and are limited in examining social innovation and its usefulness in helping individuals or organization cope with difficulties. Most studies reviewed deal with innovation in general and not social innovation. Furthermore, there is no study that has integrated the identified elements in social innovation. Social innovation can be a key enabler of sustainability as suggested in the reviewed literature but should also address and incorporate the aspect of resilience. Consequently, the resilient that is realised since social problems are sorted out through innovation does not come from a relationship between social entrepreneurship strategy point of view and this innovative practice. It is with this trend that the study proposed to determine how social innovation outcomes, when employed on social entrepreneurship strategies influence resilience of one acre-fund household livelihoods in Kakamega County.

2.2.3 Social Innovation, Social Entrepreneurship Strategies and Resilience of Household Livelihoods.

In Promberger's (2012) study, Promberger eluded that social challenges, such as insecure labour, long-term unemployment, working deprivation, spatially segregated socioeconomic inequities with elevated local levels and low jobs, areas of depopulation, strong links between job and education insecurity and threatened biographical transfers to and from work points to what is termed as multi-layered social class. This shows an adverse situation that must be dealt with.

Wingerter (2012) confirms that the number of persons in nonstandard labour has rose considerably during the last decade, now covering about one quarter of the active population. Waltermann (2010) supports Wingerter (2012) and Promberger (2012) by submitting that this case is problematic in many respects. Achatz and Trappmann (2011) clarify that no work has been carried out in a comprehensive way on resilient habits in poor communities, but rather a small village in eastern Germany that has been marked by three decades in de-industrialization and heavy intranational emigration, and which allows households and families a social enterprise by creativity in planting and breeding.

An economic effects analysis by Fenge *et al.* (2012) showed that while some of these were sufficient to support the expense of important items, such as food, home maintenance, travel, and service, leisure opportunities were being limited. Those with tight budgets were afraid of debt in the event of unforeseen costs. The UK (2013) noticed a decline in their standard of living over the last few years among 24 percent of older persons. Giuntoli *et al.* (2011) also offers useful information into Bradford's post-crisis impact on mental wellbeing. The participants reported difficulties paying for rentals, charges and car services. The study outlined four categories of emotional distress due to job loss and financial stress. These are: time loss in the day; loss of social importance; anger and frustration and stigma associated with being unemployed. In fact, the degree of deprivation in the United Kingdom varies greatly in the area (Gripaios and Bishop, 2005). The adversity in this study has been caused by job loss. Further, the study reveal that there is evidence of some elderly equipped with certain element of resilience factors due to their nature of money management and budgetary skills. However, this limits the presence of innovation and entrepreneurial activities.

The effect of the recession on working adults and children and pensioners and on the person, the social, and the structural coping strategies of disadvantaged groups is examined in a research undertaken by Giuntoli *et al.* (2011) in Britain and Wales. In places where inequality, insecurity and instability have risen since the recession, the inquiry was undertaken. As the 2010 figures from the Department of Employment and Pensions show, there has been a significantly greater unemployment and workers at low salaries, in two areas in London as with two smaller regions of Merseyside and Wales as possible applicants for this research. However, Giuntoli *et al.* (2011) found that the resiliency of Bradford's unemployed participants relies not on social entrepreneurship or innovation, but on their personal and other resources and their help received from family and friends. It contributed to a discussion about how this situation was being addressed by social entrepreneurship. In England and Wales, social policy stressed the vulnerable groups, for example, children and pensioners, in the context of this history and the facts before the crisis. It is likely that, because of increasing unemployment, cuts in government jobs and expenditure, the recession and the related counteracting policies have changed the structure of the vulnerable population. However, these discussion did not identify any innovation or entrepreneurship strategies in building resilience of households' livelihood to counter this crisis. Instead the individual have used the support of their own material collected from friends and family. Furthermore the two studies were carried out in a geographical set up that is urban with small and big towns as the present study is to be carried out in the rural set up. Although resilience is exposed, minimal social innovation activities and social entrepreneurship activities are noticed.

In a further study by Kassimati (1998) in Greece, the government was found to be in a severe debt crisis consisting of "rescue" measures for the EU/IMF in 2010 as well as later measures on austerity. With poverty rapidly increasing at 25-30 percent of the total population, jobs have been taken away in this context of crisis, with an estimated 1.3 million unemployment in the total working population of 4.5 million, and hopes among the general population seemed to be diminishing. The prevailing model for daily life was the economic precocity of precarious, low-pay and insecure jobs, combined with decreased welfare coverage. Kassimati (1998) found that new and unpredictable forms of resilience, solidarity, collective responsibility and reciprocity ideas and acts of thought and subjectivity, and the emergence of new political subjectivities seeking to reclaim democracy, emerged at the same time. Kassimati (1998), though didn't define the resilience growth, studied the dimensions and phases of some form of social enterprise exclusion in Greece.in this connection, Petraki (1998) stated that the social

truth of private business exclusion has not been examined in Kassimati (1998). All the same, these did not identify any innovation or entrepreneurship strategies in building resilience of households' livelihood.

Eroğlu (2011) used longitudinal research in his research beyond poverty resources, which shows that the macroeconomic deterioration during crises had a direct and significant effect on the economic deprivation of the homes of poor neighbourhoods. The focus was on four regions, which comprised Diyarbakir, Mersin, Istanbul and Zonguldak. The urban-rural dimension also included ethno-political contrast, and deindustrialisation. In the first two regions, Eroğlu (2011) focused attention on Kurdish households, who came to these cities as victims of forced migration, whereas in the latter two, the study was to assess how poor households without an ethnic distinction cope with economic crisis. In recent years, Diyarbakir's population had almost doubled: the rise of slums, homelessness, hunger, insecure jobs, and the shortage of social services posed migrants with severe challenges. Eroğlu (2011) in Mersin further suggests that migrants are met with social isolation and also bigotry. This is often marked by inequality, deprivation and a wide income disparity between wealthiest and poorest neighbourhoods, which appears to be providing more incentives than many metropolitan centres. Istanbul draws a substantial proportion of ethnic immigrants. Through focusing on non-Kurdish, poor households in the slum areas of town, there are no solutions between big and smaller towns for coping with the problem created through poor households.

On the one hand, since the middle of the 19th century Zonguldak Province is home to the largest coalfield in the country, Zonguldak Province has been an important industrial centre. On the other hand, Zonguldak can help investigate which rural household modes have been developed to deal with this crisis and whether food production for auto-consumption is the sustainable strategy (Tekgüç, 2010) as a non-urban zone where people are engaged in forest and fishing as well as mining. The search method for self-consumption food production is not worked out. This research did not, however, define the implementation in Turkey of certain techniques employed by these men. The research would discuss many approaches for social entrepreneurship that are used for creating the sustainability of the beneficiaries. Sustainability appears to be the key outcome from the social entrepreneurship established in this region contrary to the current study that will deal with resilience outcome.

In analysing social enterprises and social innovations for social development using real-life cases Pahurkar (2015) conducted a study in India. He explains that social enterprises are needed to solve various social issues and social innovation is the most essential instrument for maximizing the useful effect and social value of social enterprises. The demand for social enterprise in society is demonstrated with the assistance of actual case analyses through this study. Social enterprises are organizations that pursue social innovations maximized social values to benefit the needy. This is aim of social innovation the most favoured forms of social innovation and social enterprise must be reproduced and have least limitations. This will increase the spread of the social innovations and social benefits (Pahurkar, 2015). Social enterprises act as crucial change initiators, and they use innovation to sustain and spread their change activities to the neediest members of society. These enterprises are always in search of opportunities in the form of social challenges that are not being resolved through regular social systems and that are causing social disparity, and they address these challenges through continuous learning, innovation, adoption and adaptation for maximum value creation and positive social change. Social enterprises can still strive to resolve these issues with the help of social innovations even when resources for resolving social issues are limited (Pahurkar, 2015).

According to research carried out by Haase and Pratschke (2012), unemployment and deprivation have increased significantly in areas on the outer borders of the commuter belt (Irish Times, "Rich Land, Poor Land," 5 January 2013).The case study in Ireland concentrated on Mullingar and its rural area. Mullingar is a medium-sized provincial town (by Irish standard) and its rural area that during the Celtic Tiger era was included within the long-distance commuter back land for the larger area of Dublin (1.8 million in population). The city, which was originally an agricultural market town, consists of a traditional urban core of working classes surrounded by a suburban ring that has more than doubled in population since 1996 (Haase and Pratschke, 2012). Part of their urban centre are classed "extremely deprived." The rural case study focused on a small village where most households are farmers. In 2011, unemployment rose to 10 per cent and the poverty increased correspondingly. Interesting variations of life in the sample areas were noted, as the rural district had an aging dependence ratio double that of the suburb. Nevertheless, there is substantial evidence that Irish people in the study area rely heavily on extended family networks for informal social entrepreneurship, including social care and childcare (Haase and Pratschke, 2012). A qualitative analysis found some signs of support from relatives in a very bad research sample (Daly and Leonard, 2002). This resilience work centred on one subsistence problem caused by population unemployment.

Sijabat (2016) studied social innovation and social entrepreneurship in promoting inclusive and sustainable development. The main aim of this research was to explore how social innovation and social entrepreneurship play a role in supporting inclusive and sustainable development (Sijabat, 2016). The study was carried out on a social business (Bloom Agro) established by Emily Sutanto, a social entrepreneur. The study indicate that to develop farmers' capacity for organic rice farming, Emily used social innovation in the form of partnerships. The partnership supported the farmers strive to avoid their social and economic challenges. Sijabat (2016) believed that the vicious cycle of poverty was caused by involvement of *tengkulak* in the rural bonded labour system. A culture of mutual trust and appreciation between the farmers and Emily was cultivated by this partnership, which made their agricultural produce to become relevant on the world market. The organic agricultural system developed became famous worldwide with certification from the international community. This recognition was hitherto unprecedented among Indonesian farmers. However, through the efforts of Emily and the farmers, Bloom Agro was ultimately able to export the organic rice it grew. This showed social entrepreneurship's ability to develop capacity, access and markets for farmers and their products. This a study combination of the use of social innovation and social entrepreneurship in promoting sustainability similar to the current study but contrast with the element of sustainability. The study did not involve entrepreneur strategies and other elements of social innovation to build resilience.

A study was carried out by Ivon Yossy in Indonesia on "Batik" SMEs analysed the moderating effect of innovation on strategy-financial performance relationship (Yossy, 2017). The study provided empirical evidence that innovation moderates strategy-financial performance relationship. The study proved that innovation purely moderates the strategy-financial performance relationship of the batik SMEs in Solo city. However, first, the study was conducted in the Solo city, so the generalization was limited only for the Solo city. Second, it is related to the *batik* business SMEs only finally, the study used the wider innovation as a moderator as the present study is to determine the use of social innovation.

In Africa, in particular Zimbabwe, Maroyi (2009) found in his study that the sustainability cycle relies heavily on the resilience of rural livelihoods to various challenges, such as poverty alleviation, and acts as a response to catastrophic shocks and stress in regions where economic opportunities are small. People's lives cannot be viable unless they are robust. Life is

sustainable when it can manage shocks and tension and recover untouched; it should be able to enhance power and assets without weakening the natural resource base (Gwimbi, 2009). Gwimbi (2009) evaluated some of the recent hazards on topics relating to the livelihoods and safety of populations at risk of floods in Zimbabwe. According to Gwimbi, the opinion of many scholars surveyed is that the interaction between the aspects of survival and durability is relational and mutually reinforcing. By their logic, the forces of nature cannot be reversed, however they can be better understood and their consequences figured out, as people learn to deal with these powers. Resilience building discourse at the core of rural livelihoods is the livelihood commodity. Although flood threats are not the only danger to natural resources and livelihoods, improvements in water flows can impact the viability of livelihoods unless appropriate steps are taken to protect them by adaptation and other strategies. In disadvantaged rural areas, such approaches would involve maintaining natural resources using information structures that are readily accessible to households. Nevertheless, Gwimbi's (2009) research has demonstrated durability in the light of one catastrophe.

Basing on ethnographic evidence of indigenous mutual support practices among rural households in eastern Ethiopia, Endris *et al.* (2017) carried out a study on harnessing social capital for resilience to livelihood shocks. Endris *et al.* (2017) believes that shock, especially uncovered shock, are causes of household poverty and vulnerability in the case study groups. Shock constitutes a subjective threat to the survival of poor households on everyday basis because of subordinate household capital holding and capabilities with limited human action to mobilize resources. The study concluded that all forms of local level social capital comprised of sundry stocks of risk sharing and risk-pooling technique that function based on membership in networks of kinship, residence, tribal origin, neighbourhood, and mutual acquaintances underpinned by local customs, shared norms, values, inherited habits, generalized reciprocities, and mutual trust with the object of reducing vulnerabilities to shocks and risks are called indigenous mutual support practices (Endris *et al.*, 2017). Study suggests that mutual support practices are very essential in building coping resilience by flattening utilization shocks (improving nutritional and dietary conditions and health status of households) that transpire from distinctive shocks. The study identified social capital as a component that built resilience contrary to the current study.

In another report, Wenyuan *et al.* (2018) attempted to extend the definition of mutual interest by exploring the moderating impact of social innovation in the relationship between economic

and social value in Corporate Shared Value in the education sector in Ghana. The findings of this study have shown that specific indicators of social innovation have shown how profit-driven social enterprises apply new social innovation to the education sector in order to achieve shared value creation. Wenyuan *et al.* (2018) postulates that the research has shown how corporate social and catalytic innovation capabilities have enabled Corporate Shared Value to be applied to the education sector in Ghana, while also reacting to educational challenges and increasing economic benefits. The findings of the study also showed a positive link between social and economic interest in the development of mutual equity in education. The implications of the above results for managers in education and social enterprise organizations are that the achievement of shared value in education lies in social innovation. The emergence of social innovation helps market actors to address the worries of students and education executives in using innovative methods to overcome educational problems while enhancing their economic conditions (Wenyuan *et al.,* 2018). Furthermore, social innovation does not minimize the connection between economic opportunity and mutual wealth development. Whereas the validity of this claim rests in the performance of the current adopted paradigm with difficulties or adversities that contributed to the use of this paradigm to create resilience is not argued. While this is the only research found on the moderating impact of social creativity, the analysis was not focused on livelihoods, but instead on a school setting.

Oparinde and Hodge (2011) did a study on factors affecting farm households' adoption of coping and adaptive strategies in rural Nigeria. The aim of this study was to identify aspect of rural livelihoods that assists in sustaining households' coping and adaptive capacities during a crisis, thus attempting to diagnose which element of a livelihood has potential for maximizing livelihood resilience and minimizing vulnerabilities. In general, the study provided information on those areas of asset poverty that can be improved upon for reducing the impacts of HPAI outbreaks on rural livelihoods as well as for enhancing household's resilience to future livelihood shocks. These included physical capital (improving ownership of better poultry housing), natural capital (farm land area), and improving access to market and social capital (enhancing poultry association membership).

2.3 Summary of the Literature Review

Theoretical literature revealed that social entrepreneurship theory identifies social entrepreneurship as a continuum which pursues both financial and social goals with the latter

being the most dominant objective. Studies reviewed agree that there exists a relationship between social entrepreneurship and resilience for households' livelihood. Social entrepreneurship takes innovation as a supportive agent. The kind of relationship between social entrepreneurship and innovation in social innovation theory shows that entrepreneurship is the act of innovation embodying innovation activities and holds that the impact of social innovation depends on whether social innovation strategically fits the needs of the society. On the contrary, resilience theory advocates for the capacity of people, groups of people or organizations to carry on with their being, or remain more or imbalanced when faced with some kind of disarray. All the three theories guided the three objectives of this study. Therefore, most studies reveal that social resilience may use social entrepreneurship along with social innovation to create stability thus social resilience theory remain the major theory that will guided this study. Empirical literature review especially in western countries suggests that social entrepreneurship play a critical role in the lives of households. Social entrepreneurship have been studied in relation to household livelihoods in various regions of the world with minimum studies in Kenya. The study identified five social entrepreneurship strategies that includes: system reforms, physical capital development, individual empowerment, collective action and earned income strategies. However, no study has integrated all the five social entrepreneurship strategies in relation to resilience of household livelihoods. Therefore the impact of the five social entrepreneurship strategies on resilience of household livelihoods remains limited. In addition, Innovation studies in connection to social entrepreneurship and resilience for household livelihoods have focused on either general innovation or technological innovation or business innovation leaving social innovation that might suit resilience theoretically. Consequently, its effects on resilience of household livelihoods is not clear. Whereas literature indicates that social innovation is a moderator in the social entrepreneurship and household livelihoods extant literature does not present its empirical testing to ascertain its magnitude, direction and interaction effect. Studies that present the element of moderating effect use the wider innovation as the present study will use social innovation save for Wenyuan *et al.* (2018) who used social innovation as moderator. Most studies were carried out in urban set ups with major towns and small cities as compared to the current study that is to be carried out in rural set up of Kakamega County. Furthermore, these studies are inconsistent in showing the strength and direction played by innovation in any of the relationships. The present study was set to focus on social innovation. Consequently, there was an existing gap in knowledge in the empirical analysis on the social entrepreneurship strategies, social innovation and resilience of One-Acre Fund household livelihoods**.**

CHAPTER THREE

METHODOLOGY

This chapter describe how data was gathered from the library and the field. It also explained the study design and the study area. It further describes the study population, the sampling procedures as well as the data collection instruments. The procedure of analysis for the data to be collected was also explained.

3.1 Research Design

The research design starts with reflecting on the research philosophy The study used post-positivism research philosophy. Post-positivists argue that the ideas, and even the particular identity, of a researcher influences what they observe and therefore impacts upon what they conclude. Post-positivism pursues objective answers by attempting to recognize, and work with, such biases with the theories and knowledge that theorists develop. Post-positivist approaches assume that reality is multiple, subjective and mentally constructed by individuals. Post-positivist thinkers focus on establishing and searching for evidence that is valid and reliable in terms of the existence of phenomena rather than generalization. This is used to understand how this research was conducted, it provided a framework comprising on accepted set of theories, methods and ways of defining data (Collis & Hussey, 2003). In simple manner, it was used to provide brief guidelines about how a researcher would conduct the research. Therefore, it helped in designing the research by identifying how data would be collected and analyzed.

The research design is a rational model of evidence that helps the researcher to draw inferences regarding the casual relationship between the variables under study Nachmias and Nachmias (1992). In this scenario, the theoretical methodology of Bless, Smith & Kagee (2006) deals with a conceptual problem and not a practical problem. According to Kothari (2004), a research design is an overall framework or plan for investigation and a logical model of evidence that guides the researcher at different stages of the research. This is the philosophical context within which the work was being performed.

The study used a correlational research design with quantitative approach. Quantitative research method deals with quantifying and analyzing variables in order to get results. Creswell

(2012) states that in correlation research designs, investigation use the correlation statistical test to describe and measure the degree of association (or relationship) between two or more variables. Correlational research design was used because it focuses on examining the relationship between variables without manipulating them. It describes existing conditions and explores how different factors are related. It involves the utilization and analysis of numerical data using specific statistical techniques. Quantitative approach was used because the information collected through questionnaires was to be analyzed using analytical tools such as central trend measures and dispersion measures (Newman and Benz, 1998). This research design enables the researchers to gather data from a wide range of respondents on the investigation of social entrepreneurship strategies, social innovation and resilience of One-Acre Fund household livelihoods in Kakamega County. The design is applied because it uses a series of well-structured questionnaires which are the main tool for gaining primary information in a practical research, due to the fact that the researcher can decide on the sample and the types of questions to be asked. The architecture would make it possible to quantify the approaches of social entrepreneurship and social innovation and to determine the degree to which they apply. The design made it possible to generalize the findings, since a large sample was chosen to be representative of the entire population. The design was also used to collect and analyze archival data from one acre fund pamphlets, internet sources and other library materials. This helped the study understand the influence of the new social entrepreneurship organizations and how they built resilience of One-Acre Fund household livelihoods.

3.2 Study Area

The study area was Kakamega County. The county has the following sub counties: Lurambi, Navakholo, Ikolomani, Shinyalu, Malava, Butere, Khwisero, Mumias West, Mumias East, Matungu, Likuyani and Lugari. According to the Kakamega County Government (2017), the altitudes of the county range from 1,240 meters to 2,000 meters above sea level. The southern part of the county is hilly and consists of rough granites rising to 1,950 meters above sea level. The Nandi Escarpment is a prominent feature on the eastern border of the county, with its main scarp rising from a general elevation of 1,700 meters to 2,000 meters. Annual rainfall in the county ranges from 1280.1 mm per year to 2214.1 mm per year. The rainfall pattern is evenly distributed throughout the year, with heavy rainfall in March and July, and light rains in December and February. Temperatures range from 18^0C to 29^0C. This area is chosen because

it has some social enterprises which are vital in this study (County Government of Kakamega, 2017).

The county has two key ecological zones that are the upper medium and the lower medium. The upper medium has the central and northern parts of the county that includes Ikolomani, Lurambi, Malava, Navakholo and Shinyalu. This region produce intensive maize, tea, beans and horticulture mainly on small scale while Lugari and Likuyani practice large-scale farming. The second ecological region which is the Lower medium, occupies a substantial portion of the southern part of the county that includes Butere, Khwisero, Mumias North, Mumias West and Matungu (County Government of Kakamega, 2017). In this zone, the main economic activity is sugarcane production with some farmers practising maize, sweet potatoes, tea, ground nuts and cassava production. According to the census report of 2009 (Republic of Kenya, 2009), the county had a population of 1,660,651 comprising of 800,896 males and 859,755 female giving a population diffusion of 48% male and 52% female. This population is projected to be growing at an annual growth rate of 2.5 % (Republic of Kenya, 2009). The county is divided into One-Acre Fund sections known as ports or districts. The following are the sections: Kakamega South district, Kakamega North district, Mumias district, Butere district, Matete district and Lugari district. These districts are headed by field directors (FDs) who help the households.

3.3 Target Population

Target population comprise of total number of individuals or objects from which samples are taken for analysis (Mugenda and Mugenda, 2003). According to Bless, Smith, and Kagee (2006) a population is a full set of objects or people which is the pivot of a research and about which the researcher wish to determine some characteristics. Therefore, the target population should be well established on identifiable feature or attribute that clearly identifies individual or objects in the target population set. Given the nature of this inquiry, the population of interest included mostly One-Acre Fund households directly or indirectly involved in social entrepreneurial activities of One-Acre Fund in Kakamega County. The county has a target population of 1390 households who practice One-Acre Fund that was used in this study. The One-Acre Fund households Heads were needed to be best set to articulate issues in the study as they have the theoretical perspective of One-Acre Fund farming. The household is the main unit of analysis. Table 3.1 displays a summary of the target population.

Table 3.1 Target population

Districts	One-Acre Fund Households Heads	Totals
Kakamega south	247	247
Kakamega north	198	198
Mumias	233	233
Butere	149	149
Matete	263	263
Lugari	300	300
Total	**1390**	**1390**

Source: One-Acre Fund, Youn and Gachunga (2018)

3.4 Sampling Procedures

Orodho (2004) describes sampling as a process of picking from a population a number of individuals or items, so that the selected sample contains representatives of the characteristics found in the whole group. In the study, the sample formulation of Leeuw (2008) was used.

This was worked out as:

$$n = N / [1 + N (e)^2 \quad \text{.....Equation. 3.1}$$

Where: n is the sample size,

N-the total number of respondents in the county

α-the margin of error set at 5 percent.

Worked out as:

$$n = \frac{1390}{1 + 1390 (0.05)^2} = 310.6145$$

$$n = 311 \text{ respondents}$$

Using Leeuw (2008) sampling formula, proportionate stratified sampling technique was adapted to sample out respondents for each of the 6 districts. Proportionate stratified sampling technique was used so as to be sure to get adequate proportions of respondents with certain

required characteristics to various strata. The number of items placed to various strata was proportional to the representation of the strata in the target population (Cowles and Nelson, 2015). This accounted for geographical diverse population. The sample size is displayed in Table 3.2.

Table 3.2.Sample Size

District	Target population (One-Acre Fund household Heads)	Working 10% For Pilot study	Sample size After 10% For Pilot study
Kakamega South	247	(247/1390x311)-5	50
Kakamega North	198	(198/1390x311)-4	40
Mumias	233	(233/1390x311)-3	48
Butere	149	(149/1390x311)-3	30
Matete	263	(263/1390x311)-6	53
Lugari	300	(300/1390x311)-7	60
Total	**1390**	**31**	**280**

Source: From One-Acre Fund (Youn and Gachunga, 2018)

Therefore, the sample size was 311 One-Acre Fund household heads from a target population of 1390 One-Acre Fund households. Since 10% (31 Households) of the sample size was pre tested the sample size reduced to 280 respondents. The One-Acre Fund household heads were conducted to provide information relevant for the study.

3.5 Data Collection Methods

This study obtained data for analysis through questionnaires and document analysis.

3.5.1 Data Types and Sources

The study acquired primary data from households using the questionnaires. These are key informants in this study. Secondary data were obtained from magazines, books, diaries and pamphlets of One-Acre Fund.

3.5.2 Data Collection Procedures

The researcher acquired an introductory letter from Maseno University, to enable him collect data. The area was visited for introduction and after establishing a rapport with the management

representatives, the key informants in the data, and the purpose of the study was explained. The questionnaires was administered by the researcher and two assistants who were recruited and given necessary training to collect the data using drop and pick method including phone calls. Time frame of one month was allowed to fill the questionnaires after which the questionnaires were collected. An extension was given to those who were had not completed filling the questionnaires to increase the response rate. Document analysis was done by the researcher to collect relevant information.

3.5.3 Data Collection Instruments

Another tool that was used to collect primary data that was through a structured questionnaire contained a mix of open ended questions and closed questions based on a five point Likert scale. Questionnaires are also suitable for generating quantitative data from a large sample to test hypotheses. All the sampled One-Acre Fund households were the main respondents and were subjected to the questionnaire. The questionnaire was divided into two sections with each part handling a different research variable. Part A of the questionnaire covered the demographic and background information of the respondents sampled. The second part comprised of ordinal data where a 5-point Likert scale was used to measure social entrepreneurship strategies and innovation. Respondents were required to specify their level of agreement with a given statement by way of an ordinal scale ranging from "Strongly Disagree" on one end to "Strongly Agree" (Nassiuma, 2000; Creswell, 2009). For the benefit of those respondents who do not speak or understand English, translation of the questionnaire was done in Kiswahili. Secondary data were collected through evaluation of reports, records, magazines, publications and review of literature applicable to the current study. The sources of such data would be any official documents like One-Acre Fund reports that would be considered pertinent to furnish this study with substantive facts.

3.5.4 Reliability Tests

Reliability refers to the degree to which data collection instruments provide consistent results after repeated trials (Trochim, 2006). In the current study, however, the survey instrument were tested on a small representative sample. The pilot study would make it possible for the proposed study to check whether the articles employed are valid, reliable, and equally correct. Therefore the pilot test helps to perfect the survey so that respondents do not have an ambiguity during the main study. This is made possible by ascertaining the consistency and importance of the

questions in the questionnaires from those who answered the pilot test. The piloting for this study involved 10% of sample size random sampled from One-Acre Fund beneficiaries obtained from left target population after sampling. This was 31 participants that left a sample size of 280 participants for the study as seen on Table3.2. Pilot study respondents were sampled out proportionately per every one acre fund district. They were later randomly sampled in every district. These respondents did not participate in the main study. The information obtained from the pilot study helped in testing the validity and reliability of the research instruments, and adjusted the same accordingly to ensure it measured what was intended to be measured.

An independent accuracy methodology using Cronbach's alpha was then used to calculate the precision of all questionnaires distributed to various classes of pilot respondents. Kothari (2004) notes that Cronbach's alpha is a reliability coefficient which permits impartial estimate for the generalization of data. The following thumb rules are given by Walliman (2011):

Cronbach's Alpha Coefficient Decision

>.9 Excellent

>.8 Good

>.7 Acceptable

>.6 Questionable

>.5 Poor

<.5 Unacceptable

The data collection is shown to be relatively consistent internally and could be extrapolated to reflect the views of all respondents in the target group with an alpha coefficient higher than 0.7 (Bentler and Chuo, 1987). As a rule of thumb, test score of 0.7 was used as a cut off or benchmark for items to be included in the study (Cronbach, 1951).

Reliability is an indication of the stability and consistency with which the instrument measures a concept and helps to assess the goodness of a measure (Cooper & Schindler, 2011). According to Zinbarg (2005) Cronbach's Alpha of 0.70 or higher indicated that the gathered data is reliable as it has a relatively high internal consistency and can be generalized to reflect opinions of all respondents in the target population (Zinbarg, 2005). Serakan (2003) points out that a value of 0.70 is the minimum acceptable value for Cronbach's Alpha reliability. The Cronbach's alpha was used in this study to measure the internal consistency of the variables. Reliability test was done where Cronbach's Coefficient Alpha was used.

According to Kline (2014), a value of 0.8 is generally acceptable for cognitive test as an indicator of reliability. For social-science constructs values below 0.7 can be expected because of the diversity of the construct being measured. The items on each of the variables in the questionnaire were subjected to Cronbach's Coefficient Alpha test of all the items were found to be reliable for measurement because the reliability coefficient were found to be above the recommended threshold of 0.7 (Kline, 2014) as indicated in Table 4.1.

The results of the test are presented in Table 4.1

Table 3.3 Cronbach's Alpha for the Research Constructs

Construct	**α- value**
Resilience	0.89
Social entrepreneurship strategies, social innovation and moderation	0.73

The acceptable minimum limit of alpha is 0.70. Table 4.1 shows Cronbach's alpha coefficient of the social entrepreneurship strategies and social innovation strategies variable as 0.89 and that of resilience as 0.73. Therefore both constructs satisfied the requirements of the test.

3.5.5 Validity tests

According to Borg and Gall (1989), validity is the degree to which a test measures what it purports to measure. A measure is said to own construct validity to the degree that it confirms to predicted correlations with other theoretical propositions. The internal validity of a research study depends on the particular studied variables (Trochim, 2006). There are many forms of internal validity, according to Trochim (2006), namely face, content, construction and criterion. The supervisors were asked for support in the production of the questionnaire. This was to ensure that the evaluated aspects are reflected in the instruments in terms of statements, questions or indicators. As noted by Gay (1992) that an expert decides the validity of material. Validity test was done to ensure that the degree with which a measurement procedure or a questionnaire measures the characteristic it is intended to measure (Saunders, Lewis & Thornhill, 2009). These included, content, construct, and criterion validity (Orodho, 2009). Construct validity, was done through restricting the questions to the conceptualizations of the variables and ensuring that the indicators of a particular variable fall within the same construct.

Content validity was done by designing the questionnaires according to the study variables and their respective indicators of measurement.

The researcher used content validity index where six experts were drawn from the University. A total of six experts were involved. Non-face-to face approach was conducted through online content validation form sent to the experts and clear instructions provided. In the content validation form, the definition of domain and the items represented the domain were clearly provided to the experts. The experts were requested to critically review the domain and its 50 items before providing scores on each item. The experts were encouraged to provide written comment to improve the relevance of items to the targeted domain. All comments were taken into consideration to refine the domain and its items. According to Yusoff (2019) there are two forms of content validity index (CVI), in which CVI for item-content validity index (I-CVI) and CVI for scale-content validity index (S-CVI) were used. A score of '1' is given to a reviewed and accepted question and a '0' is awarded to a rejected question by an expert. A total of 6 accepted scores were expected to each question. All the totals were made and averaged at 50 items. One expert rejected 12 questions and gave his comments and inputs. For example, an input on the acreage of the respondents was included in the demographic section. However, this did not affect the outcome. The study gave an S-CVI/Ave and an S-CVI/UA of 0.96. Based on this calculation, it was concluded that I-CVI, S-CVI/Ave and S-CVI/UA meet satisfactory level Yusoff (2019), and thus the scale of questionnaire achieved satisfactory level of content validity.

3.6 Data Analysis and Presentation

The data collected were checked and examined comprehensively, summarized, coded and tabulated. Data were coded and entered into the Statistical Package for Social Sciences (SPSS) for analysis. Categorical set of data utilized frequencies and percentages to analyse demographic factors and establish how well each social entrepreneurship strategies and social innovation relates to resilience of households livelihood while inferential statistics such as hierarchical regression analysis examined the interactive effect of social innovation and the relationship between social entrepreneurship strategies and resilience for households' livelihood. Hierarchical regression analysis was used because data on independent variables and dependent variable was measured in ordinal scale. Hierarchical regression analysis was used in categorical data with different categories (Bryman, 2011). Categorical data are variable for which the measurement scales consists of a set of categories. The Hierarchical regression

analysis tested the hypothesis about moderating effect of social innovation on the relationship between social entrepreneurship strategies and resilience of one acre-fund household livelihoods in Kakamega County because it is used to test the effects of ordinal data. Hierarchical regression are designed to show the link between the dependent and independent variables. These are designated by dependent variable (Y), independent variable (X) and moderating variables (Z). In this arrangement X and Z are predictors displayed as:

I. To test the direct influence of social entrepreneurship strategies on resilience of one acre-fund household livelihoods.

$$Y_i=\beta_0+\beta_1 X_i+\varepsilon_i \quad \text{Equation. 3.2}$$

II. To test the direct influence of social innovation on resilience of one acre-fund household livelihoods.

$$Y_i=\beta_0+\beta_2 Z_i+\varepsilon_i \quad \text{Equation. 3.3}$$

III. The hierarchical multiple regression model below was adopted to assess the moderation moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of household livelihoods in Kakamega County

$$Y_i=\beta_0+\beta_1 X_i+\beta_2 Z_i+\beta_3 X_i Z_i+\boldsymbol{\varepsilon_i} \quad \text{Equation. 3.4}$$

Where Y=Resilience of household livelihood measured in terms of Income growth/ Job creation, Health, Education, Food security and Payment of bills.

X=social entrepreneurship strategies measured in terms of System reform strategy, Physical capital development, Individual empowerment strategy, Collective action strategy and Earned income strategy.

Z=social innovation measured in terms of New organization model, creativity to gain new skills, market orientation, new production technology approaches and tools and new products**.**

β =Beta coefficient of variable of the study (i = 1, 2, 3, 4)

β_0= constant

ε= is the error

i = Unit of analysis

3.6.1 Testing for Assumptions Results of Regression

According to Kothari (2014) violation of assumptions lead to serious biases and meaningless results. Exploratory tests were done before the data was analysed to check whether the data met the minimum conditions for inferential tests. The following discussions are based on some tests done to ensure data met the basic assumptions for inferential tests.

3.6.2 Autocorrelation Test

Autocorrelation is correlation between the residue terms for any two observations; it is expected that the residue terms for any two observations should be independent (Field, 2005). Statistical software calculates a VIF for each independent variable. VIFs start at 1 and have no upper limit. A value of 1 indicates that there is no correlation between this independent variable and any others. VIFs between 1 and 5 suggest that there is a moderate correlation, but it is not severe enough to warrant corrective measures. VIFs greater than 5 represent critical levels of multicollinearity where the coefficients are poorly estimated, and the p-values are questionable. Durbin-Watson test was used to test for the presence of autocorrelation between variables. Gujarati (2003) observed that Durbin-Watson statistic ranges from 0 to 4. A value near 0 indicates positive autocorrelation while a value close to 4 indicates negative autocorrelation. A value ranging from 1.5 to 2.5 indicates that there is no presence of autocorrelation. Table 3.3 displays the findings of autocorrelation for this study. The findings reveal Durbin-Watson of 1.759 that that signifying autocorrelation is very minimal.

Table 3.4 Autocorrelation

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.857[a]	.734	.732	.51760683	.734	424.538	2	308	.000	1.759

a. Predictors: (Constant), Social Innovation, Social Entrepreneurship strategies

b. Dependent Variable: Resilience of Household livelihoods

3.6.3 Multicollinearity Test

A multicollinearity test was done to determine whether the independent variables had collinearity problem which occurs when predictors are highly correlated amongst themselves. This was tested through tolerance values and variance inflation factor (VIF). Tolerance values shows the amount of variation of the variable which is shared with other variables while VIF shows how much variance of the estimated regression coefficients would be inflated as

compared to when the predictor variables are not linearly related (Gujarat and Porter, 2009). According Gao, Candidat and Chik (2013), tolerance values of more than 0.10 and VIF values are less than 10 is allowed. Conventionally, multicollinearity is present when Tolerance values are less than 3.0 as this means that 70% of the variable variation is accounted for by other variables. The VIF of more than 3.0 is considered high and could imply multicollinearity Adeboye *et al.,* (2014) indicate that multicollinearity start to exist when VIF is more than 2.5 and anytime when tolerance levels get below 0.40, in this study all the VIFs were less than 2.5 while the tolerance were all greater than 0.4. Table 3.5 displays multicollinearity test indicating that the data set has not suffered multicollinearity.

Table 3.5 Multicollinearity Test

	Model	Tolerance	VIF
1	(Constant)		
	Social Entrepreneurship	1.000	1.000
2	(Constant)		
	Social Entrepreneurship	.567	1.522
	Social Innovation	.563	1.516
3	(Constant)		

3.6.4 Test of Normality

Normality is important in knowing the shape of the distribution and helps to predict dependent variables scores (Gel, Miao & Gastwirth, 2007). Normality is a critical characteristic in parametric tests. In this study, Normality test was done numerically using Kolmogorov-Smirnov and Shapiro –Wilk test. The Shapiro–Wilk test is more appropriate method for small sample sizes (<50 samples) although it can also be handling on larger sample size while Kolmogorov–Smirnov test is used for $n \geq 50$ (Anaesth, 2019). For both of the below tests, null hypothesis states that data are taken from normal distributed population. When $p>0.05$, null hypothesis is accepted and data are called as normally distributed. According to Shapiro and Wilk (1965), the test to reject the null hypothesis of normality is when the p-value is less than or equal to 0.05. Thus the data for the respective variables are normally distributed hence the data collected is ideal for running a regression test (Shapiro & Wilk, 1965). Normality test for social entrepreneurship strategies and social innovation as per the results in Table 3.6 indicate that the p values were all less than 0.05 meaning they were not significantly different from a normal distribution. This is the basis on which the null hypothesis was rejected. Table 4:16 shows the Test of Normality.

Table 3:6 Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Resilience of Household livelihoods	.093	311	.000	.975	311	.000
Social Entrepreneurship strategies	.109	311	.000	.928	311	.000
Social Innovation	.075	311	.000	.983	311	.001

a. Lilliefors Significance Correction

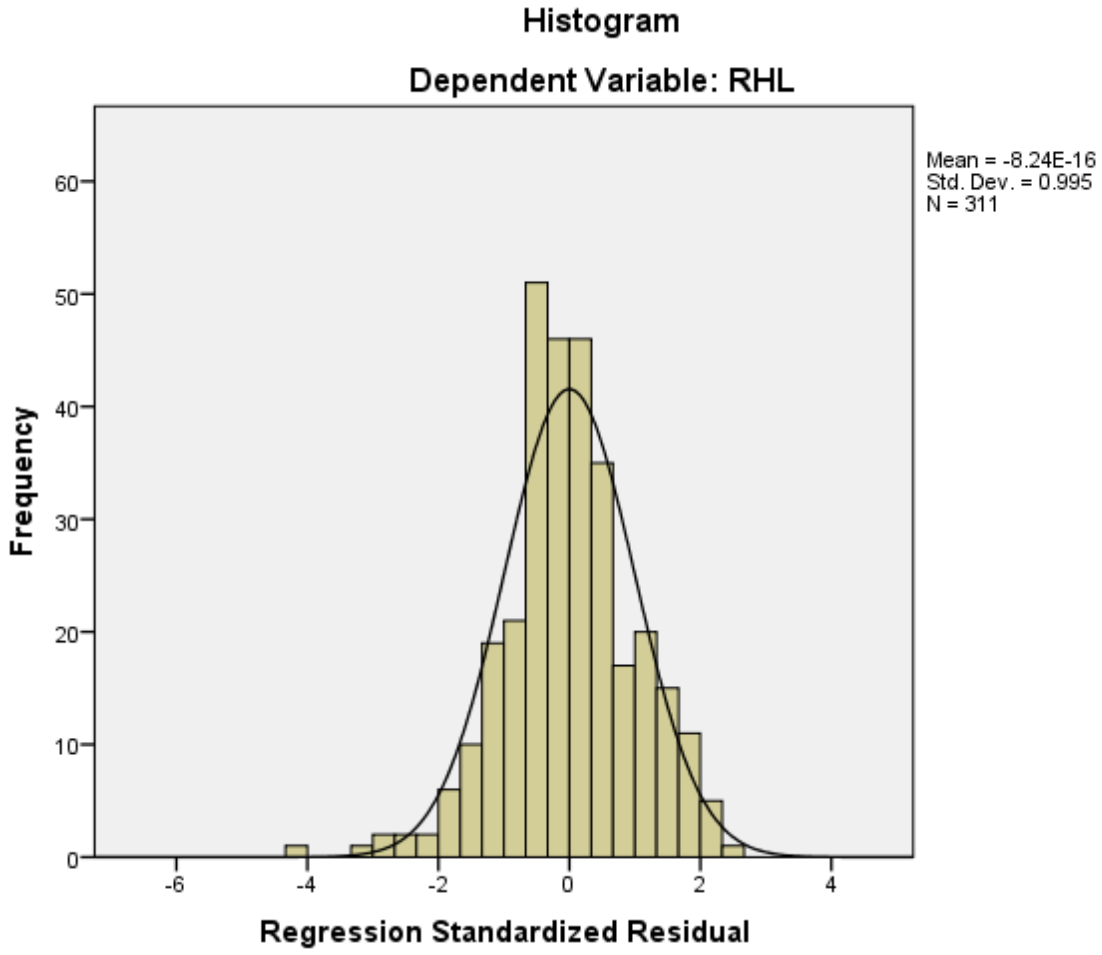

Figure 3.1 Test of Normality of Residual

The box plots are also used to indicate normality. Therefore the following box plots in figure 3.2 displays some symmetric figures that show normality.

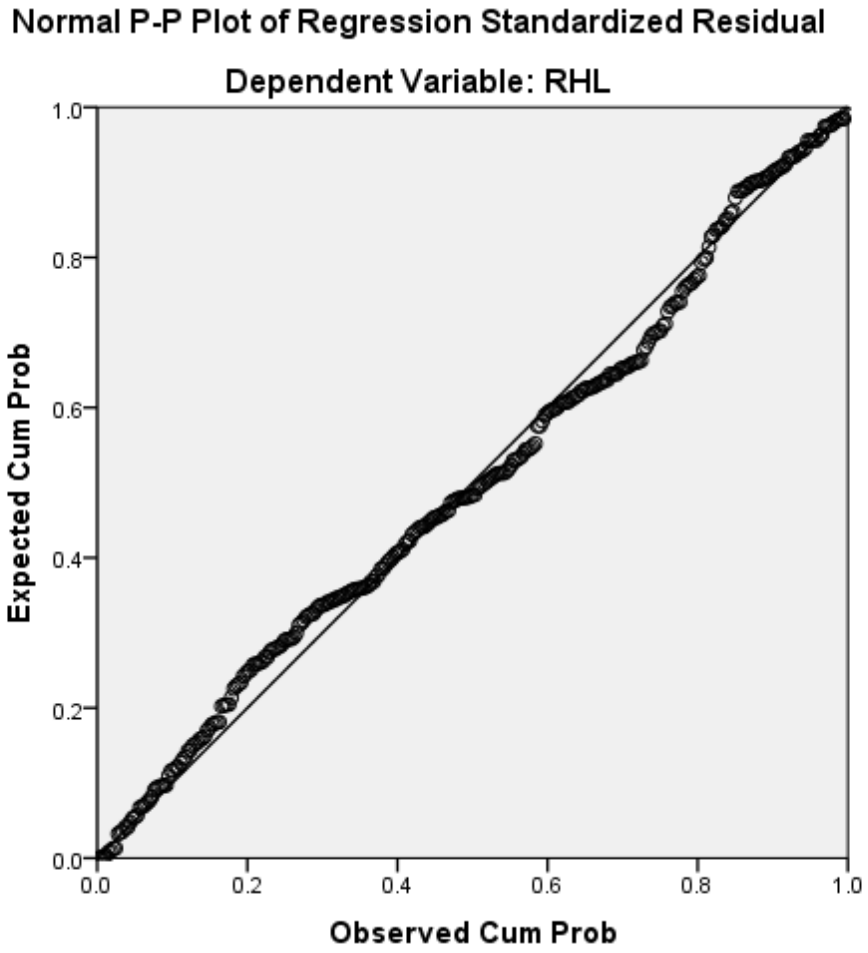

Figure 3.2. Normal P-P plot of regression standardized residual

3.6.5 Testing for homoscedasticity

Homoscedasticity requires that the dependent variable exhibit equal levels of variance across a range of predictor variables. If the assumption does not hold, then the accuracy of the b coefficient is open to question. Serious violations in homoscedasticity: that is, assuming a distribution of data is homoscedastic when in actuality it is heteroscedastic, results in overestimating the goodness of fit as measured by the Pearson coefficient. Homoscedasticity was tested with the dependent variable and the social entrepreneurship as a predictor variable. A plot of standardized differences between the observed data and the values predicted by the regression model (ZRESID) against the standardized predicted values of the dependent variable (ZPRED) was used to assess whether the assumption of random error and homoscedasticity had been satisfied. This was done for the measure of resilience of One-Acre Fund household livelihoods, which was the dependent variable. This was the aggregate of the dimensions which

included social entrepreneurship strategies. Figure 3.3 explain the distribution of the plots on the scatter diagram. The plots seem to be concentrated along a scatter diagonal line if it were to be drawn. This indicated homoscedasticity. The normal P-P plots, depicting satisfaction of homoscedasticity condition, is indicated below.

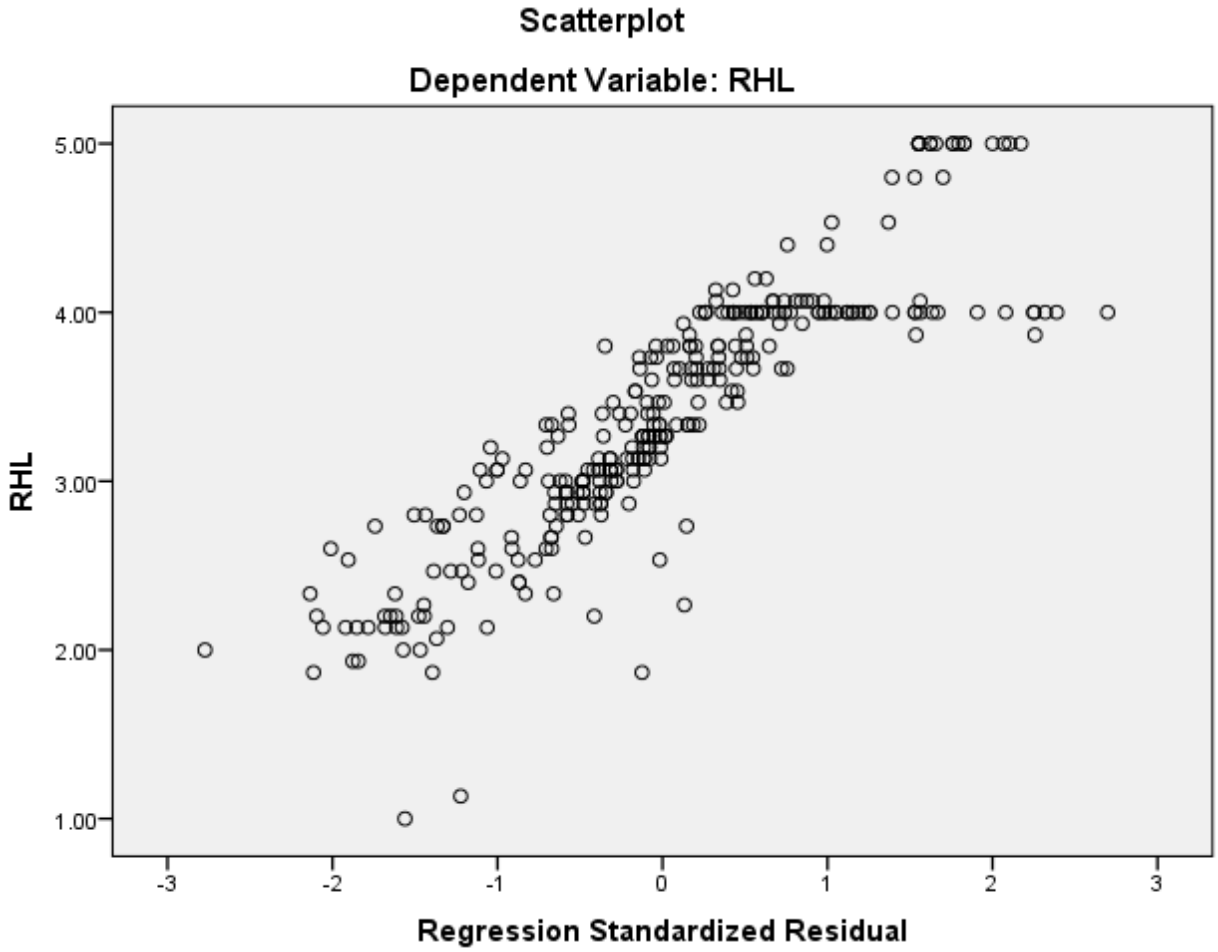

Figure 3.3: Testing for homoscedasticity

3.7 Ethical Consideration

This study involved human subjects. A number of ethical issues and procedures was put in place before, during and after data collection. Protection of participants' rights including the right to privacy and confidentiality, right of protection from discomfort and harm and right to withdraw from data collection process was all respected and adhered to throughout the process of data collection and analysis. Permission to conduct research was sought from Maseno University Ethics and Review Committee (MUERC) and national commission for science, technology and Innovation (NARCOSTI). The researcher obtained a transmittal letter from the University department offices in order to aid in getting authorization to collect data from the

respondents in the One-Acre Fund organization. The participants were informed of the objective of the study and be given an opportunity to decide to participate. Caution was therefore observed to ensure that the participants' identity is protected. All concerns of privacy, anonymity and confidentiality was maintained by the research and research assistants at all costs. To do so, the researcher observed the following: first, the researcher explained the nature and purpose of research to all the concerned participants and thereafter sought their consent. All the respondents were briefed on the purpose of the questionnaire and voluntary responses were solicited. There was need to protect the identity of the respondents as much as possible hence the questionnaires would not require the respondent's names or details that would reveal their identity (Hall and Hall, 2008). Secondly, participants were requested to sign a consent form that is attached to every questionnaire. The researcher was careful to avoid any actions or statements that lower the dignity of the respondents' participants were made aware that confidential handling of the questionnaire would be maintained and the fact that respondents would return the completed questionnaire anonymously helped achieve this objective. The respondents were assured verbally that the information obtained from them was treated with ultimate confidentiality, and the same statement was included in the questionnaire as well as the introductory letter from the University. Any data transfer was conducted in respect to existing legal and administrative standards provided by Maseno University, and other existing Kenyan law. All anticipated and foreseeable risks associated with this study was explained. The researcher would responsible for the physical, mental social well-being of the participants. Participants would be empowered to make decisions of withdrawal from the study at will.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter presents findings and their interpretation. The chapter is subdivided into several sections based on the study objectives. Each of the findings is accompanied by a brief synthesis and cross-examination with existing literature for better understanding. The chapter further contains the optimal model results and summary of the tested research hypotheses.

4.1 Response Rate

The study had a sample size of 281 One-Acre Fund households. A total of 280 questionnaires were disseminated and administered to all respondents and feedback results revealed a response rate of 100 percent. This was achieved because of the competency of the research assistants deployed.

4.2 Demographic data

This section presents the characteristics of the sample population in terms of gender, age, length worked with One-Acre Fund, level of education. This was to aid the population statistics for the study.

4.2.1 Gender

Slightly a higher proportion (60%) of the respondents are male, whereas 40% were female. This shows that a majority of those engaged in One-Acre Fund in Kenya are male. Table 4.1 presents gender of the respondents.

Table 4.1 Gender of the respondents

		Frequency	**Percent**
Valid	M	130	46.3
	F	151	53.7
	Total	**281**	**100**

Source: Field Data 2021

4.2.2 Age of the respondents

The study revealed that the majority of respondents (39.4%) were within the 26-35 years age bracket followed by 34.2% of the respondents in the 36-45 years age bracket, 12.4% are 46 years and above while 14% of the respondents are 18-25 years of age. This shows that the bulk of the respondents (73.6%) fall within the category of ages 25-45. This shows that a large portion of the representatives in the labour force are energetic. This is illustrated in

Table 4.2.

Table 4.2 Age of the respondents

Age	Frequency	Percent
18-25 years	39	14.0%
26-35 years	110	39.4%
36-45 years	96	34.2%
46 and above years	35	12.4%
Total	**280**	**100.0%**

Source: Field Data 2021

4.2.3 Length worked with One-Acre Fund

Respondents were asked to state the length they have worked with One-Acre Fund. Table 4.3 displays the length of service of the respondents.

Table 4.3: Length of service of the respondents

No	Years of service	Percentage
1	Less than 1 year	7%
2	2-3 years	25%
3	3-4 years	28%
4	4-5 years	40%

Source: Field Data 2021

The study results revealed that majority (40%) of the respondents had worked with One-Acre Fund between 4-5 years, whereas a few (7%) of the respondents had worked for less than 1 year 25% of the respondents had worked with One-Acre Fund for a period of 2-3 years while 28% had worked for 3-4 years. Long lengthy of service insinuate loyalty and work commitment of the household.

4.2.4 Level of Education

This study sought to find out the level of education that the respondents had by the time of data collection. The findings are in Table 4.4 below on the Level of Education.

Table 4.4 Level of Education

Level	Frequency	Percentage
Primary	84	30%
Secondary	141	50%
Certificate/Diploma	38	13.4%
Graduate	9	3.3%
Postgraduate	8	3.3%
Total	**280**	**100.0%**

Source: Field data (2021)

The findings show that 50% of the respondents had secondary level education, 12.4% had a certificate or diploma, followed by Graduate and primary at 7.3% and 29.1% respectively. Very few of the households (4.1%) are at post graduate level of education at the time of the pilot study. This means that there is increased value added in the one-acre fund. Further, this indicates that there is a good working quality of the households in the One-Acre Fund which enhances commitment which can lead to good resilience of household livelihoods. In addition, this qualification of the respondents from data above exhibit that most farmers had low education achievements which implies that communication channels was to be adapted to a format appropriate to the respondents of low education level.

4.3 Descriptive data analysis

Descriptive statistic was used to explore the study variables with a view to understanding their current status to explore their interaction. Response scores on the questionnaire items were elicited on a 5-point Likert scale with the first variable **(**social entrepreneurship strategies) having the following options**:** Strongly Disagree (SD), Disagree (D), Undecided (U), Agree (A) and Strongly Agree (SA) while the second variable and the dependent variables having options as Not at All (NA), Small Extent (SE), Moderate Extent (ME), Large Extent (LE) and Very Large Extent (VLE)

4.3.1 Social entrepreneurship strategies in One-Acre Fund entrepreneurship

The aim of the study variable was to evaluate the influence of social entrepreneurship strategies in One-Acre Fund social entrepreneurship. In order to establish how well each social entrepreneurship strategies in reference to resilience is implemented, respondents were to respond to statements on a Likert scale of 1 to 5 where, the respondents Strongly disagreed, Disagree, Undecided, Agreed and Strongly Agreed. For purpose of interpretation, a mean score of $0 \leq 1.5$ means that the respondents strongly disagreed, between $1.50 \leq 2.50$ means they

disagreed, 2.50≤3.50 they were respondents were Undecided, 3.50≤4.50 means they agreed and above 4.50 means the respondents strongly agreed. Tables 4.6 to 4.11 displays this information.

4.3.1.1 System reforms strategies

The study sought to find out the influence of system reform strategies in One-Acre Fund social entrepreneurship in reference to resilience for households livelihood. The responses were measured on a Likert Rating Scale with `responses ranging from Strongly Disagree to Strongly Agree. The results of findings are presented in Table 4.5

Table 4.5 System reforms strategies

Statement	SD	D	U	A	SA	M
One-Acre Fund organization conducts Training to teach farmer HHs modern farming skills.	12.5	4.5	1	39.2	42.8	3.95
One-Acre Fund organization has created new organizational skills for us farmer HHs	9.3	5.1	2.6	38.3	44.7	4.04
Skills acquired in One-Acre Fund organization have improved our farming	7.7	5.1	3.9	33.1	50.1	4.13
One-Acre Fund organization organises capacity building meetings	13.8	0.8	3.2	30.9	45.3	3.87
One-Acre Fund reaches farmers using chiefs' *barazas* and abide by the law.	41.8	10.9	8.0	23.5	15.8	2.6
Total						**18.6**
Mean Score						**3.72**

From Table 4.5, 82% of the respondents agreed that One-Acre Fund organization conducts training to teach farmer households modern farming skills with a mean of 3.95. This was followed by 82% of the respondents who agreed that One-Acre Fund organization has conducts Training to teach farmer households modern farming skills. On the other side 83% of the respondents accepted that One-Acre Fund organization created new organizational skills for us farmer households that gives a mean of that 4.04.Further 83.2% of the respondents agreed that Skills acquired in One-Acre Fund organization have improved their farming of which it gives a mean score of 4.13.On the other hand 76.2% agreed that One-Acre Fund organization organises capacity building meetings with a mean score of 3.87. While 39.3% agreed that One-

Acre Fund reaches farmers using chiefs 'barazas and abide by the law with a mean score of 2.6. The system reform strategies has produced a general mean of 3.72 with an average of 72.74%.This means that majority of respondents accepted system reform strategies is a strong component in One-Acre Fund social entrepreneurship. An annual report from One Acre Fund confirms and are in line with the finds where it reveals:

> In addition to our full-service program, One Acre Fund delivers "systems change" interventions in partnership with public or private sector actors, targeting majority of the farmers in a particular region or country. These programs range from setting up rural retail shops that serve farmers year-round to distributing farm inputs, trees seedlings in entire regions or countries to market access interventions for commercial crops. In 2021, these programs generated $60.6 million in new farm profits for 1.8 million unique farmers beyond our full-service program (One Acre Fund, 2022).

The findings of this study resonate well and converge with other new meta-strategies by (Chandra, Jiang and JunWang, 2016). Chandra, Jiang and JunWang (2016) was on mining using social entrepreneurship strategies with the topic modelling called "system reform." In essence, system reform is the core of what social activists do. According to Chandra, Jiang and JunWang (2016) When activists mobilize people, build coalitions with powerful elites, or use costly tactics (e.g., chaining themselves to railway tracks to get their voices heard), they seek to eventually reform the system. Their study provided empirical support with a large number to the presence of system reform as a strategy in social entrepreneurship, which has previously been reported in the social activism but not in the social entrepreneurship literature. The current study has used trainings, new organizational skills, capacity building meetings reaching farmers using chiefs' *barazas* and abiding by the law as system reform strategies to make profits in One-Acre Fund farming.

4.3.1.2 Physical capital development reforms strategies

The study sought to find out the influence physical capital development reforms strategies The responses were measured on a Likert Rating Scale with `responses ranging from strongly Disagree to Strongly Agree as a percentages. The results of findings are presented in Table 4.6.

Table 4.6 Physical capital development reforms strategies

Statement	SD	D	U	A	SA	M
We use natural capital like sun, water and recycled wastes on our farms.	6.8	5.1	3.5	42.1	42.4	4.08
Human capital like casual labourers, skilled and unskilled labour are used on our farms.	8.9	2.9	1.6	42.4	45	4.14
Manufactured capital like machinery, tools and equipment are used on our farms.	10.0	3.9	1.3	47.9	37.	3.8
Financial capital like group loans, soft loans and grants help us in our farming activities.	21.9	7.4	1.9	42.4	26.4	3.44
Farmer Households use social capital like networking, communication channels, families, voluntary organizations and networking on the farm.	10.6	9.3	2.3	44.7	33.1	3.8
Total						**19.26**
Mean Score						**3.85**

The findings of this study complement Studies by Chandra, Jiang & JunWang (2016) on mining social entrepreneurship strategies using topic modelling revealed which their social entrepreneurship strategies proposed predominantly focus on the sources of the resources that social entrepreneurs use to create social change. Their new meta-strategy called "physical capital development" extends their research by suggesting that building physical capital is a common strategy to enact social change. At company level, Garzarelli & Limam (2019) researched on how any company should do in order to succeed and in order to produce its goods. They concluded that a company needs five forms of resources. Rather than depleting or diminishing these stocks of resources, a sustainable company should preserve and develop them where possible. It helps companies to expand their perception of financial sustainability by exploring how wider environmental and social concerns can impact competitiveness in the long term. The five capital forms were: The energy and matter (natural resources); operations needed for the growth and distribution of their goods and services (human capital);

environmental and ecological capitals (natural capital); sinks collecting, neutralise or recycling waste (e.g. wood, oceans); resources that are renewable (wood, grain, fish and waters); and processes that allow life to continue in a healthy manner, such as climate control and carbon cycles. Sanders and Nee (1996) identifies human capital and generated or manufactured capital, Aldrich & Moody (2000) discusses about financial capital while Garzarelli & Limam (2019) comes up with natural capital with five resource and social capital. In this discussion, literature identifies five physical capital development that emerged to be in line with the current study. The current study established that natural capital like (sun, water and recycled wastes); human capital like (casual labourers, skilled and unskilled labour); manufactured capital like (machinery, tools and equipment); financial capital like (group loans, soft loans and grants) and social capital like (networking, communication channels, families, voluntary organizations and networking on the farm) have helped One-Acre Fund grow in strength.

Oparinde & Hodge (2011) did a study on factors affecting farm households' adoption of coping and adaptive strategies in rural Nigeria. The study provided information on those areas of asset poverty that can be improved upon for reducing the impacts of HPAI outbreaks on rural livelihoods as well as for enhancing household's resilience to future livelihood shocks. These included physical capital (improving ownership of better poultry housing), natural capital (farm land area), and improving access to market and social capital (enhancing poultry association membership).

4 .3.1.3 Individual empowerment strategies

The study sought to find out the influence Individual empowerment strategies. The responses were measured on a Likert Rating Scale with `responses ranging from "Strongly Disagree" to "Strongly Agree" as percentages. The results of findings are presented in Table 4.7.

Table 4.7 Individual empowerment strategies

Statement	SD	D	U	A	SA	M
One-Acre Fund provides individual farmer households with farming manuals.	7.4	4.8	0.3	55.6	31.8	4.17
One-Acre Fund sends extension officers to visit farmer households.	22.8	9.6	1.6	32.1	13.8	3.24
One-Acre Fund farm visits assist Farmer households in checking individual progress and advice.	7.4	8.0	1.0	54.7	28.9	3.9
One-Acre Fund has taught farmer households how to make and keep farm produce and financial records.	7.1	6.4	1.6	47.3	37.6	4.02
One-Acre Fund farm records assist farmer households make required changes on their farms on their own.	6.8	3.9	1.9	47.9	39.5	4.10
Total						**19.43**
Mean Score						**3.89**

From Table 4.8 above, 93.6% of the respondents with a mean of 4.17 agreed that One-Acre Fund provides individual farmer households with farming manuals as a form of Individual empowerment strategies. This was followed by 65.9% of the respondents with a mean score of 3.26 who agreed that One-Acre Fund sends extension officers to visit farmer Households while 87.7% of the respondents with a mean score of 4.13 agreed that One-Acre Fund farm visits assist Farmer Households in checking individual progress and advice. Additionally 90.4% of the respondents with a mean score of 4.23 agreed that One-Acre Fund has taught farmer households how to make and keep farm produce and financial records. On the other hand 90.7% of the respondents with a mean score of 4.21 agreed that One-Acre Fund farm records assist farmer Households make required changes on their farms on their own. These elements informed the study that One-Acre Fund embraced Individual empowerment strategies that generated general average mean score of 4.00.

The current study is in line with a study by Nyaribo (2012) on employee empowerment strategies used by Kenya's Africa Nazarene University. Though it used an empirical case study

with different types of Individual empowerment strategies in an education institution set up, the venture was not a social entrepreneurship. The study revealed that Africa Nazarene University implemented different employee empowerment techniques for encouraging its workers, in order to allow them to function creatively and individually, but in a certain way. The strategies included among others: positive reinforcement and giving feedback, have access to information, co-workers support, coaching and mentoring employees. The individual empowerment strategies gave out successful results that was realised in the aspect of sustainability, effectiveness and independence in decision making feature. The current study used Provision of farming manuals, visits by sends extension officers, checking individual progress and giving advice and preparation and keeping farm produce and financial records for individual empowerment to realise successful and good yields in One-Acre Fund farming.

4.3.1.4 Collective action Strategies

The study sought to find out the influence Collective action strategies. The responses were measured on a Likert Rating Scale with `responses ranging from strongly disagree to Strongly Agree as percentages. The results of findings are presented in Table 4.8

Table 4.8 Collective action strategies

Statement	SD	D	U	A	SA	M
A group budget is prepared every year for planting.	29.6	9.6	2.3	51.8	6.8	2.96
Local One-Acre Fund groups are created to assist each other will during manual work on individual farmer HHs farms.	8.4	5.8	1.9	47.3	36.7	3.98
One-Acre Fund group farmer HHs visit other farmer HHs in other areas for benchmarking.	5.1	4.8	0.6	61.7	27.7	4.02
One-Acre Fund group visits to other farms for benchmarking improves farmer HHs farming activities.	5.5	3.9	2.6	55.0	33.1	4.06
Field officers visit group farmer HHs regularly and promptly for support.	4.5	4.2	3.2	53.7	34.4	4.09
Total						**19.11**
Mean Score						**3.82**

From Table 4.9, 63.6% of the respondents with a mean of 3.1 agreed that a group budget is prepared every year for planting as a form of Collective action strategies. This was followed

by 91.7 % of the respondents with a mean score of 4.2 who agreed that Local One-Acre Fund groups are created to assist each other will during manual work on individual farmer households' farms. In addition 87.7% of the respondents with a mean score of 4.13 agreed that One-Acre Fund farm visits assist Farmer Households in checking individual progress and advice. While 91.6 % of the respondents with a mean score of 4.2 agreed that One-Acre Fund group visits to other farms for benchmarking improves farmer households farming activities. On the other hand 89.1% of the respondents with a mean score of 4.2 that Field officers visit group farmer households regularly and promptly for support. The above results indicated that One-Acre Fund embraced Collective action strategies that generated general average mean score of 3.95.

The findings of this study align with those of Alonso-Población & Susana (2018). During their studies in Italy, they decided to learn about the workings of the policy of collective action implemented by the involvement of women and their leadership in fisheries folk organizations. The focus of the study were the identification of constructive examples and lessons learned from the drivers, as well as identified participants and organizations that play major role in promoting increased involvement and leadership of women in fisheries collective action. The key facilitators of women's participation in collective action were identified among state institutions, social movements and civil societies, development and conservation projects, religious groups, academia, endogenous mobilization, charismatic people and coincidences. The key factors described as catalysts for the participation of women in collective action are the reduced resources and the need to ensure management position, transformation, and distribution of fisheries rights, economic change, family welfare and women's rights. The study concluded that there appears to be consensus on the positive consequences for women as a result of their contribution to collective modes of practice. Therefore, Alonso-Población & Susana (2018) confirm the positive results that women can achieve by combining for common objectives, full participation of women in fisheries folk organisations, and the collective action taken by women, is an essential tool to combat gender inequality. These are some of the areas that are relevant and comparable to those of the current study but differ slightly where the current study established that collective actions that includes group budgets, group visits by households and visits by field officers yield good results for One-Acre Fund households.

4.3.1.5 Earned income strategies

The study sought to find out the influence Earned income strategies. The responses were measured on a Likert Rating Scale with `responses ranging from Strongly Disagree to Strongly Agree. The results of findings are presented in Table 4.9

Table 4.9 Earned income strategies

Statement	SD	D	U	A	SA	M
One-Acre Fund organization provides farm inputs according to the needs of the farmer households.	7.7	2.3	1	35.7	53.4	4.25
One-Acre Fund farming proceeds and profits pay for the farm inputs acquired as loan from the organization.	8.7	7.4	1.6	36.3	46.0	4.04
One-Acre Fund farming proceeds and profits have sustained farmer HHs farming for the last 3 years	5.1	5.5	0.6	36.7	52.1	4.25
Different produce like maize, beans and vegetables have improved farmer household's income.	4.5	7.7	1.3	31.2	55.3	4.25
Farm proceeds and profits have financed different projects in farmer HHs homes	14.5	25.4	1.3	44.7	14.1	3.19
Total						**20**
Mean Score						**4.00**

From Table 4.9, 95.5 % of the respondents with a mean of 4.5 agreed that One-Acre Fund organization provides farm inputs according to the needs of the farmer households as a form of Earned income strategies. This was followed by 93.9 % of the respondents with a mean score of 4.4 who agreed that One-Acre Fund farming proceeds and profits pay for the farm inputs acquired as loan from the organization. In addition 98.1% of the respondents with a mean score of 4.6 that One-Acre Fund farming proceeds and profits have sustained farmer households farming for the last 3 years. While 96.1 % of the respondents with a mean score of 4.6 agreed that Different produce like maize, beans and vegetables have improved farmer household's income. On the other hand, 64.6% of the respondents with a mean score of 3.3 agreed that farm proceeds and profits have financed different projects in farmer households' homes. These results indicated that overall earned income strategies is a strategy embraced by

One-Acre Fund social entrepreneurship that generated general average mean score of 4.00. A review of the annual report confirms the findings.

> "Over the years, our rigorous impact assessments have consistently shown that farmers working with One Acre Fund improve their bottom-line profits by at least 40%, even after repaying program fees and controlling for what they would have earned without participating in the program. We are happy to report that in 2021, farmers who participated in our full-service program generated $104 in additional profit, representing a 45% increase in income on activities supported by One Acre Fund. Across the 1.4 million families reached, this represents $150 million of impact." (One Acre Fund, 2022).

These findings are in line with studies by Reeve & McClish (2018) who carried out studies on the secret to success for the non-profit looking for financial sustainability using earned income. This study demonstrated that while funding does continue to be a problem for traditional non-profits, by adding an earned income item, it is not necessarily a remedy for financial sustainability but assists maintain businesses. However, this study contradicts studies by Ferrari (2014) who investigated social entrepreneurship from a business perspective. For example, some of the participant organizations manage to combine external and or internal income flow consisting of for-profit and non-profit subunits. Finally, Ferrari (2014) explains that sub units for-profit and non-profit become relatively successful because of this earned income strategy and an external source. The currents study has successfully revealed that only earned income strategy leads to a successful One-Acre Fund enterprise.

4.3.1.6 Findings of Social entrepreneurship strategies

The influence of social entrepreneurship strategies was measured using system reforms strategies; physical capital development reforms strategies; individual empowerment strategies; collective action strategies and earned income strategies. Various individual strategies produced general average mean scores and standard deviations that are displayed in Table 4.10.

Table 4.10 Social entrepreneurship strategies

Statement	M
System reforms strategies	3.7
Physical capital development reforms strategies	3.85
Individual empowerment strategies	3.89
Collective action strategies	3.82
Earned income strategies	4.00
Total	**19.26**
Average	**3.9**

The findings from the study reveal that Social entrepreneurship strategies had a mean score of 3.9.The findings clearly indicates that an (M=3.9) respondents agreed Social entrepreneurship strategies has helped improve One-Acre Fund social entrepreneurship.

The current study is in tandem with a study carried by Opati (2014) that examined the impact of social entrepreneurship strategies on community empowerment among religious organizations. The study found out that community based service provision strategies an equivalent to collective action strategy in the current study influence community empowerment among faith-based organization in Kajiado County, Kenya. Since social entrepreneurship strengthen public infrastructure and facilities that provide public services that contribute to human, social, and economic development. Economic development empowerment though limited has been identified. This is an equivalent of earned income strategy. Social entrepreneurship also provide the necessary support for skill development to help communities to identify and/or address their concerns, deliver social services in the community. However, this study differed from the current study where it has used three social entrepreneurship strategies that were carried out on denominational organizations which does not address livelihood issues. The current study integrated the five social entrepreneurship strategies and revealed their strong impact.

The findings of this study explains the social entrepreneurship theory as propounded by Dees Dees (2001). The theory identified social entrepreneurship as a continuum which pursues both financial and social goals with social goals being the most dominant objective. One-Acre Fund is one such Social entrepreneurship that has shown to trail both fiscal and social desires. Social entrepreneurship makes development possible and promotes even where large manufacturers see no business opportunities. Social entrepreneurship strategies have been used in (One-Acre

Fund) as agents that have married financial independence and social mission. In this respect, this study makes a significant contribution to social entrepreneurship theory by confirming that the aspect of social entrepreneurship strategies are used in any enterprise to realise better outcomes. System reforms, physical capital development reforms individual empowerment, collective action and earned income are strategies used in one acre fund to realise both financial and social gains. The findings of this study add value to the social entrepreneurship theory and encourage research exploring the interaction between social entrepreneurship strategies and social innovation as a catalyst for social entrepreneurship development in different emerging and mature economies.

4.3.2 Social innovation in One-Acre Fund social entrepreneurship

The objective of the study was to determine the influence of social innovation in One-Acre Fund social entrepreneurship in Kakamega County. Social innovation was measured by new organization model and creativity market orientation, new production technology and new products and new products and services. In order to establish how well social innovations are implemented respondents were to respond to statements on a Likert scale of 1 to 5 where, 1 meant that the respondents Not At All, 2- small extent, 3- Moderate Extent, 4- Large Extent and 5 meant that they Very Large Extent. For purpose of interpretation, a mean score of $0 \leq 1.5$ means that the respondents agreed not at all, between $1.50 \leq 2.50$ means they agreed to small extent, $2.50 \leq 3.50$ they were respondents agreed to moderate extent, $3.50 \leq 4.50$ means they agreed to large extent and above 4.50 means the respondents agreed to large extent. The results were displayed percentages and means.

4.3.2.1 New organization model and creativity

The study sought to determine the influence Earned income strategies. The responses were measured on a Likert Rating Scale with `responses ranging from Not At All, small extent, Moderate Extent, Large Extent and Very Large Extent. The results of findings are presented in Table 4.11

Table 4.11 New organization model and creativity

Statement	NA	SE	ME	LE	VLE	M
Creativity in One-Acre Fund improves yields in our farming activities.	10.5	11.3	23.5	38.6	16.1	3.4
There is learning and acquiring of new ideas to farmer households farming or service delivery. Provision of new ideas, methods and tools has improved our farming activities.	12.5	4.8	35.7	34.4	12.5	3.3
Through new organization, farmer households have better ways of producing yields and marketing has made farmer households get products.	7.7	7.1	26.0	46.3	12.9	3.5
New One-Acre Fund model has improved our farming.	9	4.8	29.6	34.7	21.9	3.6
Our group uses creative methods of reaching markets, enhancing services and products e.g. volunteerism	10.9	12.2	22.2	42.4	12.2	3.3
Total						**17.0**
Mean scores						**3.4**

From Table 4.11, The sample size was 280, the study revealed that the statement creativity in One-Acre Fund improves yields in farming activities of households had a mean of 3.4 . This was followed by a statement that there is learning and acquiring of new ideas to farmer households farming or service delivery with provision of new ideas, methods and tools improved households farming activities had a mean score of 3.3. The statement that: "Through new organization, farmer households have better ways of producing yields" and "Marketing has made farmer households get products" had a mean score of 3.5 agreed that through new organization, farmer Households have better ways of producing yields and marketing has made farmer Households get products. New One-Acre Fund model has improved our farming had a mean score of 3.6. On the other hand the statement that Our group uses creative methods of reaching markets, enhancing services and products e.g. volunteerism had a mean score of 3.3 agreed that their groups uses creative methods of

reaching markets, enhancing services and products e.g. volunteerism. The above results indicated that new organization model and creativity strategies are strategies embraced by One-Acre Fund social innovation that generated general average mean score of 3.4.

The findings of this study are in line with a study by Njuguna (2015) about factors influencing sustainability of social entrepreneurship projects. The study was on 'Iko Toilet' which is another alteration that has changed the lives of many people in Nairobi and other towns in Kenya. 'Iko Toilet', which when loosely translated means 'there is a toilet*'* is a product of Ecotact which was started in 2007 as a social enterprise working with the new innovative ideas for the cause of helping slum residents have decent latrines in Kenya. The real problem addressed was sanitation problem. Iko toilet a social innovation addressed this problem. Creativity and market orientation that has customer value and that innovation help the entrepreneur and customers feature commonly. The current study provides creativity, learning and acquiring of new ideas, provision of new ideas, methods and tools new model, creative methods of reaching markets, enhancing services and products e.g. volunteerism in new organization model and creativity that has been found out to improve and sustain One-Acre Fund farming activities.

4.3.2.2 Market orientation, new production technology and new products and services

The study sought to determine the influence earned income strategies. The responses were measured on a Likert Rating Scale with `responses ranging from Not At All, small extent, Moderate Extent, Large Extent and Very Large Extent. The results of findings are presented in Table 4.12

Table 4.12 Market orientation, new production technology and new products and services

Statement	NA	SE	ME	LE	VLE	M
One-Acre Fund produce have been able to enter new markets.	9.2	4.8	35.4	37.6	12.6	3.3
We are able to produce & supply products with desired features that were previously not available and affordable to the consumers.	9.3	4.8	35.4	37.6	12.9	3.4
One-Acre Fund has introduced new products (solar lamps, batteries, sanitary pads) or services that benefit consumers.	7.4	9.6	15.4	37.6	29.9	3.7
Information in One-Acre Fund reaches farmer HHs through text messages on their mobile phones and that farmers pay their loans via mobile phones.	5.8	7.7	26.7	27.3	22.2	3.7
It is easier to establish and access linkages for markets through different media including social media.	8.0	15.4	26.0	37.0	13.5	3.3
Total						**17.4**
Mean scores						**3.48**

From Table 4.12 the sample size was 280. The study revealed that the statement One-Acre Fund produce have been able to enter new markets had a mean 3.3 whereas the statement on We are able to produce & supply products with desired features that were previously not available and affordable to the consumers produced a mean of 3.4. One-Acre Fund has introduced new products (solar lamps, batteries, sanitary pads) or services that benefit consumers had a response with a mean 3.7.Information on One-Acre Fund reaches farmer HHs through text messages on their mobile phones and that farmers pay their loans via mobile phones had a response with a mean 3.7. The statement that: It is easier to establish and access linkages for markets through different media including social media had a response with a mean 3.3.

The findings of this study are in line with studies by Hazel (2015) on the role of relationships in building capabilities for social innovation with social enterprises in England. The study presented a conceptual model that displayed social innovation process in two stages as "Seizing and Selection" and "Scaling and Implementation." The model then outlined the external relationships engaged by social enterprises to utilise the capabilities required for social

innovation. The two elements of social innovation that are new organization model and market orientation featured. However this differed with the current study because it had five elements. Hazel (2015) further notes that, the study identified a varied range of external organisations that are crucial to accessing the capabilities required for social innovation mapping these external relationships to each stage of the innovation approach.

4.3.2.3 Findings of Social innovation

The influence of Social innovation was measured using new organization model, creativity, market orientation, new production technology new products and services. These innovation elements produced general average mean scores of 3.8 that is displayed in Table 4.13.

Table 4.13 Social innovation

Statement	M
New organization model and creativity	3.41
Market orientation, new production technology and new products and services	3.48
Total	**7.5**
Mean scores	**3.8**

Apparently, a mean of 3.8.is an indication that majority of the respondent have agreed that Social innovation with its elements plays a significant role. The following extract was captured from the annual report:

> "We initiated farming behaviour change programs to improve productivity and yields, which are important indicators in assessing impact. Over the past two years, we've provided tailored farm-level recommendations in Kenya, resulting in developing a digital seed recommendation platform to be integrated into our enrolment app. Over the coming years, we plan to improve our planting timing recommendations by incorporating weather forecast data and offering more up-to-date training to field officers and farmers" (One Acre Fund, 2022).

The above data informs this study that One Acre Fund embraces technology in improving its services. The study resonates well with studies by Workman (2004) on market orientation, creativity, and new product performance in high-technology firms. Workman (2004) explains that key to the success of a firm is the ability to generate and market creative ideas in new products and related marketing programs in response to changing market needs. Workman (2004) also show that of greater importance in explaining the link between market orientation and new products success is the meaningfulness dimension rather than the novelty dimension

of creativity. However, Workman (2004) contradicts Studies by Hazel (2015) on the role of relationships in building capabilities for social innovation with the case of social enterprises in England. The study presented a conceptual model that displayed social innovation process in two stages as "Seizing and Selection" and "Scaling and Implementation." However, the two stages provide two of social innovation elements that are new organization model and market orientation that feature most unlike the current study with five elements. The five elements were used to explain the role of social innovation in the one acre fund social entrepreneurship.

4.3.3 Resilience of One-Acre Fund household livelihoods

The objective of the study was to analyse the influence of social innovation on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods in Kakamega County. In order to establish how well social innovation moderate on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods are implemented respondents were to respond to statements on a Likert scale of 1 to 5 where, For the purpose of interpretation, a mean score of $0 \leq 1.5$ means that the respondents Not at All agree (NA), between $1.50 \leq 2.50$ means respondents agreed to a Moderate Extent (ME), $2.50 \leq 3.50$ means respondents agreed to Small Extent (SE), $3.50 \leq 4.50$ means respondents agreed to Large Extent (LE), and above 4.50 means respondents agreed to Very Large Extent (VLE).

4.3.3.1 Income growth and job creation

The study sought to determine the influence Income growth and job creation. The responses were measured on a Likert Rating Scale with responses ranging from Not At All, small extent, Moderate Extent, Large Extent and Very Large Extent. The results of findings are presented in Table 4.14.

Table 4.14 Income growth and job creation

Statement	NA	SE	ME	LE	VLE	M
Sales volume on our yields have increased over the years with One-Acre Fund farming.	10.3	8.4	21.9	44.1	15.4	3.5
HH made some progress in profits each year for the last 3 years from our sales.	11.3	3.9	26.7	42.8	15.4	3.5
One-Acre Fund has contributed to an increase in HH disposable income.	8.0	11.6	20.6	45.7	14.1	4.5
HH depend wholly on revenue generated from One-Acre Fund proceeds to sustain our livelihood.	78.6	7.9	12.1	0.7	0.7	1.37
New job openings have been created by One-Acre Fund.	7.1	9.6	16.7	55.0	11.6	3.5
Total						**16.37**
Mean						**3.27**

From Table 4.14, the sample size was 280, the study revealed that respondents agreed to the statement that Sales volume on their yields have increased over the years with One-Acre Fund farming with a mean of 3.5. Household made some progress in profits each year for the last 3 years from our sales yielded a mean of 3.5. The statements One-Acre Fund has contributed to an increase in Households disposable income generated a mean of 4.5 while the statement that new job openings have been created by One-Acre Fund has a mean of 3.5. Finally a statement that Households depend wholly on revenue generated from One Acre Fund proceeds to sustain our livelihood had a mean scores of 1.37. The overall results revealed that Income growth and job creation had a mean of 3.27. Interpreting results of the fourth statement with a mean of 1.37 indicates that the respondents did not agree at all to this statement.

The findings of this study congruent with studies by Sijabat (2016) who made studies on how social innovation and social entrepreneurship as used in promoting inclusive and sustainable development. This is in the same way the current study has used social entrepreneurship and social innovation in the resilience of One Acre Fund farmers' livelihood. The study carried out on a social business (Bloom Agro) established by Emily Sutanto, a social entrepreneur indicated that to develop farmers' capacity for organic rice farming, Emily used social innovation in the form of partnerships. The partnership supported the farmers strive to avoid

their social and economic challenges. Sijabat (2016) believed that the vicious cycle of poverty was caused by involvement of *tengkulak* in the rural bonded labour system. Therefore, through the efforts of Emily and the farmers, Bloom Agro was ultimately able to export the organic rice it grew. This showed social entrepreneurship's ability to develop capacity, access and markets for farmers and their products. The current study revealed that one acre has: increased Sales volume on the yields over the years of which households made some progress in profits each year for the last 3 years from our sales. In addition One-Acre Fund contributed to an increase in households' disposable income that made them sustain our livelihood. Furthermore, this was an opening for new job openings.

4.3.3.2 Education and Health

The study sought to determine the influence Education and health. The responses were measured on a Likert Rating Scale with `responses ranging from Not At All, small extent, Moderate Extent, Large Extent and Very Large Extent. The results of findings are presented in Table 4.15

Table 4.15 Education and health

Statement	NA	SE	ME	LE	VLE	M
I save my One-Acre Fund farming proceeds on monthly basis.	54.6	5.0	33.9	6.4	0.0	1.9
I educate my children from One-Acre Fund farming proceeds.	77.5	7.9	12.9	1.8	0.0	1.4
I plan to increase my savings to finance future education of my children.	6.1	10.6	30.9	43.4	9.0	3.4
One-Acre Fund farming proceeds has enabled us access minor health services.	8.0	9.0	23.5	48.6	10.9	3.5
One-Acre Fund farming proceeds has enabled us access to major health services.	40.0	0.4	2.9	53.9	2.9	2.8
Total						**13.0**
Mean						**2.6**

From table 4.15 above, the sample size was 280, the study revealed that respondents agreed to the statement that: I save my One-Acre Fund farming proceeds on monthly basis had response with a mean of 1.9. I educate my children from One-Acre Fund farming proceeds yielded a mean of 1.4. While the statement that: I plan to increase my savings to finance future education

of my children had a mean of 3.4. One-Acre Fund farming proceeds has enabled us access minor health services and One-Acre Fund farming proceeds has enabled us access to major health services had mean scores of 3.5 and 2.8 respectively. The overall results revealed that had a mean of 2.6.

4.3.3.3 Food security and Bills payment

The study sought to determine the influence Food security and Bills payment. The responses were measured on a Likert Rating Scale with `responses ranging from Not At All, small extent, Moderate Extent, Large Extent and Very Large Extent. The results of findings are presented in Table 4.16

Table 4.16 Food security and Bills payment

Statement	NA	SE	ME	LE	VLE	M
We plant different types of crops on our farms using One-Acre Fund.	9.0	9.3	31.2	41.5	9.0	3.3
We sale and keep some produce for own consumption.	9.0	8.4	37.0	30.5	15.1	3.3
The produce we keep is enough to sustain my family throughout the year.	9.0	14.5	26.7	37.3	12.5	3.3
The sales make us pay for our bills that include electricity, water and sewage.	60.7	34.3	5	0	0	1.4
Settling our bills on time makes lead a better life	61.8	37.9	0.4	0	0	1.4
Total						**12.7**
Mean						**2.5**

From Table 4.16 above, the sample size was 280, the study revealed that respondents agreed to the statement that We plant different types of crops on our farms using One-Acre Fund had a mean of 3.3. We sale and keep some produce for own consumption had a mean of 3.3 just like a statement that the produce we keep is enough to sustain my family throughout the year. The sales make us pay for our bills that include electricity, water and sewage had a mean of 1.4. Settling our bills on time makes lead a better life had a mean of 1.4. The overall mean score for food security and bills payment had a mean of 2.5. The overall results indicates that respondents moderately agree to the fact that One Acre Fund contributes moderately to food

security and payment of bills. The results of a mean of 2.5 confirms that resilience of households' livelihood diminishes. From the annual report, the following information was captured.

> "There is enough food in the community now because of One Acre Fund," few sacks of maize are left over from the last harvest. "People now have surplus food, enough to sell in the market. They can send their kids to school, and start businesses in the community. Some people have even opened shops (One Acre Fund, 2017)."

The above data support the study findings on the use of the One Acre fund proceeds in feeding the family and educating children. The study is in line with a study by Thirapongphaiboon (2018) on the power of social enterprises in encouraging food sustainability transitions in consumerism towards food waste reduction in the UK, Denmark, and the Netherlands. This involve how five social enterprises are used to save on wastes to realise profits that can be used. Social enterprises were involved. The study found that each social enterprise was working and their practices that encourage consumers to engage in food waste behavioural changes through the integrated Motivation-Opportunity-Ability-Behaviour (MOAB) framework. This study provided the revision on the how social enterprises can help in achieving sustainable development particularly on the food waste reduction under the food sustainability practice by using food waste hierarchy as a guideline. Then focused on the changes that could make through changing consumer behaviours and suggested the concept of social marketing to be used with social enterprises' activities since social enterprises do business differently from the commercial business. The data findings from all five social enterprises with the implication of food waste hierarchy were important for identifying which level their business operates to tackle food waste, and all of them operate at least in the prevention level before moving further down to the later level.

4.3.3.4 Resilience of One-Acre Fund household livelihoods

Resilience of One-Acre Fund household livelihoods tested the respondents' views on Income growth and job creation; Education and health and Food security and Bills payment. The results are displayed in Table 4.17.

Table 4.17 Resilience of One-Acre Fund household livelihoods

Statement	M
Income growth and job creation	3.3
Education and health	2.6
Food security and Bills payment	2.5
Total	**8.4**
Mean	**2.8**

From Table 4.17 it is revealed that Income growth and job creation had a mean of 3.3 and a; Education and health a mean of 2.6 and Food security and Bills payment a mean of 2.5. The overall results revealed that had a mean of 2.8. For the purpose of interpretation, a mean score of 0≤1.5 means that the respondents did Not at All agree (NA), between 1.50≤2.50 means respondents agreed to a Moderate Extent (ME) 2.50≤3.50 means respondents agreed to Small Extent (SE), 3.50≤4.50 means respondents agreed to Large Extent (LE), and above 4.50 means respondents agreed to Very Large Extent (VLE). The results of this study fall in the category of 2.50≤3.50 that means respondents agreed to a Moderate Extent (ME) that Income growth and job creation; Education and health and Food security and Bills payment are elements in One-Acre Fund that are used to test resilience of One-Acre Fund household livelihoods. Resilience of one acre fund remain an issue that needs to be addressed. The One Acre Fund annual report of 2021 reveals that One Acre Fund helped Small holder farmers to build resilience with their produce during the Covid-19 pandemic.

> "When COVID hit, it exposed the vulnerability of rural farming systems to shock and unpredictable events. It also gave impetus to our work to continue to make food systems more productive, resilient, and sustainable by better responding to the emerging and future needs of smallholders. Building the resilience of food systems is one of the most urgent challenges we face today. As we reflect on our work over the past year, farmers will benefit more from farming strategies that respond to specific needs, rather than generalized systems and techniques. We developed a number of diverse pathways to improve food security and livelihoods among smallholders: Covid-19 response initiatives, expanded agroforestry offerings, optimized agronomy and farming practices such as farm-level planting recommendations, additional high-value crops, and market access initiatives, among others. By providing additional avenues for impact, we offered farmers the ability to develop solutions to individual challenges and address livelihood gaps in ways that make the best sense to individual contexts. Our work created tangible impact on the livelihoods of farm families and will continue to benefit rural communities in the years ahead (One Acre Fund, 2022)."

The above data supports the findings of the study that One Acre Fund improve incomes is to enhance the resilience of farming communities. Although the findings of the present study are in tandem with the findings of Endris *et al.* (2017), the present study slightly differ because Endris *et al.* (2017) study suggests that mutual support practices are very essential in building coping resilience by flattening utilization shocks (improving nutritional and dietary conditions and health status of households) that transpire from distinctive shocks, the study identified social capital as a component that built resilience contrary to the current study.

4.4 Inferential statistics

The researcher conducted inferential statistical to test hypothesis that comprised of correlation analysis, linear regression and hierarchical regression analysis. A correlation exists between two variables when one of them is related to the other in some way (Triola, 2008). Where more than one independent variable exists in the study Hierarchical regression analysis models are used (Lind *et al.*, 2008). Therefore, these statistics were conducted to proof the existence of a relationship nature of the relationship and the extent of the relationship between the resilience of One-Acre Fund household livelihoods (RHL) social entrepreneurship strategies (SE) and social innovation (SI). The researcher findings were computed to give rise to the three main research variables. Table 4.18 displays descriptive statistics.

Table 4.18 Descriptive Statistics

	Mean	Std. Deviation	N
Resilience of Household Livelihoods	2.7555	.29438	280
Social entrepreneurships	3.8977	.64032	280
Social innovation	3.6064	.70377	280

The inferential descriptive results in Table 4.18 above are also in agreement with results of the descriptive statistics averages of 3.9 of social entrepreneurship strategies of Table 4.10; averages of 3.8 of social innovation of Table 4.13 and the averages of 2.6 of resilience of One-Acre Fund households' livelihood of Table 4.17.

4.4.1 Effect of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood

The first objective of the study was to establish the effects of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood. The Study analysed one construct under social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood. Social entrepreneurship strategies were operationalized as a composite variable that had the following five indicators as: system reforms strategies; physical capital development reforms strategies; individual empowerment strategies; collective action strategies and earned income strategies. To actualize this objective, correlation analysis was conducted and the results illustrated on Table 4.19 below.

4.4.2 Correlations for social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood

Table 4.19 Correlations for social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood

Correlations

			RHL	SES
Spearman's rho	RHL	Correlation Coefficient	1.000	.689**
		Sig. (2-tailed)	.	.000
		N	280	280
	SES	Correlation Coefficient	.689**	1.000
		Sig. (2-tailed)	.000	.
		N	280	280

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

The output from correlation analysis (Table 4.19), provides a matrix of the correlation coefficients for the two variables. Underneath each correlation coefficient both the significance value of the correlation and the sample size (*N*) on which it is based are displayed. Each variable is perfectly correlated with itself (obviously) and so *rho* = 1 along the diagonal of the table. The study established a significant positive correlation between social entrepreneurship strategies and the dependent

variable resilience of One-Acre Fund households' livelihood at (r=.689, p<0.000). The results in Table 4.19 means that an increase in social entrepreneurship strategies is associated with a similar increase in resilience of One-Acre Fund households' livelihood. Any variation in size of the social entrepreneurship strategies causes a variation in resilience of One-Acre Fund households' livelihood. These findings established that the effect of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood was positive and statistically significant. This significance value tells us that the probability of getting a correlation coefficient of this nature in a sample of 281 people if the null hypothesis were true (there was no relationship between these variables) is very low (close to zero in fact). Hence, we can gain confidence that there is a genuine relationship between social entrepreneurship strategies and resilience of household livelihoods.

4.4.1.2. Regression analysis for social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood

Regression analysis was constructed to identify impact of the independent variables on the dependent variables since correlation statistics simply indicated a clear relationship. Table 4.20 shows the results of the regression analysis.

Table 4.20. Regression analysis for social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.713[a]	.509	.507	.20670	.509	287.908	1	278	.000

a. Predictors: (Constant), social entrepreneurship strategies

Regression analysis is a measure of the ability of independent variable(s) to predict an outcome of a dependent variable where there is a linear relationship between them. In this study regression analysis was done to establish whether independent variables predicted the dependent variable. The R square, t-tests and F-tests and Analysis of Variances (ANOVA) tests were generated by SPSS to test the significant of the relationship between the variables under the study. This also established the extent to which the predictor variables explains the variation in dependent variable. The significance of the independent variables was tested using F test and p value approaches. The decision rule was to reject the null hypotheses that the effect of independent variable(s) is insignificant if the computed *F*-value exceeds the critical *F*-value or if the *p*-value was less critical

value of 0.05. Cooper and Schindler (2010) argued that regression analysis can also be used determine the strength of the relationship between the independent and dependent variables and to determine the combined influence of all the independent variables on the dependent variable. The coefficient of determination (R^2) was used to measure the change in dependent variable explained by the change in independent variable(s). *F*–test was carried out to evaluate the significance of the overall model and to define the relationship between the dependent variable and independent variables; *t*-test was used to test the significance of the individual independent variables to the dependent variable. Table 4.20 gives a model summary for regression analysis for social entrepreneurship strategies. The results presented in Table 4.20 indicate that R^2 for the model is R^2=0.509 (adjusted R^2=0.507; R change=0.509) which implies that 50.9% variability in resilience of One-Acre Fund households' livelihood is caused by social entrepreneurship strategies. This means that social entrepreneurship strategies causes a 50.9% increase in resilience of One-Acre Fund households' livelihood. Furthermore, social entrepreneurship strategies do interpret much of the variability in resilience of One-Acre Fund households' livelihood since it has an R^2 of more than 50%. Given the above average the analysis statistically significant p-values continue to identify relationships and coefficients have the same interpretation. The model summary results as presented in Table 4.25 indicated that this large F-statistics, larger than 4, implies that the model is a good fit. This indicate a significant positive influence of social entrepreneurship strategies on resilience of household livelihoods and standard error of estimate (0.21) shows mean deviation of the predictor variable from the line of the best fit.

4.4.1.3. Analysis of variance Results for regression analysis

The researcher conducted further inferential statistical test using regression analysis (Table 4.21) to explain the influence of social entrepreneurship strategies (SE), and resilience of household livelihoods (RHL). First the data was tested to determine its suitability of the data for regression analysis as explained by the regression ANOVA (Table 4.21). The data should be accurate complete and suitable for further analysis (Sekeran & Bougie, 2010).

Table 4.21: Analysis of variance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.301	1	12.301	287.908	.000[b]
	Residual	11.877	278	.043		
	Total	**24.178**	**279**			

a. Dependent Variable: RHL

b. Predictors: (Constant), SES

The results on Table 4.21 indicated a mean square is 0.043 and F statistic of 287.908 showing that the model accurately predicts the response therefore as per ANOVA. The level of significance is at p<0.000 indicating high level of significance therefore as per ANOVA values, the model is accepted. The total variance explained by the model as a whole was R^2=50.9% adjusted R^2= 50.7%, F (1,278) =287.908, p<0.000 meaning that data fits better in the model indicating that the model accurately predicts response.

4.4.1.4. Coefficients for social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood

Table 4.22: **Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.077	.076		14.114	.000
	SES	.328	.019	.713	16.968	.000

a. Dependent Variable: RHL

Moderated multiple regression model was also used to determine the effect of the moderating variable on the whole model where the R^2 values with and without the moderating variable were compared (Brace, Kemp & Snelgar, 2012). The research hypotheses were tested using the p-value approach at 95% confidence level based on linear regression analysis output produced by SPSS. The decision rule was that the null hypothesis should be rejected if the calculated p-value was less than the significant level (0.05); and accepted if the calculated *p*-value was greater than the significance level (0.05). Coefficients are illustrated on Table 4.22 which indicates that there is a positively significant relationship between Resilience of household livelihood and social entrepreneurship strategies at (B=.328; p<0.000) indicating that a unit change in resilience of household livelihood will be caused by social entrepreneurship strategies. This means that as

social entrepreneurship strategies increase, resilience of household livelihood increases at the same rate or level and if social entrepreneurship strategies decrease, resilience of household livelihood increases by some rate.

This confirms that the first hypothesis of the study that social entrepreneurship strategies have no significant positive influence on resilience of One-Acre Fund households' livelihoods in Kakamega County is not supported by findings of the present study. It is therefore concluded that there is a significant relationship between social entrepreneurship strategies and resilience of One-Acre Fund households' livelihoods. Resilience of one acre fund livelihoods means developing income for households, maintaining and sustaining their food stocks and poverty alleviation. Therefore, then the study supports the tenets of social entrepreneurship theory that looks at social entrepreneurs as agents who marry financial independence and social mission. The study is in tandem with that of KirIuki (2016) on the relationship between entrepreneurial orientation and performance of social enterprises in Kenya. The study model confirms that there was a positive relationship between social entrepreneurship strategies and resilience of household livelihood. The current study is also in line with Hatibu (2020) who did a study on Social entrepreneurship strategies and competitive advantage of tour firms in Kenya. The study used multiple linear regression analysis to find out the proportion in the dependent variable competitive advantage. The study established a robust positive association between social entrepreneurship strategies and competitive advantage with a stronger coefficient of determination R that was significant. However, the study differs with Wang'oe (2018) who did his study on influence of social enterprise on economic growth, employment and community empowerment in Kenya. The study found out that economic growth variable registered tax payer was negatively correlated with creativity and innovation. Furthermore, negative correlation existed between full time and part time employment opportunities and creativity and innovation. The negative correlation was attributed to how the enterprises offered both part-time and full-time employment unlike the current study that established a positive correlation. These jobs were not sustainable and thus discouraged a number from engaging with enterprises. Therefore, the results in the current study bring new knowledge to academia.

4.4.2. Effects of social innovation on resilience of One-Acre Fund households' livelihoods

The second objective was to determine effects of social innovation on resilience of One-Acre Fund household livelihoods in Kakamega County. Social innovation was operationalized as a

composite variable that had the following five indicators as: new organization model, creativity, market orientation, new production technology and new products and services. To achieve the second objective a null hypothesis formulated was revisited. The hypothesis was tested using a linear regression model: Equation. 3.1 page 67.

Table 4.23: Correlations analysis for social innovation and resilience of One-Acre Fund households' livelihoods

Correlations.

			RHL	SI
Spearman's rho	RHL	Correlation Coefficient	1.000	.648**
		Sig. (2-tailed)	.	.001
		N	280	280
	SI	Correlation Coefficient	.648**	1.000
		Sig. (2-tailed)	.001	.
		N	280	280

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

The findings of the study indicated that the independent variable has a partially significant correlation with the dependent variable. Social innovation is positively correlated to resilience of One-Acre Fund household livelihoods and significant at (rho=0.648, p<0.001). Social scientists accept any probability below 0.05 indicative of genuine effect. This means that there is less than 0.0 n 0.05 chance that the correlation co-efficient occurred by chance in a sample of 280 respondents. This indicates a positively significant correlation between social innovation and resilience of One-Acre Fund household. In terms of resilience, the results in Table 4.14 means that an increase in social innovation causes a similar increase in resilience of One-Acre Fund household. Therefore an increase or decrease in social innovation leads to an increase or decrease in resilience of One-Acre Fund household by the same proportion.

Table 4.24: **Regression Analysis for social innovation and resilience of One-Acre Fund household livelihoods**.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	df2	Sig. F Change
1	.800[a]	.639	.638	.17714	.639	492.521	1	278	.000

a. Predictors: (Constant), Social innovation

As correlation statistics indicated a clear relationship; linear regression analysis is constructed to identify effect on dependent variable on from all variables. Therefore, regression analysis was run since the co-efficient of determination (R^2) is a superior measure compared to correlation coefficient (r) as it indicates the amount of variability in one variable that is explained by the other. The results were presented in Table 4.24 which indicated that R for the model is 0.800, adjusted R^2=0.639 and change of R^2=0.638 an indication that social innovation account for 63.9% variability in resilience of One-Acre Fund household livelihoods. This means that 63.9% change in resilience of One-Acre Fund household livelihoods is caused by each of the predictor variable social innovation while 36.1% will be explained by other factors. The interpretation of this is that social innovation leads to a 63.9% increase or decrease in resilience of One-Acre Fund household livelihoods. The second model had the regression calculated to predict resilience of One Acre Fund household livelihood based on social innovation. Although, the findings of this study corroborate with Hayat *et al.* (2021) findings on moderating role of social innovation in the role of social capital and social value creation in augmenting sustainable performance of social enterprises. Khan Samar Hayat *et al.* (2021) did not establish extend and degree of prediction. The analysis in the current study confirms the association of social innovation upon the association of social innovation and resilience of one acre fund household livelihood. With R square change of -0.004. The hypothesis of the study that Social innovation has no significant positive influence on resilience of One-Acre Fund household livelihoods in Kakamega County is not supported.

4.4.2.2. Analysis of variance Results for regression analysis

The researcher conducted further inferential statistical test using regression analysis (Table 4.25) to explain the influence of social innovation, and resilience of household livelihoods. First the data was tested to determine its suitability of the data for regression analysis as explained by the regression ANOVA (Table 4.25).

Table 4.25: Analysis of variance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.455	1	15.455	492.521	.000[b]
	Residual	8.723	278	.031		
	Total	**24.178**	**279**			

a. Dependent Variable: Resilience of Household Livelihoods

b. Predictors: (Constant), Social Innovation

Table 4.25 results indicate a mean square is 0.031 and F statistic of 492.521 showing that the model accurately predicts the response. The level of significance is at p<0.001 indicating high level of significance as per ANOVA values, the model it is accepted. The total variance explained by the model as a whole was adjusted R^2 63.8%, F (1,278) =492.521, p= (0.000) meaning that the data fit better in the model hence the regression model accurately predicts response.

Table 4.26: Coefficients for social innovation and resilience of One-Acre Fund households' livelihood

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.149	.055		20.760	.000
	social innovation	.334	.015	.800	22.193	.000
2	(Constant)	1.027	.105		9.794	.000
	social innovation	.424	.067	1.014	6.327	.000
	Social entrepreneurship strategies. social innovation	-.014	.010	-.220	-1.371	.171

a. Dependent Variable: Resilience of Household Livelihoods

The introduction of moderating variable (social innovation) in model two, shows that social entrepreneurship strategies (β=.328, p<0.000) and social innovation (β=.334, p<0.000) are significant predictors of resilience of One-Acre Fund household livelihood. This means that social innovation (t (278) =22.1931, p<.000) is a significant predictor of resilience of household livelihood.

The unstandardized results indicate that the variable social innovation was positively and significantly related to resilience of household livelihood at (B=.401, p<0.000). These findings implied that social innovation had a statistically significant effect on resilience of household livelihood. Participants resilience of one acre fund households decreased to 0.639 in social innovation where social innovation was measured on Likert scale ranging from Not at All (NA), Small Extent (SE), Moderate Extent (ME), Large Extent (LE) and Very Large Extent (VLE). From the magnitude of the *t*-statistics it is seen that the social innovation had higher impact to resilience of one acre fund households. This implies that there exists a significant relationship between (social innovation) and resilience of One-Acre Fund households' livelihood. Therefore, the null hypothesis **($H0_2$):** Social innovation has no significant positive influence on resilience of One-Acre Fund household livelihoods in Kakamega County was rejected. The study established that there was indeed a relationship between social innovation and resilience of One-Acre Fund household livelihoods. However, the extent of this relationship had not been studied which this study determined and the findings were that 63.9% increase or decrease in resilience of One-Acre Fund household livelihoods was caused by Social Innovation.

4.4.3. Moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods

The third objective was to analyse the moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods in Kakamega County. The model used was a hierarchical multiple regression analysis with resilience of One-Acre Fund households' livelihood as the outcome variable, social entrepreneurship strategies as the predictor and social innovation as the moderator variable. Hierarchical regressions analysis was considered to evaluate the moderating role of social innovation on the relationship of social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods. For this purpose three step regression models was used. In first step control variables social entrepreneurship strategies was entered, whereas social innovation was entered in second step. In third step an interaction term was created by multiplying social entrepreneurship strategies and social innovation and entered in to model. Table 4.34 entails the significant contribution of the interaction term on resilience of One-Acre Fund household livelihoods.

4.4.3.1. Hierarchical regression analysis

The Table 4.27 below showed the summary of the effects of the regression models on the dependent, independent and moderator or variables innovation and entered into the model. Table 4.27 entails the significant contribution of the interaction term on resilience of One- acre fund.

Results in Table 4.27 indicate that the moderating effect of social innovation on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods is significant. Model 1 which takes in only the independent variable social entrepreneurship strategies accounts only 50.9% for of the variation in resilience of One-Acre Fund household livelihoods (R^2=0.509) compared to the second model which introduces the moderator variable social innovation and accounts for 63.9% of variation in resilience of One-Acre Fund household livelihoods (R^2=0.639). Compared with the two models which only

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	df2	Sig. F Change
1	.713[a]	.509	.507	.20670	.509	287.908	1	278	.000
2	.800[b]	.639	.637	.17740	.131	100.434	1	277	.000
3	.803[c]	.645	.641	.17634	.006	4.329	1	276	.038

a. Predictors: (Constant), social entrepreneurship strategies

b. Predictors: (Constant), social entrepreneurship strategies, social innovation

c. Predictors: (Constant), social entrepreneurship strategies, social innovation, social entrepreneurship strategies. social innovation

encompasses the control variable, predictor variable and the moderator variable, the addition of the interaction term in the full model significantly increases the R^2 to 64.5% (increase in R^2=0.6%). This means that 50.9% of the variance in dependent variable (resilience of One-Acre Fund household livelihoods) was explained by the independent variables (social entrepreneurship strategies). When the moderator variable social innovation was introduced, R square value indicated that 63.9% of the variance in dependent variable (resilience of One-Acre Fund household livelihoods) was explained by the independent variables' social entrepreneurship strategies and the moderator variable social innovation. Interaction term between social entrepreneurship strategies and social innovation caused R Square to change further indicating that when moderating social entrepreneurship strategies (independent variable), 0.6% variance in resilience of One-Acre Fund household livelihoods was explained

by social innovation (moderator variable). According to Field (2005), analysis of moderating effect of an increase of R^2 equal to or greater than 0.05 or 5% indicates moderation effect. This result above therefore indicated that social innovation has a moderating effect on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods.

Nevertheless, social innovation reduced the explanatory power of its effect on resilience of One-Acre Fund household livelihoods from R=0.648 as indicated in Table 4.23 to R^2=0.639 as indicated in Table 4.24 hence reduces the correlation between social innovation and resilience of One-Acre Fund household livelihoods. This means that social innovation as a moderator diminishes or reduces the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods. Therefore, as moderation effect of social innovation and social entrepreneurship strategies increases, the strength of the effect of social entrepreneurship strategies on resilience of One-Acre Fund household livelihoods reduces and vice versa.

4.4.3.2. Analysis of variance

The following are further evidence on the moderator impact analysis based on hierarchical regression analysis.

Table 4.28 Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.301	1	12.301	287.908	.000[b]
	Residual	11.877	278	.043		
	Total	24.178	279			
2	Regression	15.461	2	7.731	245.660	.000[c]
	Residual	8.717	277	.031		
	Total	24.178	279			
3	Regression	15.596	3	5.199	167.184	.000[d]
	Residual	8.582	276	.031		
	Total	24.178	279			

a. Dependent Variable: Resilience of Household Livelihoods

b. Predictors: (Constant), social entrepreneurship strategies

c. Predictors: (Constant), social entrepreneurship strategies, social innovation

d. Predictors: (Constant), social entrepreneurship strategies, social innovation, social entrepreneurship strategies. social innovation

The results on table 4.28 indicated that models accurately predicts the response therefore as per ANOVA values, the model it is accepted. The total variance explained by the first model as a whole was R^2=50.9% adjusted R^2=50.7%, F(1,279)=287.908, p<0.000 indicating that the independent variable social entrepreneurship strategies were positively and significantly related to resilience of One-Acre Fund household livelihoods. The results indicate that 50.9% of variance in resilience of One-Acre Fund household livelihoods is explained by the model when social entrepreneurship strategies are increased by 50.9%. Model two results explains a total variance of R^2=64.3% adjusted R^2 63.9%, F (2,279) =245.660, P= (0.000) adjusted meaning that when the moderator variable is introduced, there is a positive and significant relationship between the independent variable, moderator and dependent variable. Therefore, 64.3% increase in resilience of One-Acre Fund household livelihoods is explained by introduction of a moderator variable to the predictor variables. Finally, for Model 3, total variance explained by the first model as a whole was 64.5 % adjusted R^2=64.1 %, F (3,279) =167.184, p<0.000 indicating a positive and significant relationship between all the variables with introduction of the interaction term. This means that there is a moderating effect of social innovation on the relationship between independent variables; social entrepreneurship strategies and the dependent variable resilience of One-Acre Fund household livelihoods thus rejecting null hypothesis **H03** There is no significant positive moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of household livelihoods in Kakamega County.

4.4.3.3. Coefficients for social innovation and resilience of One-Acre Fund households' livelihood

The Table 4.29 below showed coefficients of the three models as indicated

Table 4.29 Coefficients for social innovation and resilience of One-Acre Fund households' livelihood

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.445	.086		5.157	.000
	SES	.257	.051	.268	5.030	.000
	SI	.592	.047	.676	12.669	.000
2	(Constant)	1.517	.294		5.164	.000
	SES	.044	.094	.046	.473	.037
	SI	.247	.101	.282	2.439	.015
	SES.SI	.093	.024	.697	3.809	.000

A hypothesis was formulated as follows: **($H0_3$):** There is no significant positive moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of household livelihoods in Kakamega County. To establish the moderating effect, Model 3 was introduced incorporating social entrepreneurship strategies and social innovation constructs in order to establish its contribution the general resilience of One-Acre Fund households' livelihood as in Model 3.4 page 85.

Coefficients illustrated on Table 4.29 indicates that in Model 1, dependent variable social entrepreneurship strategies had a positive and significant relationship to resilience of household livelihoods at (B=.257; $p<0.000$) indicating that a unit change in the independent variable will cause and increase in resilience of household livelihoods. In Model 2, social entrepreneurship strategies and the moderator variable social innovation have a positive and significant relationship to operational efficiency at (B=0.44; p=0.000) and (B=.247; p=0.000) respectively. Model 3 indicated a positive and significant relationship of the interaction term between behavioural biases and real estate investment.

The results of this study has brought in an aspect of moderation and brings in new knowledge that the moderation effect of social innovation on resilience of household livelihoods reduces the effect of social entrepreneurship strategies on resilience of household livelihoods. Social innovation diminish the strength of the relationship or correlation between social

entrepreneurship strategies and resilience of household livelihoods of social entrepreneurship strategies.

4.4.3.4. Combined effect of all the variables

Hypotheses were tested for all the variables using the unstandardized co-efficient as illustrated in Table 4.30 since in the initial results some variables gave insignificant results. Therefore, to determine the combined effect of the independent variable and the moderator on the dependent variable, the unstandardized co-efficient were used.

Table 4.30 Co-efficient combining all the variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.517	.294		5.164	.000
SES	.044	.094	.046	.473	.037
SI	.247	.101	.282	2.439	.015
SES.SI	.093	.024	.697	3.809	.000

The results on Table 4.30 indicates a positive and significant relationship between social innovation and resilience of household livelihoods at (B=.044; p=0.000). This means that when social innovation is increased or decreased, resilience of household livelihoods increases or decreases with the same proportion. This indicated that of social innovation has a significant effect on resilience of household livelihoods in Kakamega County.

The coefficients illustrated further indicates that the independent variable social innovation have a positive and significant relationship to resilience of household livelihoods at (B=.247; p=0.000) indicating that a unit change in the social entrepreneurship strategies will cause and increase or decrease in resilience of household livelihoods. Hence, social entrepreneurship strategies have a significant effect on resilience of household livelihoods, Therefore, **H03** the study findings rejected the null hypotheses which stated there is no significant positive moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of household livelihoods in Kakamega County.

The introduction of the interaction term confirms the significant moderating effect of social innovation on the relationship between social entrepreneurship strategies and resilience of

household livelihoods social entrepreneurship strategies at (B=0.093; p=0.000). The study findings therefore rejected the null hypothesis that stated that social innovation have no significant moderating effect on the relationship between social entrepreneurship strategies and resilience of household livelihoods in Kakamega County.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

From the analysis above, the following are the discussions, conclusion and recommendations based on the objectives of the study. First, focus is on the summary of the findings and hypotheses confirmation in relationship to achievement of the research objectives. Furthermore, policy and further study recommendations which should be of interest to both management and policy makers are covered. Lastly, suggestions for further studies are made as a way of filling the gaps identified in the study.

5.1: Summary of the Findings

The first objective of the study was to establish the effect of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood. The effect of social entrepreneurship strategies was measured using system reforms strategies; physical capital development reforms strategies; individual empowerment strategies; collective action strategies and earned income strategies. Various individual strategies produced general average mean scores and standard deviations. The findings from the study reveal that social entrepreneurship strategies had a higher mean score. For purpose of interpretation, a higher mean score means the respondents positively affirmed that social entrepreneurship strategies impact on resilience of One-Acre Fund livelihoods. The findings clearly indicate that social entrepreneurship strategies have helped improve One-Acre Fund household livelihoods. The study did not support the null hypothesis that stated social entrepreneurship strategies have no significant positive influence on resilience of One-Acre Fund household livelihoods in Kakamega County. Regression analysis results revealed that the social entrepreneurship strategies had a significant effect on resilience of One-Acre Fund households' livelihood leading to a positive change or improvement on resilience of One-Acre Fund households' livelihood. This study establishes both the contributions of the individual and combined effect of the critical elements of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood.

The second objective of the study was to determine effects of social innovation on resilience of One-Acre Fund household livelihoods in Kakamega County. The impact of social innovation was measured by new organization model and creativity market orientation, new production technology and new products and new products and services. Various individual innovations produced general average mean scores and standard deviations. The findings from the study

revealed that social innovation had a higher mean score. For purpose of interpretation, a higher mean score means the respondents positively affirmed that social innovation has an influence on resilience of One-Acre Fund livelihoods. The findings clearly indicates that social innovation has helped improve One-Acre Fund household livelihoods. The study did not support the null hypothesis that stated social innovation has no significant positive influence on resilience of One-Acre Fund household livelihoods in Kakamega County. Regression analysis results revealed that the social innovation had a significant effect on resilience of One-Acre Fund households' livelihood leading to a positive change or improvement on resilience of One-Acre Fund households' livelihood. This study establishes both the contributions of the individual and combined effect of the critical elements of social innovation on resilience of One-Acre Fund households' livelihood.

The third objective of the study was to analyse the moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods in Kakamega County. Resilience of One-Acre Fund household livelihoods was measured by the growth of households' income and job creation, households' ability in educating the children and meeting their health needs and ensuring food security and meeting payment of other family bills. General average mean scores were generated from the study. The findings from the study revealed that resilience of One-Acre Fund household livelihoods had an average mean score. For purpose of interpretation, a an average mean score means the respondents positively affirmed that resilience of One-Acre Fund household livelihoods had improved though on a very low scale. The study did not support the null hypothesis that stated there is no significant positive moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of household livelihoods in Kakamega County. Regression analysis results revealed that the social innovation had a significant effect on resilience of One-Acre Fund households' livelihood leading to a positive change or improvement on resilience of One-Acre Fund households' livelihood.

5.3 Conclusions

Based on the research findings of the first objective, it is concluded that the combined effect of social entrepreneurship strategies which are system reform strategy; physical capital development; individual empowerment strategy; collective action strategy and earned income strategy leads to resilience for households' livelihood. Regarding the second objective, this

study concludes that social innovation which include new organization model, creativity to gain new skills, market orientation, new production technology approaches and new products are important elements that propels resilience of households' livelihood.

Based on the findings of the third objective which revealed existence of statistically significant interactive effect of social innovation on the relationship between social entrepreneurship strategies and resilience for households' livelihood, this study concludes that the moderator effect of social innovation is suitable for use in promoting the social entrepreneurship strategies and resilience for One-Acre Fund households' livelihood relationship. Therefore, this research emphasizes upon the significance of social innovation and evaluated its moderating role upon the association of social entrepreneurship strategies and resilience for One-Acre Fund households' livelihoods.

5.4 Contribution of the Study

The present study attempted to address multiple gaps and in doing so made the following important contributions. First, the study extends the limited research on the understanding of social entrepreneurship strategies and their impact on resilience of One-Acre Fund household livelihoods. This study is among the first to consider social entrepreneurship strategies as an important antecedent on resilience of One-Acre Fund household livelihoods. Second, the study assessed the moderating role of social innovation in the relationship between social entrepreneurship strategies, and resilience of One-Acre Fund household livelihoods. Thus, explaining the mechanism through which social entrepreneurship strategies can influence resilience of One-Acre Fund household livelihoods. Thirdly, no previous study to the best of the author's knowledge and through search in peer-reviewed databases has empirically explored the effects of social entrepreneurship strategies on these two work outcomes in an academic setting. However, research has shown that social entrepreneurship can increase resilience livelihoods. Fourth, existing research on social, social entrepreneurship and household livelihoods has primarily focused on other types of innovations and sustainability but not on resilience and further not in farming like the case of one acre fund. The study relied on the theory of social entrepreneurship, Rogers' innovation diffusion theory and resilience theory in explaining the role of social entrepreneurship strategies in leading to resilience of One-Acre Fund household livelihoods with moderating role of social innovation. The theory of social entrepreneurship uses two extreme ends to define social entrepreneurship as a hybrid organization that lies between not-for-profit organizations and traditional business enterprises.

Dees (2001) propounded the theory of social entrepreneurship. The theory looks at social entrepreneurs as agents who marry financial independence and social mission. That is why One Acre Fund has been established as a social entrepreneurship that looks at developing income for households, maintaining and sustaining their food stocks thus resilience. Social innovation's structural engine relates to the fact that social and social structures take a socially creative strategy that ideally fulfils societal goals. On the other part Adger (2000) considered resilience theory as the ability of communities to withstand external shocks to their social infrastructure. The present study integrates the three theoretical approaches (theory of social entrepreneurship, Rogers' innovation diffusion theory and resilience theory). The current study extends the research concerning resilience of One-Acre Fund household livelihoods (in income growth, job creation, meeting health and education obligations of their families, food security and payment of other family bills) by investigating the distinct mechanisms of social entrepreneurship strategies and social innovation by integrating social entrepreneurship theory, the theory of social entrepreneurship and resilience theory. In doing so, it adds to the theoretical development by integrating social entrepreneurship strategies with (system reform strategy, physical capital development, individual empowerment strategy, collective action strategy and earned income strategy) social innovation with (new organization model, creativity to gain new skills, market orientation, new production technology approaches and tools and new products) and resilience theory with (in income growth, job creation, meeting health and education obligations of their families, food security and payment of other family bills). Fifth, the study also contributes to policy direction by providing the answer to the unsettled policy question of one of the ways Kenyan government should use to assist smaller farmer households to generate food using the One Acre Fund Model. It is expected that policy lessons from this study's findings will enhance policymakers' capacity to design a capital formation policy framework that takes into account assisting non-governmental organization fund small farmer households with farm inputs. This will boost households' agricultural activities on their small farms that will enhance food security, alleviate hunger and poverty.

5.5: Study Limitations

Challenges were experienced that included unwillingness by respondent's to reveal information which is deemed to be confidential, misunderstanding the questions, filling all sections of the questionnaire without understanding the questionnaire. This was mitigated through assurance that the information offered was confidential and was used for academic

purposes. The introduction letter from the University helped in the study in mitigating against any suspicion both from the One-Acre Fund organization and respondents. This led to achieving a high rate of responses as respondents were assured of the objectives of the study. Misunderstanding of the questions was mitigated by translation of the questionnaire. Further, questions that were believed to be difficult were explained to the respondents. Exposure of the data collection tools during pilot testing was a limiting factor in this study. However those used in the pilot study did not participate in the main study. Non-response bias occurred in this study. Respondents were unwilling to take part in the study. However, a higher number of respondents were contacted to counter the non-response. This was achieved by having potential respondents communicated to properly by letting them know the purpose and goals of the study

5.6 Recommendations

Based on the first and second conclusion, it is recommended that combined social entrepreneurship strategies be used to enhance resilience of farmer households. The cure to the current dwindling sugarcane crop uptake by farmers and that of collapsed industries lies in maize and other food crop production. Maize production has been premised on the assumption that farmers need to practice maize farming for subsistence. However, the findings of this study revealed that one can utilize his/her small farm to get higher yields in maize farming. Therefore, this study advises the policy makers to consider production of maize by use of One-Acre Fund skills like social entrepreneurship strategies and social innovation to minimize the inefficiency levels and increase production by minimizing the cost of inputs and cost of capital.

Based on the third conclusion, it is recommended that solving most of the problems facing farmers lies on the extent of information available to them. As a coping mechanism to food insecurity, farmers must adopt One-Acre Fund model and have an Omni channel program that farmers can access in a personalized and flexible manner certain information related to One-Acre Fund. This is to rely heavily on social innovations and even technological innovations: A tool where farmers can access real-time, localized information across market prices, weather, planting recommendations, and more. Tablet-based functionalities that should have features for field staff to deliver support such as precision agriculture (personalized field-level recommendations on planting time, fertilizer application etc.) and targeted repayment follow-ups.

5.6: Areas of further research

The current study sought to investigate social entrepreneurship strategies, social innovation and resilience of One-Acre Fund household livelihoods in Kakamega County. This was achieved through the use three study variables. Establish the impact of social entrepreneurship strategies; effects of social innovation on and analyse the moderating influence of social innovation on the relationship between social entrepreneurship strategies and resilience of One-Acre Fund household livelihoods in Kakamega County. The following suggestions are made for further study. First, future studies should consider using longitudinal studies to capture data generated over a long period of time. Secondly, future studies should also consider assessing the mediating role of social innovation or even assess social entrepreneurship as the moderating variable

References

Abernathy, W. (1978). *The productivity dilemma: Roadblock to innovation in the automobile industry.* Baltimore MD: John Hopkins University Press.

Abrar, A. (2018). The impact of financial and social performance of microfinance institutions on lending interest rate: A cross-country evidence. *Cogent Business & Management*, 1-21.

Achatz, J. & Trappmann, M. (2011). *Arbeitsmarktvermittelte Abgänge aus der Grundsicherungder Einflussvonpersonen (IAB Discussion Paper, 02/2011), Nürnberg, 41S.* Arbeitsmarktvermittelte: und haushaltsgebundenen Barrieren.

Adger, N. (2000). Social and ecological resilience. *Progress in Geography*, 347-364.

Aldrich, H., & moody, J. (2000). Family matters gender, networks and entrepreneurial outcomes. *Social Science Journal*, 1-34.

Alonso-Población, & Susana., S. (2018). *Women's participation and leadership in fisher folk organizations and collective action in fisheries: A review of evidence on enablers, drivers and barriers.* Italy, Rome: FAO Fisheries and Aquaculture.

Alvord, S. B. (2004). Social entrepreneurship and societal transformation. *The Journal of Applied Behavioral Science*, 40(3), 260-282.

Anderson, A., & Miller, C. (2003). Class matters: Human and social capital in the entrepreneurial process. *Journal for Socioeconomics*, 34-90.

Aziz, A., & Yassin, N. (2010). How will market orientation and external environment influence the performance among SMEs in the agro-food sector in Malaysia. *International Business Research,* 3 (3), 154-164.

Aziz, N. N., & Samad, S. (2016). Innovation and competitive advantage: Moderating effects of firm age in foods manufacturing SMEs in Malaysia. *7th International Economics & Business Management Conference* (pp. 256 – 266). Elanor: Procedia Economics and Finance.

Bach, K. (2013). *Strengthening neighbourhood resilience: Opportunities for communities and local government.* Van couver USA: Victoria Foundations.

Barringer, B., & Bluedorn, A. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal*, 39-47.

Bentler, P., & Chou, C. (1987). *Sociological methods & research: Practical issues in structural modelling.* Texas: Sage Publications.

Bernard, M.-J., & Barbosa, S. D. (2016). Resilience and entrepreneurship: A dynamic and biographical approach to the entrepreneurial act. *AIMS (Association Internationale de Management Strategique) 19(2)*, 89-123.

Bless, C., Smith, C., & Kagee, A. (2006). *Fundamentals of social research methods:An African perspective.* Lusaka, Zambia: JUTA and co.

Bluenow. (2012, April 23). *Hydrate life.* Retrieved from Hydrate life: http:/wwwhydratelife.org/?p=250.

Boratav, K. (2011). *Bir Krizin Kısa Hikes,* Ankara: Ankara.

Borg, W., & Gall, M. (1989). *Educational research. An introduction.* New York: NY Longman.

Boschee, J. (1998, October 2007 30). *Merging mission and money.* Retrieved from A Board Member's Guide to Social Entrepreneurship. Retrieved from http://www.socialent.org/pdfs/MergingMission.pdf.

Bosma, N., & Levie, J. (2010). *Global entrepreneurship monitor 2009 global report. Babson College.* Reykjavik: Universidad del Desarrollo and Reykjavik University.

Bosma, N., Praag, V., Thurik, R., & Wit, D. (2004). The value of human and social capital investments for the business performance. *Journal for Business and Economics*, 45-90.

Brace, N., Kemp, R., & Snelgar, R. (2012). *IBM SPSS for Psychologists.* New South Wales: University of New South Wales.

Breda, A. (2014). A critical review of resilience theory and its relevance for social work. *Social Work*, 54, 1.

Bryman, A. (2011). *Business research methods.* London: Oxford publishers Ltd.

Chandra Yanto, L. C.-J. (2016). Mining social entrepreneurship strategies using topic modeling. *PLOS ONE*, 9-12.

Christensen, C. (1997). *The innovators dilemma: When new technology causes new firms to fail.* Boston: Harvard Business School Press.

Christensen, C., & Raynor, M. (2003). *The innovator's solution: Creating and sustaining successful growth.* Boston: Harvard Business School Press.

Cooper, D., & Schindler, P. (2010). *Business research method. Twelfth Edition.* New York, NY: The McGraw-Hill Companies, Inc

Cote, M., & Nightingale, A. (2012). Resilience thinking meets social theory: Situating social change in socio-ecological systems. *Progress in Human Geography*, 36(4), 475–489.

County Government of Kakamega (2018, December 21). Retrieved from *https://www.kakamega.go.ke*.

County Government of Kakamega (2017). *County integrated development plan.* Kakamega: County Government of Kakamega: Department of Economic Planning and Investments.

Cowles, E., & Nelson, E. (2015). *An introduction to survey research.* London: Business Expert Press.

Creswell, J. (2009). *Research design qualitative, quantitative and mixed methods approaches.* Sage Publication.

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

Dacin, M., Dacin, P., & Tracey, P. (2011). Social entrepreneurship: A critique and future directions. *Organization Science, 22(5*), 203-1213.

Daly, M., & Leonard, M. (. (2002). *Against all odds: Family life on a low income in Ireland.* Dublin: Combat Poverty Agency.

Danes, S. M. (2009). Determinants of family business resilience after a natural disaster by gender of business owner. *Journal of Developmental Entrepreneurship, 14(4),* 333-354.

Dart, R. (2004). The legitimacy of social enterprise. *Non-Profit Management and Leadership, 14(4),* 411- 424.

Dees, G. (2001). *The meaning of social entrepreneurship.* London: Duke University.

Dees, J. G. (1998). Enterprising non-profits. *Harvard Business Review, 76(1),* 55–66.

Dees, J. G. (2001). *Enterprising non-profits: A toolkit for social entrepreneurs.* New York: Wiley Non-Profit Series.

Dor, S., & Acs, Z. (2010). Innovation and social capital-A cross country investigation. *Industry and Innovation*, 241-262.

Dorado, S. (2006). Social entrepreneurial ventures: Different values so different process of creation, no? *Journal of Developmental Entrepreneurship, 11(4),* 319 343.

Drucker, P. (1987). Social innovation-New management. *Long range planning, 20(6),* 29-34.

Department of Trade and Industry (2006). *Social enterprise: A strategy for success.* Department of Trade and Industry, London: SBS gov.

Edwards, J., & Lambert, L. (2007). Edwards, J. R. Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods*, 12, 1-22.

Ellis, T. (2011). The seven growth strategies of social entrepreneurship. *African Journal of Management*, 34-36.

Endris, G. S., Kibwika, P., Hassan, J. Y., & Obaa, B. B. (2017). Harnessing social capital for resilience to livelihood shocks: Ethnographic evidence of indigenous mutual support practices among rural households in Eastern Ethiopia. *Hindawi International Journal of Population Research*, 1-26.

Eroğlu. Ş (2011). *Beyond the resources of poverty: Gecekondu living in the Turkish.* Turkish Capital.: Farnham.

European commission. (2015, January 31). *European Commission catalog.* Retrieved from European Commission catalog N:KE-BD-15-001-EN-N: http://tinyurl.com/h5j4qmw.

FAO. (1997). *Key to sustainability and food security.* Rome: FAO.

FAO. (2011). *The state of food and agriculture.* Rome: FAO.

Fenge, Gina & Prange. (2010). *Participatory qualitative research.* Amazon: Sage Amazon publications.

Ferrari, S., & Lund-Durlacher, D. (2015). *The social enterprise as a vehicle to poverty alleviation: Business models and earning strategies.* Vienna: University Vienna.

Field, A. (2009). *Discovering statistics using SPSS, third edition.* London EC1Y 1SP: Sage publications.

Galbraith, J. (1967). *The new industrial state.* Washington: Princeton University press.

Garmezy, N. (1974). Prospects and promises in the study of resilience. *Development Psychopathology Journal*, 1-20.

Garmezy, N. (1974). The study of competence in children at risk for severe Psychoperthology in EJ Anthony & C Keru Perisk (eds). *The chid his family vol 111, children psychiatric risk. New York, Wiley*, 77-97.

Garzarelli, G., & Limam, Y. R. (2019). Physical capital, total factor productivity, and economic growth in sub-Saharan Africa. *South African Journal of Economic and Management Sciences (SAJEMS)*, 1-10.

Gay, L. (1992). *Educational research: Competencies for analysis and applications. (4th ed).* New York: Macmillan Publishers.

Gidron, B., & Yekeskel, H. (2012). *Social enterprises: An organizational perspective. 2012.* New York: Palgrave Macmillan.

Giuntoli, G., South, J., Kinsella, K., & Karban, K. (2011). *Mental health, resilience and the recession in Bradford.* Bradford: Joseph Rowntree Foundation.

Goldenberg, M. (2010). Reflections on social innovation. *The Philanthropist*, 42-77.

Graf, M., Ghez, J., Khodyakov, D., & Yaqub, O. (2016). *Individual empowerment: Global societal trends to 2030 thematic report.* Cambridge, UK: Rand Corporation.

Gripaios, P., & Bishop, P. (2005). Spatial inequalities in UK GDP per head: The role of private and public services. *The Service Industries Journal, 25(8),* 945–958.

Gwimbi, P. (2009). Linking rural community livelihoods to resilience building in flood risk reduction in Zimbabwe. *Journal of Disaster Risk studies*, 71-79 /jamba vol 2.

Haase, T., & Pratschke, J. (2012). The 2011 Pobal HB Deprivation Index for Small Areas (SA):. *Introduction and Reference Tables*, 1-3.

Hall, N., & Hall, R. (2008). *Applied social research: Planning, designing and conducting real-world research.* South Yarra, Australia: Palgrave Macmillan.

Han, J., Kim, N., & Srivastava, R. (1998). Market orientation and organizational performance: Is innovation a missing link. *Journal of Marketing*, 62, (4), 30-45.

Harlam, A., & Hazeltine, B. (2014). *Government services at One-Acre Fund.* New York: Brown University.

Hatibu, S. (2020). *Social entrepreneurship strategies and competitive advantage of tour firms in Kenya.* Nairobi: Unpublished.

Hazel, L. (2015). *The role of relationships in building capabilities for social innovation: The case of social enterprises.* London, UK: Unpublished Thesis

Holling, C. (1973). Resilience and stability of ecological systems. *Review of Ecology and Systematics*, 4(1), 1-23.

Holt, K. (1971). Social innovation in organization. *International Studies of Management and Organization,1(3)*, 235-252.

Howaldt, J., Kaletka, C., Schröder, A., & Zirngiebl, M. (2018). *Atlas of social innovation.* Dortmund, Germany: European Union.

Hurley, R., & Hult, T. (1998). Innovation, marketing orientation and organizational learning: An integration and empirical examination. *Journal of Marketing, 62*, 42-54.

Hyppönen, M., Hyvönen, J., Morri, P., Puoskari, J., & Hallikainen, V. (2010). Keräilyn metsästyksen ja kalastuksen merkitys Ylä-Lapin kuntien kotitaluksille. *Maantieteen aikakauskirja, 1*, 65–73.

Ibrahim, N., & Masud, A. (2016). Moderating role of entrepreneurial orientation on the relationship between entrepreneurial skills, environmental factors and entrepreneurial intention: A PLS approach. *Management Science Letters,* 6 (3), 225-236.

Jeans Helen, G, E. (2017). The future is a choice: Absorb, adapt, transform, resilience capacities. *Oxfam International*, 1-8.

Kainulainen, P. (2011, Mai 2014 abgerufen am 2). *Selvitys petojen aiheuttamien vahinkojen vaikutuksista poronhoidolleja toimenpiteet pedoista aiheutuvien ongelmien ratkaisemiseksi*. Retrieved from document_library/get_file?folderId=223971: http://www.lapinliitto.fi/c/.

Kariuki, L. (2016). *The relationship between entrepreneurial orientation and performance of social.* Enterprises. Nairobi: Unpublished.

Kassimati, K. (1998). *Social exclusion: The Greek experience.* Athens: Gutenberg, (ed.).

Katre, & Salipante. (2012). *Institutional complexity and social entrepreneurship.* London: Whiterose.

Keck, M., & SakdaPolrak, P. (2013). What is social resilience? Lessons learned and ways forward. *Erdkunde*, 67 (1), 5–19.

Kerlin, J. A. (2006). Social enterprise in the United States and Europe: Understanding and learning from the differences, Voluntas: *International Journal of Voluntary and Non-profit Organizations*, 17(3), 246-262.

Kerlin, J. A. (2009). *Social enterprise: A global comparison.* Medford USA: Tufts University Press.

Khan, S. H., Yasir, M., Shah, H. A., Majid, A. (2021). Role of social capital and social value creation in augmenting sustainable performance of social enterprises: Moderating role of social innovation. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, (1), 118-137.

Kibe, L. W. (2016). *Influence of entrepreneurial determinants on the performance of social enterprises in Nairobi City County, Kenya.* Nairobi: Unpublished thesis University of Nairobi.

Kim, D., & Lim, U. (2017). Social enterprise as a catalyst for sustainable local and regional development. *MDPI*,1-15.

Kirca, A., Jayachandran, S., & Bearden, W. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing,* 69 (2), 24-41.

Kothari, C. (2004). *Research methodology: Methods and techniques.* New Delhi: New Age International (P) Ltd.

Kuratko, D. (2005). The emergency of entrepreneurship education: Development, trends and challenges. *Journal Sage Publications*, 215-223.

Lai, Y. (2013). The moderating effect of organizational structure in knowledge management for international ports in Taiwan. *International Journal of Computer and Information Technology*, 2 (2), 240-246.

Larsen, R., Calgaro, E., & Thomalla, F. (2011). Governing resilience building in Thailand's tourism-dependent coastal communities: Conceptualising stakeholder agency in social-ecological systems. *Global Environmental change*, 113-123.

Lee, R. (2009). Network communications and learning during business start-up: The creation of cognitive social capital. *International Small Business*, 49-52.

Lee, H.-S., 2014. An international comparative study on the legislative system related to social enterprise. *Soc. Enterp. Stud. 4*, 50–87.

Lee, H.-Y. (2015). *The role of relationship in building capabilities for social innovation: The case of social enterprises.* London: unpublished.

Leeuw, D. (2008). *International handbook of survey methodology: Choosing a method of data collection.* Dublin: Sage.

Lennart Olsson, A. J. (2017). Why resilience is unappealing to social science: Theoretical and empirical investigations of the scientific use of resilience. *American Association for the Advancement of Science*, 1-12

Lennart, P S, A., Stefan & Grentzelius, N. (2017). Biodiversity risks of adopting resilience as a policy goal. *Conservation Journal*, 1-43.

Lettice, F. & Parrekh. (2010). The social innovation process: Themes, challenges and implications for practice. *International Journal of Technology Management,* 51 (1):139-158.

Li, Y., Zhao, Y., Tan, J., & Liu, Y. (2008). Moderating effects of entrepreneurial orientation on market orientation-performance linkage: Evidence from Chinese small firms. *Journal of Small Business Management,* 46, (1), 113-133.

Longstaff, P. (2005). *Security, resilience, and communication in unpredictable environments.* Cambridge: Harvard University Press.

Low, M., & I.C MacMillan. (1998). Entrepreneurship: Past research and future challenges. *Journal of Management, 14(2),* 139–161.

Lüdeke-Freund, F., & Boons, F. (2013). Business models for sustainable innovation: state of the art and steps towards a research agenda. *Journal of Cleaner Production*, 1-13.

Lumpkin, G., & Dess, G. (1996). Clarifying the interneural orientation construct and linking it to performance. *Academic of Management Review, 21*, 135-173.

Lundstrom, A., & Zhou, C. (2011). Promoting innovation based on social sciences and technologies: The prospects of social innovation park. *Innovation: The European Journal of Social Science Research,* 24(1-2), 133-149.

Mair, J., & Marti, I. (2006). Social entrepreneurship research: A source of explanation prediction, and delight. *Journal of World Business, 41(1),* 36-44.

Mair, J., Battilana, J., & Cardenas, J. (2012). Organizing for society: A typology of social entrepreneuring models. *Journal of Business Ethics*, *111*(3), 353–373.

Manfre, C. (2017). *Finding the best fit One-Acre Fund's integration of digital tools in Kenya.* New York: USAID.

Maroyi, A. (2009). Traditional home gardens and rural livelihoods in Nhema, Zimbabwe: A sustainable agroforestry system. *International Journal of Sustainable Development and World Ecology*, 1-8.

Marshall, N. A., & Marshall P.A., (2007). Conceptualizing and operationalizing social resilience within commercial fisheries in northern Australia. *Journal of Ecological Science,* 12 (1), 1.

Martin, R. L., & Osberg, S. (2007). Social Entrepreneurship: The case for definition. *Stanford Social Innovation Review*, 28-39.

McClish, S. J., & Reeve, K. M. (2018). Earned income: The secret to success for the nonprofit seeking financial sustainability? *Proceedings of the International Association for Business and Society* (pp. 71-83). Lisbon, Portugal: International Association for Business and society.

Meister, B. P., Horlings, L. G., & Bulder, E. (2021). *Tackling societal challenges together: Co-creation strategies and social innovation in EU policy and funded projects.* Groningen, The Netherlands: Wiley Periodicals LLC.

Merlo, O., & Auh, S. (2009). The effects of entrepreneurial orientation, market orientation, and marketing subunit influence on firm performance. *Market letters*, 20 (3), 295-311.

Mintzberg, H., & Waters, J. (1985). Of strategies deliberate and emergent. *Strategic Management Journal*, 6, 257-272.

Mugenda, O., & Mugenda, A. (2003). *Research methods. Quantitative and approaches.* Nairobi: Acts press.

Mulgan, G. (2012). The theoretical foundation of social innovation. In A. Nicholls, & A. Murdock, *Social Innovation* (pp. 35-65). London: Palgrave MacMillan.

Mwago I.V., & G.Sijali, M. (2009). Money maker pumps: Creating wealth in Sub-Saharan Africa. *Kick Start International*, 1-18.

Myatt, D. P. (2016). Collective action (New perspectives). *The New Palgrave Dictionary of Economics*, 23.

Nachmias, F., & Nachmias, D. (1992). *Research methods in social sciences.* Indiana, USA: St Martin's press.

Nassiuma. D.K (2000). *Survey sampling: Theory and methods.* Njoro, Kenya: Egerton University Press.

Neubert, M., Hunter, t. E., & Tolentino, R. (2016). A servant leader and their stakeholders: When does organizational structure enhance a leader's influence? *The Leadership Quarterly*, 27 (6), 896-910.

Newman, I., & Benz, C. (1998). *Qualitative-quantitative research methodology: Exploring the interactive.* Illinois,USA: Southern Illinois University Press.

Niemistö, N. (2011). *The resilience of rural Ethiopian livelihoods.* Jyväskylä: A Pro Gradu unpublished Thesis,University of Jyväskylä.

Njuguna, B. (2015). *Factors influencing sustainability of social entrepreneurship projects: a case of Iko toilet project Nairobi county, Kenya.* Nairobi: Unpublished Thesis University of Nairobi.

Norris, F., Stevens, S., Pfefferbaum, B., & Pfefferbaum, R. (2008). Community resilience as a metaphor, theory, set of capacities and strategy for disaster readiness. *The American journal of community psychology*, 41(1-2), 56-60.

Nyaribo, E. K. (2012). *Strategies of employee empowerment used by Africa Nazarene University, Kenya.* Nairobi: unpublished thesis *Nazarene University*.

OECD. (2012). *Innovation for development.* Paris: OECD publishers.

Oeij, P., Vaas, F., Torre, W. v., & Dhondt, S. (2019). Understanding social innovation as an innovation process: Applying the innovation journey model. *Journal of Business Research*, 243-254.

Olwig, M. (2012). Muiti-sited resilience: The mutual construction of local and global understandings and practices of adaptation and innovation. *Applied Geography*, 23 45.

Oparinde, A., & Hodge, I. (2011). *Building livelihood resilience: A case study of factors affecting farm households' adoption of coping and.* Lagos: International Food Policy Research Institute.

Opati, M. S. (2014). *Influence of social entrepreneurship strategies on community empowerment among faith-based organizations in Kajiado County, Kenya.* Nairobi: University of Nairobi.

Orodho, J. (2004). *Techniques of writing research proposals and reports in educational and social sciences.* Nairobi: Masola Publishers.

O'sullivan, D., & Butler, P. (2009). Market orientation and enterprise policy. *European Journal of Marketing*, 43 (11/12), 1349-1364.

Pahurkar, R. N. (2015). Analyzing social enterprises and social innovations for social development using real-life cases. *International Journal of Development and Sustainability*,4 (6)702-720.

Pakkanen, A., & Valkonen, J. (. (2011). *Poronhoitajien hyvinvointi ja tulevaisuuskuvat eteläisimmissä paliskunnissa.* Esiselvitys: Lapin yliopisto.

Pelling, M. (2003). *The vulnerability of cities. Natural disasters and social resilience.* London.: Earthscan Publications.

Petraki, G. (1998). The social exclusion: Old and new definitions of social problem. *Proceedings of the 6th Scientific Conference of the Foundation Saki Karagiorga Social Inequalities and Social Exclusion, 27-30 November 1996*, (pp. pp. 19–24,). Athens (in Greek). Saki Karagiorga Foundation.

Phills, J., Deiglmeier, K., & Miller, D. (2008). Rediscovering social innovation. *Stanford Social Innovation Review Fall*, 34-43.

Praag, V. (1999). The roots of entrepreneurship and labour demand: Individual ability and low risk aversion. *Economics*, 68 (269), 142.

Prahalad, McCracken, &McCracken. (2009). Entrepreneurship: Concepts, methodologies, tools and applications. London: IGI global.

Promberger. (2012). *Applied regional growth and innovation models.* Amazon: Springer science and business media.

Pue, K., Vandergeest, C., & Breznitz, D. (2016). Towards social innovation theory. *Innovation Policy Lab White Paper*, 15-55.

Pulendran, S., Speed, R., & Widling, R. (2003). Marketing planning, market orientation and business performance. *European Journal of Marketing*, 37 (3/4), 476-497.

Revilla, A., Pérez-Luño, A., & Nieto, M. (2016). Does family involvement in management reduce the risk of business failure? The moderating role of entrepreneurial orientation. *Family Business Review*, 29 (4), 365-379.

Sagawa, S. S. (2000). Common interest, common good: Creating value through business and social sector partnership. *California Management Review, 42(2),* 105–122.

Sijabat, R. (2016). Promoting inclusive and sustainable development through social innovation and social entrepreneurship. *The 9th International Indonesia Forum Conference* (pp. 15-30). Jakarta, Indonesia: Tech monitor.

Sanders, J., & Nee, V. (1996). immigrant self- employment: The family as social capital and the value of human capital. *American Sociological Review*, 1-50.

Sandu, S., & Anghel, I. (2016). Social innovation and innovation performance in European Union. *Annales Universität's Series Oeconomica*,18(1), 57-70.

Savoia, & Copeland, P. (2011). Googles Innovation factory: Testing, culture and Infrastructure. *Inventorum: A platform for Open Innovation* (pp. 56-61). mc: Google.

Schoonhoven, C. (1981). Problems with contingency theory: Testing assumptions hidden within the language of contingency theory. *Administrative Science Quarterly*, 26, 349-377.

Schubert, S. F. (2018). *Growth and Unemployment: Short-run and Long-run Tradeoffs.* Bolzano, Italy: Free University of Bozen-Bolzano.

Schumpeter. J.A. (1934). *The theory of economic development.* Cambridge, MA: Harvard University Press.

Schumpeter, J. A. (2005). *Capitalism, socialism, and democracy.* New York: Harper.

Sekaran, U., & Bougie, J. R. (2010). *Research methods for business: A skill building approach (5th Edition).* London: Mills.

Shahidullah, A. (2016). *Community-based developmental entrepreneurship: Linking microfinance with ecosystem services.* Winnipeg, Canada: University of Manitoba.

Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. In D. S. C. Kent, *Encyclopedia of entrepreneurship* (pp. 72-90). Englewood Cliffs, NJ: Prentice Hall.

Smith, W., & Darko, E. (2014). *Social enterprise constraints and opportunities-Evidence from Vietnam.* London: Overseas Development Institute.

Sonfield, M. (2004). *First, second and third generation family firms.* London: Wiley and sons.

Southwick, S., Bonanno, G., Masten, A., & Panter-Brick, C. (2014). Resilience definitions, theory and challenges: Interdisciplinary perspective. *European Journal of Psychotraumatology*, 76-80.

Stretton, A. (2017). Deliberate and emergent strategies and origin of projects. *PM World Journal 5*, 1-17.

Taylor, J. (1970). Introducing social innovation. *The Journal of Applied Behavioral Science*,1-10.

Tekgüç, H. (2010, (abgerufen Mai 2014 2nd). *The implications of consumption from self-produce for vulnerability to poverty in Turkey. Working Papers. Mardin Artuklu University, Department*. Retrieved from Working Papers. Mardin Artuklu Univeristy, Department of Economics, /RePEc:mrd:martwp:2011-02 : http://EconPapers.repec.org

Thakur, V. (2018). Farmers Resilience: Understanding and measuring One-Acre Fund program in six countries. *Food Security Information Network (FSIN)*, 1-7.

Theron, L. (2016). Towards a culturally and contextually sensitive understanding of resilience: Privileging the voices of black, South African young people. *Journal of adolescent research*, 31 (6), 635-670.

Thirapongphaiboon, N. (2018). *The power of social enterprises in encouraging food sustainability transitions in consumerism towards food waste reduction in the UK, Denmark, and the Netherlands: concept, framework, and applicable practices for social entrepreneurs.* London: Goldsmiths, University of London.

Thompson, J. (1967). *Organizations in action.* New York, NY: McGraw-Hill.

Thompson, J. A. (2000). Social entrepreneurship – A new look at the people and the potential. *Management Decision, 38(5),* 328–338.

Trochim, W. (2006). Types of reliability: Research methods. *Scientific Research*, 2-19.

United Kingdom. (2013). *Later life in the United Kingdom.* London: United Kingdom.

Vercillo, S. (2016). Sustainable livelihoods and rural development. *Canadian journal of African Studies/Revue C anadienne des Etudes Africaines*,50 (2),326-328.

Walliman, N. (2011). *Research methods: The basics.* London and New York: Routledge.

Walsh, M. (2006). Defining resilience: Subjective understandings of resilience from the field. *Journal for Social Science*, 23-67.

Waltermann, B. (2010). *Competing for advantage: How to succeed in the new global reality.* Boston: The Boston consulting group.

Wang, C., Chen, K., & Chen, S. C. (2012). Total quality management, market orientation and hotel performance: The moderating effects of external environmental factors. *International Journal of Hospitality Management*, 31 (1), 119-129.

Wang'oe, M. (2018). *Influence of social enterprise on economic growth, employment and community empowerment: A case of Kenya.* Nairobi: Unpublished. *University of* Nairobi

Wenyuan Li, Sadick, Abubakari, M., Musah, A.-A. I., Mustapha, & Salisu. (2018). The moderating effect of social innovation in perspectives of shared value creation in the educational sector of Ghana. *Sustainability MDPI*, 1-26.

Westley, F., & Antadze, N. (2010). Making a difference, strategies for scaling social innovation for greater impact. *The innovation Journal: The public Sector Innovation, 15(2),* 2-19.

Wingerter (2012). *Comparative employment relations.* London UK: Macmillan Education.

Workman, J. P., Subin, I., & Jr. (2004). Market orientation, creativity, and new product performance in high-technology firms. *Journal of Marketing*, 114-132.

World Bank, (2013). *Entrepreneurship education and training programs around the world: Dimensions for success.* Washington DC: International Bank for Reconstruction and Development.

World Bank Group. (2017). *Enabling the business of agriculture 2017.* Washington, DC: World Bank Publications.

Yossy, I. (2017). Moderating effect of innovation on strategy-financial performance relationship: Experience of "Batik" SMEs. *Advances in Intelligent Systems Research, 131*, 1-6.

Youn, A., & Gachunga, J. (2018, May 5). *One-Acre Fundorg.* Retrieved from www.technoserve.org: http:/www.oneacrefund.org

Zahra, S., Gedajlovic, E., Neubaum, D., & Shulman, J. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing, 24(5),* 519-532.

APPENDICES

Appendix I: introductory letter

BONIFACE LIHAHANDA

P.O BOX 27-50107

SHINYALU

DATE: ……

To Executive Office

……..

NAIROBI.

Dear Sir/ Madam,

RE: ACADEMIC RESEARCH

I am a PhD student in Business Administration at Maseno University.as part of my course am required to carry out research on social entrepreneurship strategies, social innovation and resilience of one acre-fund household livelihoods. A questionnaire has been developed to collect knowledge related to research goals. The intent of this letter is to respectfully request you to allow me to collect information from your organization about this important issue.

Please note that the study is being carried out as a scientific study, without strict confidence in the information provided. To ensure confidentiality, strict ethical principles will be observed and the study results and reports will not include references to individuals.

Your acceptance will be highly appreciated

Yours Sincerely

Boniface Lihanda

Appendix II: Questionnaire for Households

Name of researcher: Boniface B. Lihanda

Maseno University,

Private Bag-40105,

Maseno.

0721560149

Email: lihandaboniface@yahoo.com

Topic: Social entrepreneurship strategies and innovation on resilience of One-Acre Fund household livelihoods in Kakamega County.

Please carefully read and complete this form. Ring the appropriate responses and sign the declaration at the end if you are willing to participate in this study. Please ask if you do not understand anything and would like more information.

- I have had the research satisfactorily explained to me in verbal by the researcher. **YES / NO**
- I understand that my participation is voluntary and that I may withdraw from this study at any time without giving reason. **YES / NO**
- I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study. **YES / NO**
- I understand that any information from me will be used solely for research purposes and will be destroyed on completion of your research. **YES / NO**
- I understand that you will be discussing the progress of your research with others in Maseno University. **YES / NO**

I freely give my consent to participate in this research study and have been given a copy of this form for my own information.

Respondents Signature:…… Date……

Part A: Demographic Information (This part relates to the individual respondent)

Habari kuhusu demografia (Sehemu hii yahusiana na Kila mmoja)

1. What is your gender?

   Wewe ni wa jinsia gani?

   Male (***Mume***) [ ] Female (***Kike***) [ ]

2. What is your age? (Tick as appropriate) ***Una umri gani? (Jibu kwa usahihi)***

18-25	[ ]
26-35	[ ]
36-45	[ ]
46 and above	[ ]

3. Level of education (Tick as appropriate) (***Kiwango cha elimu)(Jibu kwa usahihi)***

   Primary Level (**S*hule ya Msingi)*** [ ]

   Secondary Level (**S*hule ya upili)*** [ ]

   Certificate/Diploma (**S*hahada/Stashahada)*** [ ]

   Graduate (***Hitimu)*** [ ]

   Postgraduate (***Hitimu ya juu***) [ ]

4. How long have you worked with the one acre-fund? (Tick as appropriate)

   Umefanya kazi na One-Acre Fundkwa mda gani* (*Jibu kwa usahihi)

   Less than 1 years (***Chini ya mwaka mmoja***) [ ]

   Between 2 and 3 years (***Kati ya miaka 2 hati 3***) [ ]

   Between 3 and 4 years (***Kati ya miaka 3 hati 4***) [ ]

   Between 4 and 5years (***Kati ya miaka 4 kuelekea***) [ ]

Part B:
Section I. Social entrepreneurship strategies

1 point =Strongly Disagree (SD) (*Haukubaliani Sana*)

2 points =Disagree (D) (*Haukubaliani*)

3 points =Undecided (U) (*Yumba Yumba*)

4 points =Agree (A) (*Kukubaliana*)

5 points =Strongly Agree (SA) *(Kukubaliana sana)*

System reforms strategies
(Mikakati *ya mageuzi kwa mifumo*)

S/No.	Statement(*Taarifa*)	SA	A	U	D	SD
1	One-Acre Fund organization conducts Training to teach farmer HHs modern farming skills. ***Shirika la One-Acre Fund huandaa mafunzo ya kufunza ujuzi wa kisasa wa kilimo wakulima katika makaya***					
2	One-Acre Fund organization has created new organizational skills for us farmer HHs ***Shirika la One-Acre Fund huunda ujuzi mpya wa kishirika kwa sisi wakulima katika makaya***					
3	Skills acquired in One-Acre Fund organization have improved our farming ***Ujuzi tuliopata kwa shirika la One-Acre Fund umeimarisha ukulima wetu***					
4	One-Acre Fund organization organises capacity building meetings ***Shirika la One-Acre Fund huandaa mikutano ya kujijenga kiuwezo***					
5	One-Acre Fund reaches farmers using chiefs 'barazas and abide by the law. ***Shirika la one-acre huwafikia wakulima kwa kutumia baraza za wakuu wa kata na hukalisha mikutano kuambatana na sheria***					

Physical capital development reforms strategies (mikakati *ya mageuzi kwa mifumo ya kuendeleza mali halisi)*

S/No.	Statement (*Taarifa*)	SA	A	U	D	SD
1	We use natural capital like sun, water and recycled wastes on our farms ***Tunatumia rasilimali asili kama miale ya jua,maji na uchafu ulosakwa katika mashamba yetu***					
2	Human capital like casual labourers, skilled and unskilled labour are used on our farms **(*Rasilimali ya kibinadamu kama wafanyi kazi vibarua wafanya kazi wa ujuzi na wasio na ujuzi hutumiwa kwa samba zetu*)**					
3	Manufactured capital like machinery, tools and equipment are used on our farms. ***Rasilimali ya kuundwa kama mashine, vyombo na vifaa vya ukulima hutumika kwa mashamba yetu.***					
4	Financial capital like group loans, soft loans and grants help us in our farming activities. **(*Rasilimali ya kifedha kama mikopo ya vikundi,mikopo laini na ruzuku hutusaidia sisi wakulima katika ukulima wetu*)**					
5	Farmer Households use social capital like networking, communication channels, families, voluntary organizations and networking on the farm ***Makaya.ya wakulima hutumia rasilimali ya kijamii kama vile mitandao,maelezo ya mawasiliano,familia,mashirika ya kujitolea na kujieleza katika mashamba yetu***					

Individual empowerment strategies

(*Mikakati ya mtu binafsi kujiwezesha)*

S/No.	Statement (*Taarifa*)	SA	A	U	D	SD
1	One-Acre Fund provides individual farmer HHs with farming manuals ***One-Acre Fund hupatia kila mkulima katika makaya miongozo ya ukulima***					
2	One-Acre Funds ends extension officers to visit farmer HHs ***One-Acre Fund hutumia maafisa wa ugani kutembelea makaya***					
3	One-Acre Fund farm visits assist Farmer HHs in checking individual progress and advise ***Kutembelewa na maafisa wa ugani husaidia wakulima katika makaya kujichunguza kibinafsi na kasha huwapa ushauri***					
4	One-Acre Fund has taught farmer HHs how to make and keep farm produce and financial records. ***One-Acre Fund imefunza wakulima katika makaya jinzi ya kuunda na kuweka rekodi za mazao na za mapato***					
5	One-Acre Fund farm records assist farmer HHs make required changes on their farms on their own. ***Rekodi za ukulima wa One-Acre Fund husaidia wakulima katika makaya kutekeleza mabadiliko katika mashamba yao kibinafsi***					

Collective action strategies

(*Mikakati ya hatua ya pamoja*)

S/No	Statement(*Taarifa*)	SA	A	U	D	SD
1	A group budget is prepared every year for planting. ***Bajeti ya pamoja huandaliwa kila mwaka wakati wa kupanda***					
2	Local One-Acre Fund groups are created to assist each other will during manual work on individual farmer HHs farms ***Makundi ya maeneo ya One-Acre Fund hutengenezwa kusaidia kila mmoja wakati wa kazi ya kawaida ya pamoja kwa kila shamba la mkulima katika kila kaya***					
3	One-Acre Fund group farmer HHs visit other farmer HHs in other areas for benchmarking. ***Vikundi vya One-Acre Fund hutembeleana kwa ajili ya vigezo***					
4	One-Acre Fund group visits to other farms for benchmarking improves farmer HHs farming activities. ***Kutembeleana kwa vikundi vya One-Acre Fund huimarisha shughuli za ukulima wa wakulima katika makaya***					
5	Field officers visit group farmer HHs regularly and promptly for support. ***Mafisa wa nyanjani hutembelea wakulima katika makaya kila wakati***					

Earned income strategies

(*Mikakati ya mapato yanayopatikana*)

S/No.	Statement (*Taarifa)*	SA	A	U	D	SD
1	One-Acre Fund organization provides farm inputs according to the needs of the farmer households. ***One-Acre Fund inapeana pembejeo za ukulima kulingana na haja ya makaya ya wakulima***					
2	One-Acre Fund farming proceeds and profits pay for the farm inputs acquired as loan from the organization. ***Mapato na faida ya ukulima kutokana na One-Acre Fund hulipa mkopo wa vifaa vya ukulima kutoka kwa shirika hilo***					
3	One-Acre Fund farming proceeds and profits have sustained farmer HHs farming for the last 3 years ***Mapato na faida ya ukulima kupitia One-Acre Fund inaendeleza makaya ya wakulima kwa miaka 3 iliyopita***					
4	Different produce like maize, beans and vegetables have improved farmer household's income. ***Mapato tofauti kama mahindi,maaragwe na mboga imeimarisha mapato ya makaya ya wakulima***					
5	Farm proceeds and profits have financed different projects in farmer HHs homes ***Mapato na faida ya shamba imefadhili miradi ya nyumbani mwa makaya ya wakulima***					

Section II.Social innovation

Please indicate the extent to which you also agree with the following statements regarding innovation. (***Tafadhali onyesha jinsi unavyo kupaliana na taarifa kuhusu ubunifu)***

1= Not at All (NA) hakuna *kabisa*
2 = Small Extent (SE) *Kiwango kidogo*,
3 = Moderate Extent (ME) *Kiwango wastani*
4 = Large Extent (LE) *Kiwango kikubwa*
5 = Very Large Extent (VLE) *Kiwango kikubwa Zaidi*

New organization model and creativity (*mifano mipya ya shirika na ubunifu)*

S/No.	Statement(*taarifa*)	NA	SE	ME	LE	VLE
1	Creativity in One-Acre Fund improves yields in our farming activities. ***Ubunifu katika One-Acre Fund huboresha mapato kwa shughuli za ukulima***					
2	There is learning and acquiring of new ideas to farmer HHs farming or service delivery. Provision of new ideas, methods and tools has improved our farming activities. ***Kuna kujifunza na kupata mawazo mapya kwa wakulima kwenye makaya na utoaji huduma. Utoaji wa mbinu mpya na vifaa vya ukulima vimeimarisha shughuli za ukulima***					
3	Through new organization, farmer HHs have better ways of producing yields and marketing has made farmer HH get products. ***Kupitia kwa mashirika mapya makaya ya wakulima huwa na njia bora za kutoa mavuno na masoko imeimarisha makaya ya wakulima kupata bidha***					
4	New One-Acre Fund model has improved our farming ***Mfano mpya wa One-Acre Fund umeimarisha ukulima wetu***					
5	Our group uses creative methods of reaching markets, enhancing services and products e.g. volunteerism ***Kikundi chetu hutumia njia za ubunifu za kufika soko kuimarisha huduma na bidha.Mfano ni Kujitolea***					

Market orientation, new production technology and new products and services

S/No.	Statement	NA	SE	ME	LE	VLE
1	One-Acre Fund produce have been able to enter new markets ***Mapato kutokana na One-Acre Fund imeweza kupenya masoko mapya***					
2	We are able to produce & supply products with desired features that were previously not available and affordable to the consumers. ***Tumekuwa wepesi wa kuzalisha na kusambaza bidha zenye vipengele nzuri, kwa bei nafuu ambazo hazikupatikana hapo awali***					
3	One-Acre Fund has introduced new products (solar lamps, batteries, sanitary pads) or services that benefit consumers ***One-Acre Fund imetoa bidha zingine mpya kama vile taa za nishati za jua,betri,visodo na huduma ya kuridhisha wateja***					
4	Information in One-Acre Fund reaches farmer HHs through text messages on their mobile phones and that farmers pay their loans via mobile phones. ***Habari za One-Acre Fund hufikia makaya ya wakulima kupitia ujumbe mfupi kwa rununu zao na pia wakulima hulipa mikopo yao kupitia rununu.***					
5	It is easier to establish and access linkages for markets through different media including social media. ***Ni rahisi kuanzisha na kupata uhusiano wa masoko kupitia vyombo vya habari tofauti pamoja na mitandao ya kijamii***					

Section III. Resilience of household livelihoods.

1. Please score the statements below according to the extent of agreement with them using the following:

1= Not at All (NA) hakuna *kabisa*
2 = Small Extent (SE) *Kiwango kidogo*,
3 = Moderate Extent (ME) *Kiwango wastani*
4 = Large Extent (LE) *Kiwango kikubwa*
5 = Very Large Extent (VLE)

Income growth and job creation
(*Ukuwaji wa mapato na kuundwa kwa nafasi za kazi)*

S/No.	Statement	1	2	3	4	5
1	Sales volume on our yields have increased over the years with One-Acre Fund farming. ***Mauzo ya mavuno yetu imeimarika kila mwaka kupitia ukulima wa One-Acre Fund***					
2	HH made some progress in profits each year for the last 3 years from our sales. ***Ukuuaji umeimarika kwa faida makaya yaliyopata kwa miaka iliyopita tatu kutokana na mauzo*.**					
3	One-Acre Fund has contributed to an increase in HH disposable income. ***One-Acre Fund imechangia kwa mabadiliko ya mapato ya ziada ya makaya***					
4	HH depend wholly on revenue generated from One-Acre Fund proceeds to sustain our livelihood. ***Makaya hutekemea kabisa mapato ambayo hutoka na One-Acre Fundkwa kuendeleza maisha yao***					
5	New job openings have been created by One-Acre Fund ***One-Acre Fund imebuni nafasi mpya za kazi***					

Education and health (*Elimu na afya*)

S/No.	Statement (*taarifa*)	1	2	3	4	5
1	I save my One-Acre Fund farming proceeds on monthly basis ***Ninaokoa mapato yangu ambayo hutokana na One-Acre Fund***					
2	I educate my children from One-Acre Fund farming proceeds ***Ninaelimisha watoto wangu kutokana na mapato ya One-Acre Fund***					
3	I plan to increase my savings to finance future education of my children ***Ninapanga kuongeza maokozi yangu ili kufadili elimu ya watoto wangu nyakati zijazo***					
4	One-Acre Fund farming proceeds has enabled us access minor health services. ***Mapato kutokana na ukulima wa One-Acre Fund umetuwezesha kupata huduma ya matibabu ya zarura***					
5	One-Acre Fund farming proceeds has enabled us access to major health services. ***Mapato ya ukulima ya One-Acre Fund imetuwezesha kupata huduma ya matibabu makubwa***					

Food security and Bills payment

(*Usalama wa vyakula na ulipaji bili*)

S/No.	Statement(*Taarifa*)	1	2	3	4	5
1	We plant different types of crops on our farms using One-Acre Fund ***Tunapanda mazao tofauti katika mashamba yetu kupitia uwezo wa One-Acre Fund***					
2	We sale and keep some produce for own consumption. ***Tunauza na kuhifadhi baadhi ya mazao tunayopata kwa matumizi yetu sisi wenyewe***					
3	The produce we keep is enough to sustain my family throughout the year. ***Mazao tunayahifadhi ni kutosha kuendeleza familia yangu mwaka mzima***					
4	The sales make us pay for our bills that include electricity, water and sewage. ***Mauzo yetu hutuwezesha kulipa bili zetu kama vile za umeme,maji safi na maji taka***					
5	Settling our bills on time makes lead a better life ***Kulipa bili zetu kwa wakati ufaao hutufanya kuishi maisha mema***					

Appendix III: Document Analysis Guide

Documents	**Objectives**	**Content**	**Comment**
Journals			
Textbooks			
Magazines			
Other documents Founding documents, company profiles, company Policy and procedure documents.			

Appendix IV: Map 1: A Kakamega county map showing all the sub counties

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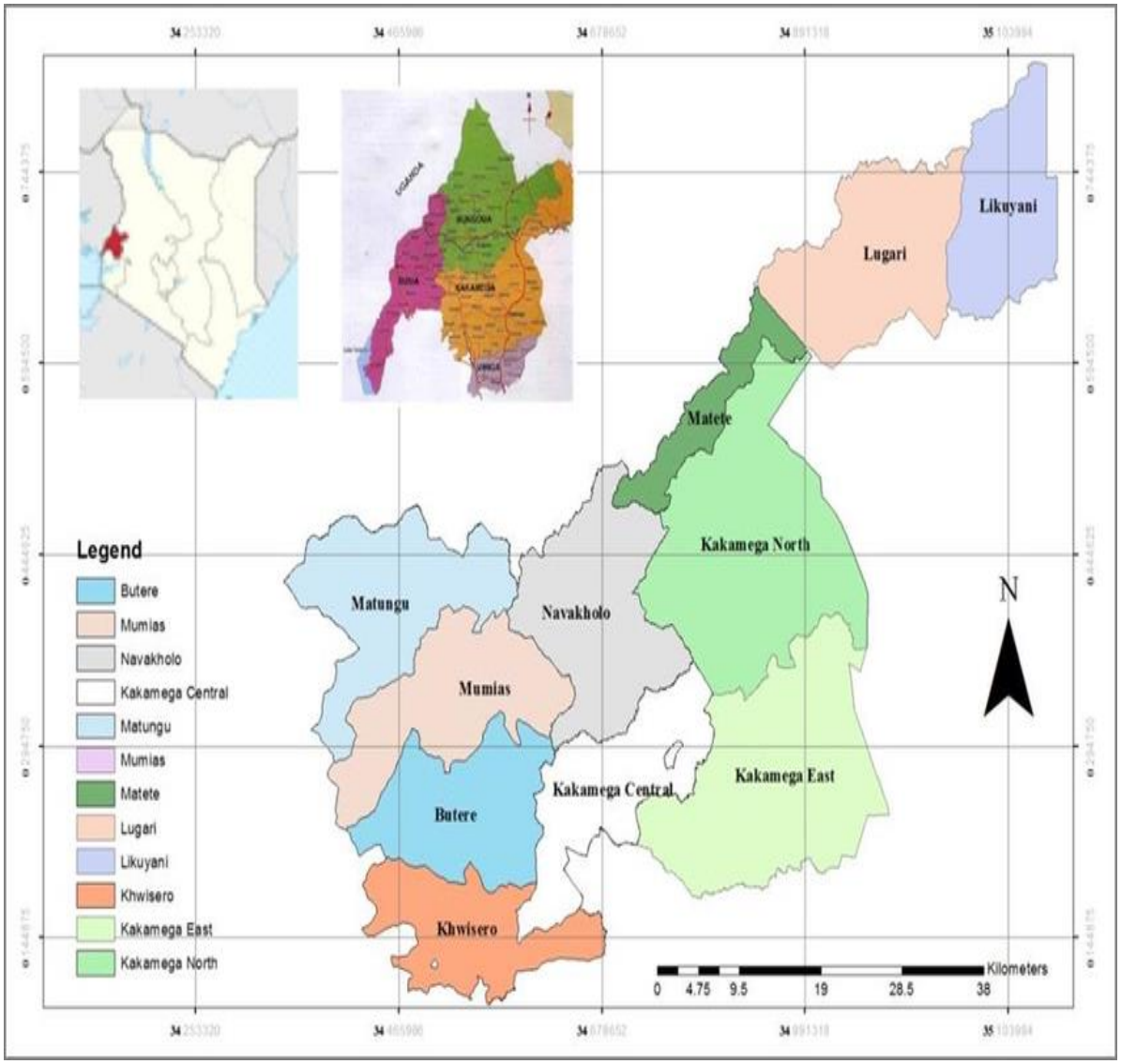

Appendix V: Letter from MUERC

MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622 Ext. 3050
Fax: +254 057 351 221
Private Bag – 40105, Maseno, Kenya
Email: muerc-secretariate@maseno.ac.ke

REF: MSU/DRPI/MUERC/00891/20 Date: 4th December, 2020

TO: Linanda Boniface Bakari
PG/PHD/BE/00008/2017
Department of Business Administration
School of Business and Economics
Maseno University
P. O. Box, Private Bag, Maseno, Kenya

Dear Sir,

RE: Social Entrepreneurship Strategies, Social Innovation and Resilience of One-Acre Fund Household Livelihoods in Kakamega County

This is to inform you that **Maseno University Ethics Review Committee (MUERC)** has reviewed and approved your above research proposal. Your application approval number is MUERC/00891/20. The approval period is 4th December, 2020 – 3rd December, 2021.

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by Maseno University Ethics Review Committee (MUERC).
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Maseno University Ethics Review Committee (MUERC) within 24 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to Maseno University Ethics Review Committee (MUERC) within 24 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to Maseno University Ethics Review Committee (MUERC).

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely

Prof. Philip O. Owuor, PhD, FAAS, FKNAS
Chairman, MUERC

Appendix VI: Research permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 375583

Date of Issue: 06/January/2021

RESEARCH LICENSE

This is to Certify that Mr.. BONIFACE B. LIHANDA of Maseno University, has been licensed to conduct research in Kakamega on the topic: SOCIAL ENTERPRENUERSHIP STRATEGIES, SOCIAL INNOVATION AND RESILIENCE OF ONE-ACRE FUND HOUSEHOLD LIVELIHOODS IN KAKAMEGA COUNTY for the period ending : 06/January/2022.

License No: NACOSTI/P/21/8356

375583

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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