



AMERICAN JOURNAL OF ECONOMICS AND BUSINESS INNOVATION (AJEBI)

ISSN: 2831-5588 (ONLINE), 2832-4862 (PRINT)

VOLUME 2 ISSUE 3 (2023)

PUBLISHED BY
E-PALLI PUBLISHERS, DELAWARE, USA

Social Entrepreneurship Strategies and Resilience of One-Acre Fund Household Livelihoods in Kenya

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Article Information

Received: July 25, 2023

Accepted: August 28, 2023

Published: September 16, 2023

Keywords

Social Entrepreneurship, System Reform, Physical Capital Development, Individual Empowerment, Collective Action, and Earned Income Strategies, One-Acre Fund, Resilience, Household Livelihoods

ABSTRACT

Entrepreneurial activities, especially social entrepreneurship, are acclaimed to foster resilience. A social entrepreneurship One Acre fund program 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. Literature identifies five social entrepreneurship strategies that help in fostering resilience of household livelihoods. These are: system reform, physical capital development, individual empowerment, collective action, and earned income strategies. All five strategies are seldom studied together in relation to resilience of household livelihoods but their impacts are unknown. Frequencies and percentages were used to analyze demographic factors while inferential statistics-moderated multiple regression was used to analyze how social entrepreneurship strategies and social innovation are related to resilience of household livelihoods. The findings revealed that social entrepreneurship strategies statistically significantly contributed to resilience of One-Acre Fund household livelihoods with ($\beta=.652$, $t(311)=15.103$, $p=.000$) that accounted for 42.3% change in resilience of One-Acre Fund household livelihoods ($R^2=0.423$, $F(1,309)=228.101$, $p=.000$). The study recommends that as a coping mechanism to food insecurity, farmers should adopt one acre fund model. This study advises the policy makers to consider the production of maize by use of one-acre fund skills as a social entrepreneurship to minimize the inefficiency levels and increase production by minimizing the cost of inputs and cost of capital. The study highlights the applicability of social entrepreneurship in a new context and further facilitates the creation of knowledge and growth of literature in social entrepreneurship.

INTRODUCTION

Social entrepreneurship is a socially active and independent enterprise which provides services, products, and trade for social purposes (DTI, 2006). Therefore, Kerlin (2009) argues that the profit received from that business has two functions: one is to facilitate the fulfillment of social goals and, second, a desire to gain financial autonomy. Social entrepreneurs are becoming more and more recognized for providing solutions to composite and persistent social problems worldwide (Kerlin, 2009). Despite a growing acknowledgment of social entrepreneurship, Bosma and Levie (2010) believes there is a lack of awareness about how entrepreneurship strategies, innovation and sustainability can be utilized to cope with social economic developments and livelihoods by households following a crisis.

In Czech Republic Gidron and Yekeskel (2012) stressed that social entrepreneurship is organized in order to meet social or environmental objectives, driven by social duties and apply marketing strategies. 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, in previous Social Entrepreneurship studies, 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, for example, 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). Community efforts to reform a system, for example, enhance personal authorisation because collective action brings people together to effectively work, which, in turn, intensify the sense of empowerment of players and can at the same time better the wider system or address a gap. Building physical capital enables actors to turn resources

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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. Prototyping requires the creation of pilot schemes and models before a wider solution is launched (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. The impact on resilience for household livelihoods of these social entrepreneurship strategies remains unknown.

The western part of Kenya and part of North rift is of great importance in this study because it has been hit by adversities in the recent past yet it is part of a section in Kenya that is grouped as "The Kenyan Food Basket". This prompted the commencement of One-Acre Fund project. Some of the challenges faced by farmers were that: Many farmers were unable to feed their families from their one acre of land and were enduring an 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. Low prices of Sales at the cereal boards, the recent outbreak of Covid-19 are other pandemic that have also added a lot of pain to the suffering households in these regions. 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 illness-related labour shortages, transport disruptions, 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 2006 Andrew Young founded this organization. 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 to farm inputs, extension services, storage and storage advice. It has gradually extended to other parts of the country and other countries like Uganda and Rwanda. Social entrepreneurship more so One-Acre Fund, are Kenya's swift developing sector and if well taken care of have the potential of helping the country address the problem of food security, the imbalance between vulnerable and less fortunate. This study strived to demonstrate that one acre-fund farmer households are capable of change and that they should be treated as active partners, rather than beneficiaries. The study was undertaken on the premise that one acre-fund farmer households are rational producers and consumers, who aspire to be in control of their own destiny.

Statement of the Problem

Food insecurity remains a major concern for numerous rural households in Kenya who rely on agriculture as their main source of livelihood. During the 2016/17 financial year, the country 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 – largely for their own use. 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 individual empowerment, collective action, system reform, 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.

Research Objective

Establish the impact of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood in Kenya.

Research Hypothesis

(H0): Social entrepreneurship strategies have no significant positive influence on resilience of One-Acre Fund household livelihoods in Kenya.

Social Entrepreneurship Theory

Social entrepreneurship theory 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 Social entrepreneurship theory. 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. Dacin *et al.* (2011) claim that the breakthrough brought by the theory of social entrepreneurship is its potential to bring the provision of resources of general interest and social solutions to an entrepreneurial and commercial level. Social entrepreneurship theory in this study 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 strive to maintain a constant balance between the social and the economic dimension. Consequently, One-Acre Fund a social enterprise in Kenya borrows ideas of social entrepreneurship theory in attempting to change social and economic dimension of people in the country. Few areas have been highlighted in the social entrepreneurship theory that are associated with social entrepreneurship strategies which forms helps the objective of the study.

METHODOLOGY

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 and 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. This research followed a sample methodology method that was compatible with a quantitative approach. 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 and resilience of one-acre fund household livelihoods in Kenya.

FINDINGS AND DISCUSSION

Findings of Social Entrepreneurship Strategies

The influence of Social entrepreneurship strategies was measured using System reforms strategies; Physical capital development reform strategies; Individual empowerment

Table 1: 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

strategies; Collective action strategies and Earned income strategies. Various individual strategies produced general average mean scores and standard deviations that are displayed in Table 1.

The findings from the study reveal that Social entrepreneurship strategies had a mean score of 3.85. 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 out in Kajiado county in Kenya 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 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 the latter being the most dominant objective. 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 regard, this study makes a significant contribution to social entrepreneurship theory by investigating social entrepreneurship strategies and acknowledging social innovation as a critical moderating variable that

significantly impacts on their relationship with resilient of household livelihoods, thereby generating economic well-being in the society. 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.

The Resilience of One-Acre Fund Household Livelihoods

The 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 2.

Table 2: The resilience of One-Acre Fund household livelihoods

Statement	M
Income growth and job creation	4.2
Education and health	3.3
Food security and Bills payment	3.3
Total	11.5
Mean	3.8

Table 2 it is revealed that Income growth and job creation had a mean of 4.2; Education and health a mean of 3.3 and Food security and Bills payment a mean of 3.3. The overall results revealed had a mean of 3.8 For the purpose of interpretation, a mean score of $0 \leq 1.5$ means that the respondents did 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). The results of this study fall in the category of $3.50 \leq 4.50$ that meant respondents agreed to Large extent 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. 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 suggest that mutual support practices are 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 that has established that several components in social entrepreneurship strategies builds resilience of household livelihoods.

Correlation Analysis

Pearson correlation coefficient was used to determine the magnitude and the direction of the relationships between the dependent variable and independent variables. The values of the Correlation coefficient are between -1 and +1. A value of 0 implies no relationship, +1 correlation coefficient indicates that the two variables are perfectly correlated in a positive linear sense, that is, both variables increase together while a values of -1 correlation coefficient indicates that two variables are perfectly correlated in a negative linear sense, that is, one variable increases as the other decreases (Kothari, 2017).

The researcher used Correlation analysis (Table 3) to test the relationships between the following study variable; Resilience of One-Acre Fund household livelihoods (RHL) and Social entrepreneurship strategie(SEs).The nature of the relationship is determined by the coefficient of correlation while the significance of the relationship at 5% levels of significance is explained by the p-value.

The output from correlation analysis (Table 3), provides a matrix of the correlation coefficients for the three 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 $r=1$ along the diagonal of the table. Social entrepreneurship strategies is positively related to resilience of household livelihoods with a Pearson correlation coefficient of $r=0.652$ with the significance value of $p=0$. This significance value tells us that the probability of getting a correlation coefficient of this nature in a sample of 311 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. This implies that a unit increase in in social entrepreneurship strategies leads to an increase in resilience of One-Acre Fund household livelihoods of 65.2%.

Table 3: Correlation Analysis

		Resilience of Household livelihoods	Social Entrepreneurship strategies
Pearson Correlation	Resilience of Household livelihoods	1.000	
	Social Entrepreneurship strategies	.652	1.000
Sig. (1-tailed)	Resilience of Household livelihoods	.	
	Social Entrepreneurship strategies	.000	.
N	Resilience of Household livelihoods	311	
	Social Entrepreneurship strategies	311	311

Factor Analysis

Kaiser-Meyer-Oklin (KMO) Bartlett's Test of Sphericity

Factor analysis was undertaken to reduce on the number of dimensions and retain the most important for each variable which informed the most important drivers of performance excellence. Prior to undertaking factor analysis, Kaiser-Meyer-Oklin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were examined to evaluate the factorability of the components. KMO varies between 0 and 1 with value closer to one

better and factor analysis can be undertaken and if low it cannot be undertaken. KMO varies between 0 and 1 ($0 < KMO < 1$) when $KMO > 0.5$, the sample is termed adequate (Tabachnick and Fidell, 2012).

Table 4. shows that KMO of the independent and dependent variable were all above 0.90 levels, with Social entrepreneurship strategies at 0.932, Resilience of One-Acre Fund household livelihoods at 0.953 implying that all variables had an acceptable degree of sampling adequacy for factor analysis.

Table 4: Kaiser-Meyer-Oklin (KMO) Bartlett's Test of Sphericity

Variable	Variable Type	KMO	Approx. Chi Square	Bartlett's Test of Sphericity Df Sig.	
Social entrepreneurship strategies	Independent Variable (X1)	.932	4301.432	300	.000
Resilience of One-Acre Fund household livelihoods	Dependent Variable (Y)	.953	5587.187	105	.000

Factor Analysis for Social Entrepreneurship Strategies Communalities for Social Entrepreneurship Strategies

The communality for performance excellence Table 5. below shows the communalities after rotation which represents the relation between the variable and the other variables. It indicate the proportion of variance in each variable that is accounted for. All the factors

were retained for further analysis. All the communalities for factor that retained are above 0.4 as suggested by Costello & Osborne (2005). The lowest communality is 0.402 (CAS1:A group budget is prepared every year for planting) and the highest 0.842 (EIS3:One-Acre Fund farming proceeds and profits have sustained farmer HHs farming for the last).

Table 5: Communalities for Social entrepreneurship strategies

	Initial	Extraction
SRS 1: One-Acre Fund organization conducts Training to teach farmer HHs modern farming skills.	1.000	.565
SRS 2: One-Acre Fund organization has created new organizational skills for us farmer HHs	1.000	.668
SRS 3: Skills acquired in One-Acre Fund organization have improved our farming	1.000	.807
SRS 4: One-Acre Fund organization organizes capacity building meetings	1.000	.695
SRS 5: One-Acre Fund reaches farmers using chiefs 'barazas and abide by the law.	1.000	.663
PCDRS1:We use natural capital like sun, water and recycled wastes on our farms	1.000	.558
PCDRS 2:Human capital like casual labourers, skilled and unskilled labour are used on our farms	1.000	.698
PCDRS3: Manufactured capital like machinery, tools and equipment are used on our farms.	1.000	.544
PCDRS4: Financial capital like group loans, soft loans and grants help us in our farming activities.	1.000	.567
PCDRS 5: Farmer Households use social capital like networking, communication channels, families, voluntary organizations and networking on the farm	1.000	.589
IES1: One-Acre Fund provides individual farmer HHs with farming manuals	1.000	.599
IES2: One-Acre Funds ends extension officers to visit farmer HHs	1.000	.359
IES3: One-Acre Fund farm visits assist Farmer HHs in checking individual progress and advise	1.000	.747
IES4: One-Acre Fund has taught farmer HHs how to make and keep farm produce and financial records.	1.000	.503
IES5: One-Acre Fund farm records assist farmer HHs make required changes on their farms on their own.	1.000	.593
CAS1: A group budget is prepared every year for planting.	1.000	.402
CAS2: Local One-Acre Fund groups are created to assist each other will during manual work on individual farmer HHs farms	1.000	.502
CAS3: One-Acre Fund group farmer HHs visit other farmer HHs in other areas for benchmarking	1.000	.697

CAS4: One-Acre Fund group visits to other farms for benchmarking improves farmer HHs farming activities.	1.000	.500
CAS5: Field officers visit group farmer HHs regularly and promptly for support.	1.000	.448
EIS1: One-Acre Fund organization provides farm inputs according to the needs of the farmer households.	1.000	.539
EIS2: One-Acre Fund farming proceeds and profits pay for the farm inputs acquired as loan from the organization.	1.000	.551
EIS3: One-Acre Fund farming proceeds and profits have sustained farmer HHs farming for the last 3 years	1.000	.842
EIS4: Different produce like maize, beans and vegetables have improved farmer household's income.	1.000	.827
EIS5: Farm proceeds and profits have financed different projects in farmer HHs homes	1.000	.592

Extraction Method: Principal Component Analysis

Total Variance Explained for Social Entrepreneurship Strategies

Principal component analysis with orthogonal (Varimax) rotation, was conducted to assess how the component loaded. Table 7 below shows that two components were rotated based on the eigenvalues greater than one criterion. The first component accounted for 40.7% of variance while the second component accounted for

6.7% of the variance. The total variance explained by the six components extracted is 60.2%. In order to physically visualize the components that are important to retain a scree plot was generated Figure 1. According to the scree plot two components can be retained since the curve is leveling off after the first two components. The scree plot thus confirms retaining two components as observed in the total variance explained with eigenvalues >1.

Table 6: Total Variance Explained for Social entrepreneurship strategies

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.179	40.716	40.716	10.179	40.716	40.716	7.269	29.075	29.075
2	1.686	6.742	47.458	1.686	6.742	47.458	2.818	11.273	40.348
3	1.147	4.589	52.047	1.147	4.589	52.047	1.841	7.363	47.711
4	1.030	4.119	56.166	1.030	4.119	56.166	1.571	6.286	53.996
5	1.013	4.051	60.217	1.013	4.051	60.217	1.555	6.221	60.217
6	.982	3.926	64.143						
7	.881	3.526	67.669						
8	.838	3.352	71.021						
9	.773	3.092	74.114						
10	.665	2.658	76.772						
11	.626	2.504	79.276						
12	.609	2.435	81.711						
13	.574	2.297	84.008						
14	.535	2.141	86.149						
15	.508	2.033	88.182						
16	.445	1.779	89.961						
17	.435	1.742	91.702						
18	.407	1.627	93.330						
19	.359	1.435	94.765						
20	.341	1.365	96.130						
21	.303	1.210	97.340						

22	.256	1.022	98.362						
23	.207	.829	99.192						
24	.139	.556	99.748						
25	.063	.252	100.000						

Extraction Method: Principal Component Analysis.

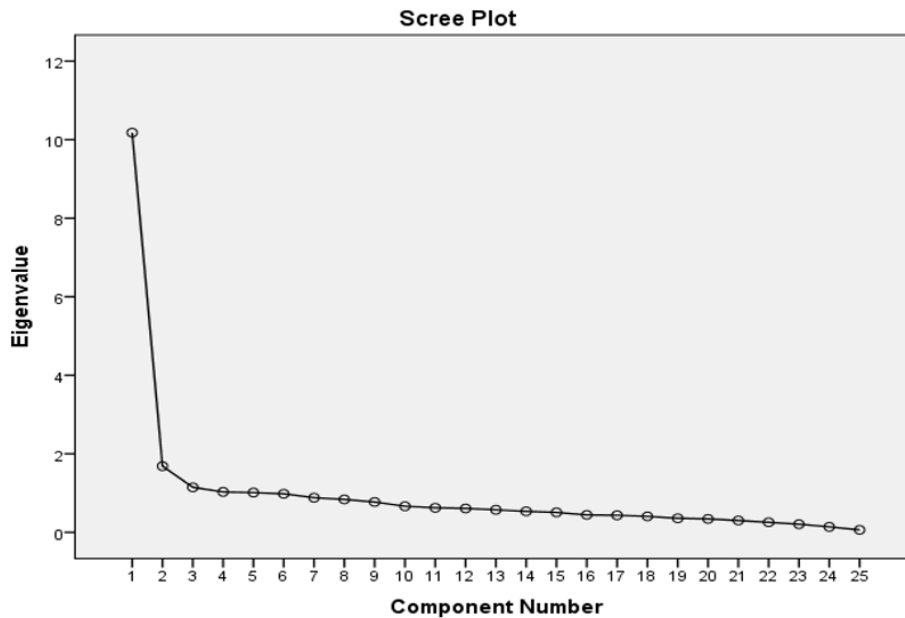


Figure 1: Scree plot for Social entrepreneurship strategies

Rotated Component Matrix for Social Entrepreneurship Strategies

Table 8. shows the rotated component Matrix for Social entrepreneurship strategies, it is generated to show the rotated loading of the component, with loading less than 0.5 suppressed.

Rotation converged in 14 iterations where EIS3-One-Acre Fund farming proceeds and profits have sustained farmer HHs farming for the last 3 years; EIS4-Different produce like maize, beans and vegetables have improved farmer household's income; SRS 3-Skills acquired in One-Acre Fund organization have improved our farming; PCDRS 2-Human capital like casual labourers, skilled and unskilled

labour are used on our farms; SRS 4-One-Acre Fund organization organizes capacity building meetings; EIS2-One-Acre Fund farming proceeds and profits pay for the farm inputs acquired as loan from the organization; SRS 2-One-Acre Fund organization has created new organizational skills for us farmer HHs; EIS1-One-Acre Fund organization provides farm inputs according to the needs of the farmer households; PCDRS1-We use natural capital like sun, water and recycled wastes on our farms; IES5-One-Acre Fund farm records assist farmer HHs make required changes on their farms on their own; PCDRS3-Manufactured capital like machinery, tools and equipment are used on our farms; IES4-One-Acre Fund

Table 7: Rotated Component Matrix for Social entrepreneurship strategies

	Component				
	1	2	3	4	5
EIS3: One-Acre Fund farming proceeds and profits have sustained farmer HHs farming for the last 3 years	.808				
EIS4: Different produce like maize, beans and vegetables have improved farmer household's income.	.805				
SRS 3: Skills acquired in One-Acre Fund organization have improved our farming	.803				
PCDRS 2: Human capital like casual labourers, skilled and unskilled labour are used on our farms	.768				
SRS 4: One-Acre Fund organization organizes capacity building meetings	.756				
EIS2: One-Acre Fund farming proceeds and profits pay for the farm inputs acquired as loan from the organization.	.708				
SRS 2: One-Acre Fund organization has created new organizational skills for us farmer HHs	.642				

EIS1: One-Acre Fund organization provides farm inputs according to the needs of the farmer households.	.626			
PCDRS1: We use natural capital like sun, water and recycled wastes on our farms	.625			
IES5: One-Acre Fund farm records assist farmer HHHs make required changes on their farms on their own.	.580			
PCDRS3: Manufactured capital like machinery, tools and equipment are used on our farms.	.576			
IES4: One-Acre Fund has taught farmer HHHs how to make and keep farm produce and financial records.	.565			
CAS5: Field officers visit group farmer HHHs regularly and promptly for support.	.519			
CAS4: One-Acre Fund group visits to other farms for benchmarking improves farmer HHHs farming activities.	.518			
EIS5: Farm proceeds and profits have financed different projects in farmer HHHs homes		.712		
SRS 5: One-Acre Fund reaches farmers using chiefs' barazas and abide by the law.		.694		
CAS1: A group budget is prepared every year for planting.		.601		
PCDRS4: Financial capital like group loans, soft loans and grants help us in our farming activities.		.541		
PCDRS5: Farmer Households use social capital like networking, communication channels, families, voluntary organizations and networking on the farm				
IES2: One-Acre Funds ends extension officers to visit farmer HHHs				
IES3: One-Acre Fund farm visits assist Farmer HHHs in checking individual progress and advise			.830	
IES1: One-Acre Fund provides individual farmer HHHs with farming manuals			.535	
CAS3: One-Acre Fund group farmer HHHs visit other farmer HHHs in other areas for benchmarking				.777
SRS 1: One-Acre Fund organization conducts Training to teach farmer HHHs modern farming skills.				.700
CAS2: Local One-Acre Fund groups are created to assist each other will during manual work on individual farmer HHHs farms				

Extraction Method: Principal Component Analysis., Rotation Method: Varimax with Kaiser Normalization., a. Rotation converged in 8 iterations.

has taught farmer HHHs how to make and keep farm produce and financial records; CAS5-Field officers visit group farmer HHHs regularly and promptly for support and CAS4-One-Acre Fund group visits to other farms for benchmarking improves farmer HHHs farming activities load to one component loading highest at .808 and lowest at 0.518. EIS5-Farm proceeds and profits have financed different projects in farmer HHHs homes; SRS 5-One-Acre Fund reaches farmers using chiefs' barazas and abide by the law; CAS1-A group budget is prepared every year for planting; PCDRS4-Financial capital like group loans, soft loans and grants help us in our farming activities load to second component with EIS5-Farm proceeds and profits have financed different projects in farmer HHHs homes loading highly at 0.712 and PCDRS4 -Financial capital like group loans, soft loans and grants help us in our farming activity loading lowest 0.541. IES3-One-Acre Fund farm visits assist Farmer HHHs in checking individual progress and advise and IES1-One-Acre Fund provides individual farmer HHHs with farming manuals loaded on the third component with while 0 .830 and 0.535 respectively.

Impact of Social Entrepreneurship Strategies on Resilience of One-Acre Fund Household's Livelihood

The first objective was to establish the impact of social entrepreneurship strategies on resilience of One-Acre Fund households' livelihood. Social entrepreneurship strategies was 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 achieve the first objective a null hypothesis was formulated as

(H0)₁: Social entrepreneurship strategies have no significant positive influence on resilience of One-Acre Fund household livelihoods in Kakamega County.

The hypothesis was tested using a linear regression model. Table 9. displays the findings of the test results for social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood.

The model one in Table 8. indicate that Social

Table 8: Coefficients: social entrepreneurship strategies and resilience of One-Acre Fund households' livelihood

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.125	.043		.000	1.000		
	Social Entrepreneurship strategies	.652	.043	.652	15.103	.000	1.000	1.003

entrepreneurship strategies is a significant predictor of resilience of One-Acre Fund household livelihood ($\beta=.652, p=0.000$). The model regression was calculated to predict resilience of One Acre Fund household livelihood based on social entrepreneurship strategies. A significant regression equation was found $\Delta R^2=0.423, \Delta F(1, 309)=228.101, p=.000$ in the table. Participants predicted resilience of One Acre Fund household livelihood was equal to $3.125 + 0.652SE$. Participants resilience of one acre fund households increased by 0.559 in social entrepreneurship strategies where social entrepreneurship strategies was measured on Likert scale ranging from Strongly Disagree (SD), Disagree (D), Undecided (U), Agree (A) and Strongly Agree (SA). The regression constant shows that when the independent variable (Social entrepreneurship strategies) is constant at zero, the resilience of households' livelihood would be 3.125. It was established that resilience of households' livelihood would increase by 0.652 with every unit positive increase in One-Acre Fund Social entrepreneurship strategies. This statistic is significant at 95% confidence level, $t(1, 311) = 15.103, p=0.000$. According to Well, it is easiest to conceptualize the t-tests as measures of whether the predictor is making a significant contribution to the model. Therefore, if the t-test associated with a b-value is significant (if the value in the column labelled Sig. is less than .05) then the predictor is making a significant contribution to the model. The smaller the value of Sig. (and the larger the value of t), the greater the contribution of that predictor. For this model, the social entrepreneurship strategies ($t(311) = 15.103, p=.000$). This implies that there exists a significant relationship between (Social entrepreneurship strategies) and the resilience of One-Acre Fund households' livelihood. Therefore, the null hypothesis (H_0): Social entrepreneurship strategies have no significant positive influence on resilience of One-Acre Fund household livelihoods in Kakamega County was rejected.

Regression Analysis For Social Entrepreneurship Strategies on the Resilience of One-Acre Fund Household's Livelihood

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, F-tests, and Analysis of Variances (ANOVA) tests were generated by

SPSS to test the significance of the relationship between the variables under the study and establish the extent to which the predictor variables explain the variation in the dependent variable. Moderated multiple regression model was also used to determine the effect of the moderating variable on the whole model where the R2 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). The significance of the independent variables was tested using F test and p value approaches. The decision rule was to reject the null hypothesis 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 10. gives a Model Summary for Regression analysis for social entrepreneurship strategies.

The model summary results as presented in Table 9. 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 (0.76) shows mean deviation of the predictor variable from the line of the best fit. The R-square of 0.425 which implied that other factors held constant Social entrepreneurship strategies explained 42.3 % of the variation in resilience of household livelihoods in Kakamega County. The remaining 57.7% variation was explained by other variables which are not in this model. Although we cannot make direct conclusions about causality from a correlation, we can take the correlation coefficient a step further by squaring it. The

Table 9: Model Summary^b for Regression analysis for social entrepreneurship strategies

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	.652 ^a	.425	.423	.75971849	.417	228.101	1	309	.000	1.081

a. Predictors: (Constant), Social Entrepreneurship strategies, b. Dependent Variable: Resilience of Household livelihoods

correlation coefficient squared (known as the coefficient of determination, R²) is a measure of the amount of variability in one variable that is shared by the other (Field, 2009). Table 10 displays the model that gives an output of the R Square Change of 0.417. This confirms that the 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 this 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 Entrepreneurial Orientation and Financial Performance of Enterprises. 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 is attributed to how the enterprises offered both part-time and full-time employment. These jobs were not sustainable and thus discouraged a number from engaging with enterprises.

ANOVA Results for Regression Analysis

The researcher conducted further inferential statistical test using regression analysis (Table 10) to explain the influence of Social entrepreneurship strategies (SES), 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 10). The data should be accurate complete and

Table 10: ANOVA^a for Social entrepreneurship strategies

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	131.654	1	131.654	228.101	.000 ^b
	Residual	178.346	309	.577		
	Total	310.000	310			

a. Dependent Variable: Resilience of Household livelihoods, b. Predictors: (Constant), Social Entrepreneurship strategies

suitable for further analysis (Sekeran & Bougie, 2010). The results of model one in Table 10 shows that the F statistics is significant (F=228.101, p=0.000) and the model was valid. The large F statistic implies that social entrepreneurship strategies makes a good model fit and significantly improves resilience of One-Acre Fund household livelihoods.

CONCLUSION

Based on the research findings, 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.

Way Forward

Based on the conclusion, it is recommended that combined social entrepreneurship can 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.

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