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Strategic Management Practices and Sustainability of SME's Agribusiness in Kenya: A Survey of Githunguri Sub County

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Abstract

The main objective of this study was to establish the effect of strategic management practices in sustainability of Agribusiness by small scale farmers in Githunguri Sub - County. Agriculture is a pillar and the economy's backbone in most of the developing countries like Kenya, it helps to create job opportunities for the citizens and this assists in the growth of rural development. Despite the growing populations in developing countries, the agricultural sector continues to perform poorly and the majority of people engaged in agriculture remain in poverty. To achieve a sustainable agricultural sector, new strategies must be developed to holistically address the challenges preventing growth. The overall objective of this study was to establish the effect of strategic management in sustainability of Agribusiness by small-scale farmers in Kenya with a general focus on Githunguri Sub - County. Specifically, the study examined the effects of strategic human resource in performance of Agribusiness in Githunguri, established the effects of using technology strategies on Agribusiness performance, determined the effects of strategic supply chain management practices on Agribusiness performance and also established the effects of financial management on Agribusiness performance in Githunguri. The study adopted a conceptual framework underpinned by Modern Portfolio Theory, Agency Theory, and Resource-Based Value Theory. The study target population was 12,170 SME farmers in Githunguri Sub-County. Descriptive research design was used to investigate the variables, the study also used stratified random sampling and adopted Fisher's scientific formula to determine the sample size

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of 96 farmers in Githunguri Sub- County. The Pilot study had 84 Questionnaires. Questionnaires used to collect data offered both qualitative and quantitative data which was key for the data analysis. Quantitative data was analyzed by SPSS version 24.0. Thereafter, inferential statistics such as correlation and regression were carried out to determine the existing relationship between the study variables. The correlation analysis helped to determine the magnitude and the nature of the relationship between the variables. The study recommended improvement of Human Resource strategies by building capacity of the farmers, use of technology modern farming methods, improvement of supply chain for maximum value addition and sound financial management planning and controls. Both the National Government and County Government need to legislate and come up with better agribusiness policies so as to ensure agribusiness sustainability.

Key words: *Human resource strategies, Technology strategies, Supply chain strategies, financial management strategies, Agribusiness sustainability, Kenya*

1.1 INTRODUCTION

Agribusiness refers to the business of agricultural production which includes agrichemicals, breeding, crop production, farming, contract farming, distribution, farm machinery, processing, and seed supply, as well as marketing and retail sales, (Ng & Siebert, 2009). Agribusiness focuses on agriculturally related business with functions as, processing, warehousing, distribution, marketing and retailing of the proceeds from farming produce. This includes the agricultural commodities, such as livestock and crops. The agribusiness management applies business theories and practices to the agricultural industry to lower costs, boost profits and ensure that farm or food products are grown and distributed effectively. Sustainability is the ability to maintain economic growth at a certain rate. It is possible to measure performance through the use of both qualitative and quantitative methods. According to Ittner and Larcker (2003), non-financial measures serve as better performance indicators in the service industry as opposed to financial measures.

In the 21st century, organizations' survival, competitiveness and financial stability is highly dependent on the firm's ability to effectively cope with change. Thus, organizations must adopt coping strategies to survive and accommodate changes to remain relevant and competitive in their business. Barney and George (2006) assert that strategic planning process includes organization's vision and mission, environmental analysis, selecting objectives, and analysis of strategic choices. There is no a single approach of carrying out a strategic planning process in an organization and thus strategies should be formulated in a clear and objective manner (Juhnyoung, 2006). Dobini, (2003) argue that many organizations have acknowledged the importance of strategic planning owing to the fact that it helps organizations to clearly identify and equally prioritize their objectives together with targets. Strategic planning is important to the farmers and managers as it helps in identifying a clear-cut concept and as a result, it enhances formulation of plans and activities that lead them closer to the set goals (Pearce & Robinson, 2008). Managers in the agribusiness sector operate in an environment that is ever changing, where nothing is static including the society, policies, value chains and technology. Thus, the

farmers must embrace change and technology so as to ensure sustainability in agribusiness. Barney and George (2006) assert that strategic planning process includes organization's vision and mission, environmental analysis, selecting objectives, and analysis of strategic choices. There is no a single approach of carrying out a strategic planning process in an organization and thus strategies should be formulated in a clear and objective manner (Juhnyoung, 2006). Dobini (2003) argue that many organizations have acknowledged the importance of strategic planning owing to the fact that it helps organizations to clearly identify and equally prioritize their objectives together with targets.

1.2 Statement of the Problem

The research conducted has revealed that some of the challenges faced by SME farmers include, Human Resource, Technology, Supply chain and Finance Management strategies as they all have an effect on agribusiness sustainability. Over the past three decades, dramatic structural changes have occurred in agriculture worldwide as a result of globalisation, economic liberalisation, environmental regulation, rapidly shifting societies, and reduced protection of agricultural markets that are increasingly complex and competitive (Boehlje, Doehring & Sonka, 2005). The increase in the challenges in the world today demands the need to improve the skills of farmers and their workforce. Human resource represents a broad concept that interrelates to activities such as attracting, developing and maintaining human capital (Dan, 2009). The uncharted waters of globalization require innovative human resource practices that can handle new market demands, climate deterioration, market competition, customer needs and commercialization changes. Technology is vital for nearly every aspect of business today. Challenges such as food security, scarcity of water, biodiversity loss, and climate change are a threat to the sustainability of agriculture. Hence, there is a need to explore sustainable options and technology provides the necessary transformations for food production and consumption. According to Hamid and Mohammad (2018), information, communication and technology play a significant role in contributing towards the sustainability of agribusiness due to its disruptive technology. Ioannis, George, & Socrates (2019) acknowledge the existing barriers to a sustainable supply chain. One is the steep cost of production, the unequal bargaining power, access to food markets. Farmers abandon agricultural activities due to these challenges and move to urban areas resulting in a lower demand for infrastructure and development in the rural communities. . Reliable access to markets is critical for their success. The farmers, majority of whom are in rural areas sell their produce at harvest time, hence experience challenges of asymmetric information in prices and selling opportunities as well as limited market access for their products. While markets may exist, one of the limiting factors is not connecting on time. Access to agriculture finance for small and medium farmers is still limited in Kenya In a study conducted by Oguonu (2015), the researcher found that an entrepreneurial skill like financial management is equally critical to preconditions such as the policy environment and personal characteristics in the success of agribusiness.

1.3 Specific objective

i. To determine the effect of Human Resource Strategies in Agribusiness Sustainability.
ii. To establish the effect of Technology Strategies in Agribusiness Sustainability

iii. To assess the effect of Supply Chain Strategies in Agribusiness Sustainability

iv. To establish the effect of the Financial Management Strategies in Agribusiness Sustainability.

2.1 Theoretical Literature Review

It's an abstract concept that defines a term in an academic discipline and is concerned with review of books, scholarly articles as well as other relevant sources to the specific issue under investigation. As a result, a description is presented together with a summary together with a critical evaluation of previous works related to the research problem under investigation.

2.1.1 Modern Portfolio Theory (MPT)

The theory was pioneered by Harry Markowitz in his paper "Portfolio Selection," published in 1952 by the Journal of Finance. He was later awarded a Nobel prize for developing the MPT. This is a theory on how risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward. It is an investing model in which investor, invest with the motive of taking the minimum level of risk and earning the maximum amount of return for that level of acquired risk. The modern portfolio theory is a helpful tool for the investors as it helps them in choosing the different types of investments for the purpose of the diversification of the investment and then making one portfolio by considering all the investments. The effects of diversification by including agribusiness assets in two investment portfolios, a mixed asset portfolio and a diversified share portfolio was investigated using (Markowitz's,1952) Modern Portfolio Theory (MPT) of mean-variance optimization.

2.1.2 Agency Theory

Lincoln (2012) attributes agency relationship as a contract under which one individual or a number of principals engage with the agent and another person to conduct some service on their behalf, which involves delegation of some decision-making powers to the agent. While executing tasks based on the principal-agent-relationship, it is a requirement that the agent chooses actions that have repercussions for both the agent and the principal. Palmer, (2012) conducted a study using the agency theory in modeling cooperative public purchasing together with the operational linkages between government firm, their purchasers, and suppliers and viewed them as crucial contributors to the success of government decision-making and policy.

2.1.3 Resource Based Value Theory (RBV)

Wernefelt (1984) was the first theorist to come up with this theory, although it was later reviewed by different contributors who went further to evaluate the impacts of both the intangible and tangible assets on the performance of an organization (Crook et al., 2008). According to Schroeder et al. (2002), this theory magnifies the benefits of internal resources within an organization together with the application of these resources in formulating strategy so as to achieve sustainable advantage within the competitive markets of the firm. RBV asserts that the strategic choice made by an organization to compete in the external environment is determined by its internal capabilities. Loasby (2002) evaluates the idea that investment in

capabilities and resources are choice decisions that are made in the context of uncertainty and that it is by combining these factors that make real options become potentially valuable.

2.2 Empirical Literature Review

Empirical research is dependent on observed as well as measured phenomena while at the same time deriving knowledge from actual experiences as opposed to belief or theory. The current research is based on the issues discussed below:

2.2.1 Human Resource Strategy and Sustainability of Agribusiness Entrepreneurship

The increase in the challenges in the world today demands the need to improve the skills of farmers and their workforce. Human resource represents a broad concept that interrelates to activities such as attracting, developing and maintaining human capital (Dan, 2009). The uncharted waters of globalization require innovative human resource practices that can handle new market demands, climate deterioration, market competition, customer needs and commercialization changes. In order to adjust effectively and efficiently, the agricultural sector must consistently improve the human resources to increase performance, reduce costs and develop innovative products. This can only be achieved through attracting retaining and developing the right talent. Human resource has the capability of attaching strategic value to workers in the organization so as to add value in the business and at the same time achieve competitive advantage (Burke, 2012).

2.2.2 Technology Strategies and Sustainability of Agribusiness Entrepreneurship

Technology is vital for nearly every aspect of business today. Challenges such as food security, scarcity of water, biodiversity loss, and climate change are a threat to the sustainability of agriculture. Hence, there is a need to explore sustainable options and technology provides the necessary transformations for food production and consumption. According to Hamid & Mohammad (2018), information, communication and technology play a significant role in contributing towards the sustainability of agribusiness due to its disruptive technology. A combination of related information, skills, and technologies in cloud computing, Internet, social media, data mining, drones, mobile applications, are part of disruptive ICT. The authors also explore the merits of technology in improving efficiency, creating networks along a supply chain, increasing traceability, allowing transparency and improving the general business and food process.

2.2.3 Supply Chain Strategies and Sustainability of Agribusiness Entrepreneurship

Overall, small-scale farmers are usually the largest players in the agricultural sectors. The common challenges for a majority of these farmers are the access to credit facilities, markets, resources and bargaining power in the supply chain. Ioannis, George, & Socrates (2019), maintain that farmers should work together with various organizations and networks so as to gain economies of scale, market power and negotiate for policy changes. In essence, the authors advocate for leveraging the existing networks in the supply chain, that is; the stakeholders, the value chain networks and the social networks. In so doing, the farmers can develop a sustainable food system. Ioannis, George, & Socrates (2019) acknowledge the existing barriers to a sustainable supply chain. One is the steep cost of production, the unequal bargaining power,

access to food markets. Farmers abandon agricultural activities due to these challenges and move to urban areas resulting in a lower demand for infrastructure and development in the rural communities.

2.2.4 Financial Management Strategies and Sustainability of Agribusiness Entrepreneurship

In a study conducted by Oguonu (2015), the researcher found that an entrepreneurial skill like financial management is equally critical to preconditions such as the policy environment and personal characteristics in the success of agribusiness. The entrepreneurial skills gained outside the farming sector maintain the potential to transform the existing social and cultural conditions that lead to the sustainability of agribusiness. In this respect, financial management strategies are considered a means of meeting and coping with challenges in the environment to ascertain the survival and success of agribusiness. The concept of financial management can be conceived as an approach towards generating new businesses, reducing costs, identifying areas that require value addition and making better decisions to grow the craft (Oguonu, 2015). Primarily, financial management strategies refer to attain skills such as accounting, reporting, forecasting, budgeting, and capital budgeting to carry out tasks related to the business. It equally comprises of the systems of risk management and monitoring of the financial and operational performance, which includes resource performance as well as reporting on these functions at the internal and external levels. Focusing on these skills will enable the farmer to combat the rapidly changing agricultural environment. Ogunu (2015) maintains that fostering financial management skills is a means of support farmers to succeed.

2.4 Conceptual Framework

Figure 1 shows the conceptual framework. The independent variables of the study include Human Resource Strategy, Technology, Supply Chain and Financial Management while the dependent variable is strategic management practices and sustainability of agribusiness entrepreneurship.

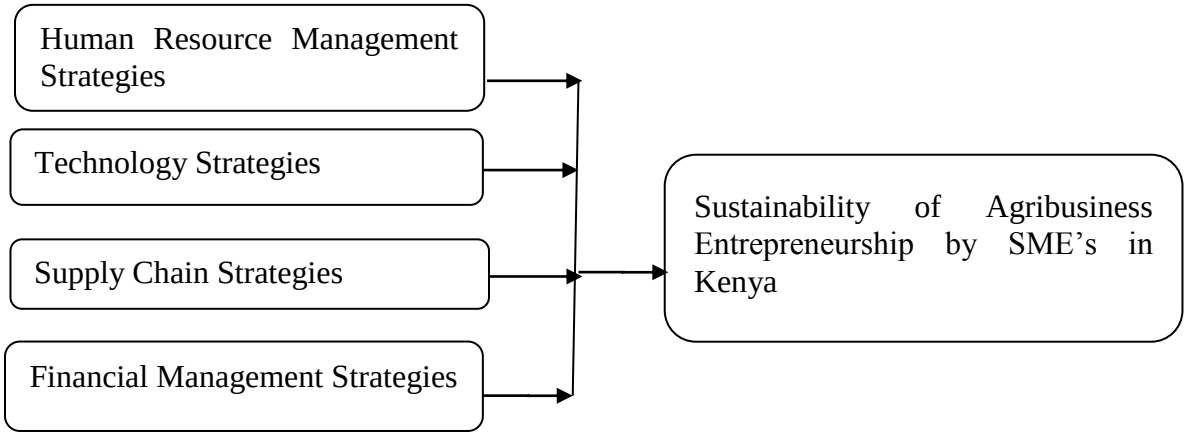

Figure 1: Conceptual Framework

Human resource is as vital as other strategic human resource management methods such as training and development, resources, employee relations and reward management. The two are related to the process through which individuals are not only employed but equally managed inside a company. It is as a result of strategic human resource management that traits such as capability and innovativeness are regarded crucially in employment of a task force that can help in obtaining competitive edge for the firm. Human resource management encompasses understanding the local needs of the workforce and the consumers and incorporating diverse values both local and global and working to realize the shared goals. (Chadha & Sudan, 2015), also shares the view that effective human resource management enables an organization to balance values and practices with the present commercial agricultural systems. One crucial way of handling the transformations in the world is training the agricultural human resource.

3. RESEARCH METHODOLOGY

The Descriptive research was used to describe characteristics of a population or phenomenon being studied. Before processing the responses, the completed questionnaires were edited for completeness and consistency. In order to fulfill objectives, a descriptive analysis was employed. Descriptive statistics such as means and standard deviation were used in this analysis to identify current strategic management practices and Sustainability of Agribusiness Entrepreneurship and factors that influence Agribusiness choice on these strategies. After data collection and clean up, the procedure for data analysis was carried out. First descriptive statistics such as such as frequencies, percentages, mean and standard deviation were be carried out. Then inferential statistics such as correlation and regression were carried out to determine the existing relationship between the study variables. For data analysis SPSS version 24.0 was used to obtain the necessary statistics. Precisely, the correlation analysis will determine the magnitude and the nature of the relationship between the variables. Linear regression model was used to show the relationship between the study variables.

The multiple regression models were

$Y=\beta_0+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+ e$

Where:

Y =Sustainability of Agribusiness Entrepreneurship

(βi, i =1, 2, 3, 4) = various coefficients for the independent variables

X_1= Human Resource

X_2= Technology

X_3= Supply Chain

X_4= Financial Management

e = Error Term

4.0 RESEARCH FINDINGS AND DISCUSSION

4.1 Presentation of Research Findings

4.1.1 Response Rate

The sample for the study comprised of 96 SME's in Githunguri Sub- County. 96 questionnaires were distributed for this study. Out of these, only 10 questionnaires were not returned and the rest 86 were successfully filled and returned. This represents a response rate of 90%, which was adequate for the researcher to continue with the data analysis. Indeed, Frankfort- Nachmias *et al.*, (2008) asserts that a response rate above 50% is considered sufficient enough to complete an analysis. Mugenda Mugenda (2012) also indicates that a response rate above 70% is excellent for a study. Therefore, a return rate of 90% in this research is satisfactory. Contacts prior to the dispatch of the questionnaires and follow up calls accounted for the high response rate.

Table 1 Demographic Profile

Demographic profile		**Frequency**	**Percentage**
Gender	Male	35	41%
	Female	51	59%
Age (years)	18-30	16	19%
	31-40	26	30%
	41-50	32	37%
	Over 51	12	14%
No of Years in Agribusiness	0-10	9	10%
	11-20	10	12%
	21-30	28	33%
	Over 30 Years	39	45%
Education Level	Primary	7	8%
	Secondary	36	42%
	Diploma	25	29%
	Undergraduate	13	15%
	Postgraduate	5	6%
Total		**86**	**100%**

The respondents were requested to provide the study with demographic information as seen in table 1 on demographic profile. The table shows that, it is evident that more than half of the respondents at 59% were female and 41% being male. This implies that the agribusiness is female dominated, however, the male population at 41% is not very badly off. On age distribution of the respondents, it is evident that majority of the respondents at 37% had their ages ranging from 41-50 years, then 30% ranging from 31-40 years, then 19% ranging from 18-30 years, then 14% with over 51 years This is a clear indication that majority of the respondents were clearly exposed and were experienced in agribusiness practices and strategies. The results on table 4.2 show that 29(38%) of the respondents attained primary school education, 25(33%)

were four form graduates, 16(21%) had certificates, and a tie 3(4%) had diplomas and degrees. This was an indication that majority of the youth 54(71%) who took part in agriculture value chain projects were graduates from primary and secondary schools. This indicates that these people have at least adequate knowledge for capacity building and also for increasing productivity because they can learn.

4.2 Descriptive Statistics

4.2.1: Human Resource Management Strategies

The study sought to determine the level of agreement with the following statements regarding human resource and sustainability of agribusiness in Githunguri Sub- County.

Figure 2 shows the graphical representation of data:

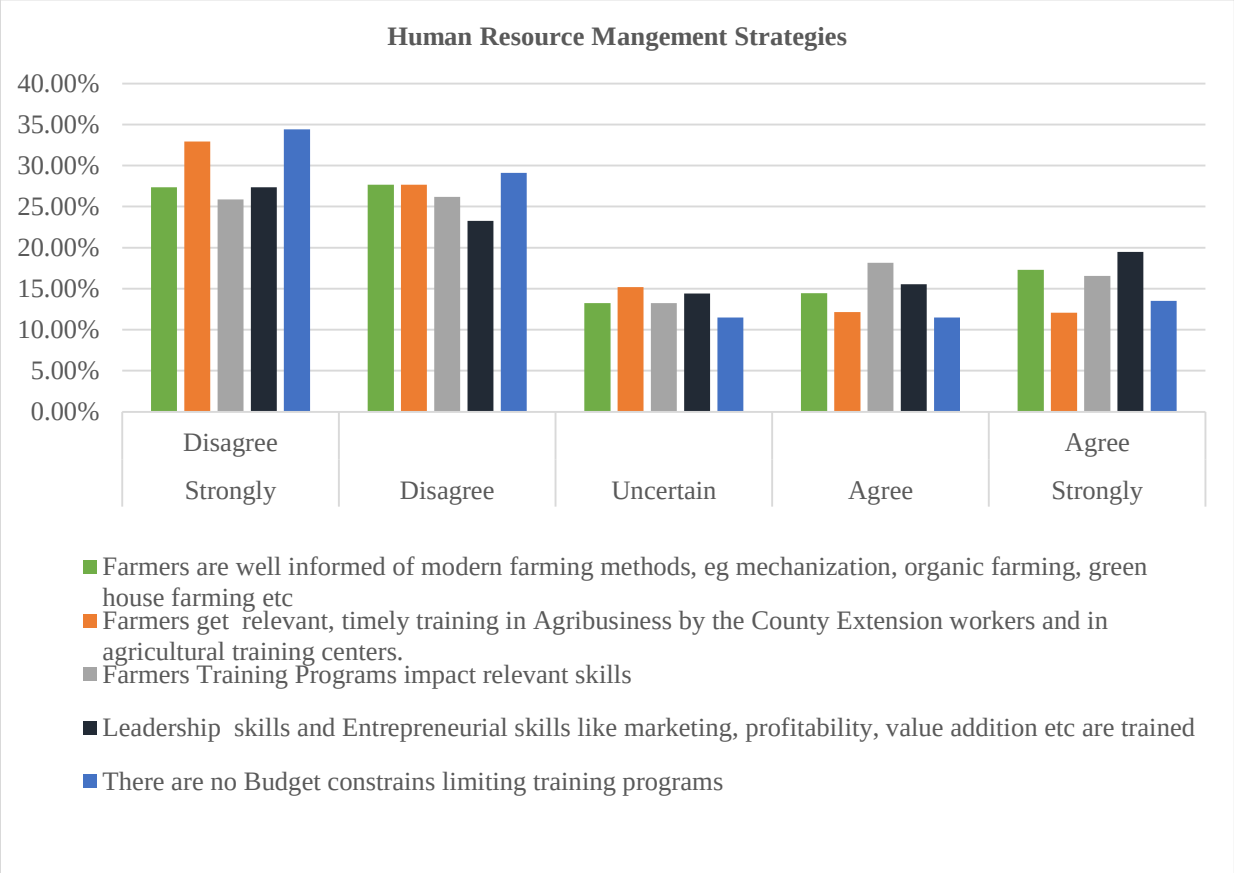

Figure 2 Human Resource Management Strategies

Overall the farmers displayed dissatisfaction with the human resource strategies currently in place and their capability to contribution towards attaining sustainability in agribusiness. In particular, and as indicated by the graph above, a majority of the farmers strongly felt that there are budget constraints limiting the training programs for human resource management strategies. Furthermore, most farmers agreed that they do not get relevant, and timely training in

Agribusiness by the county extension officers in agricultural centers. On a five point score, the statements obtained a Mean average of 2.60 and a Standard Deviation of 0.71. The results corroborate the views by Cole's (2002), and Young (2008), who argue that human resources strategies such as training and development improve human capacity to be able to maximize on economic and financial benefits.

4.2.2: Technology Management Strategies

The study sought to determine the level of agreement with the following statements regarding technology management strategies of agribusiness in Githunguri Sub- County. Figure 3 shows the graphical representation of the statistical data:

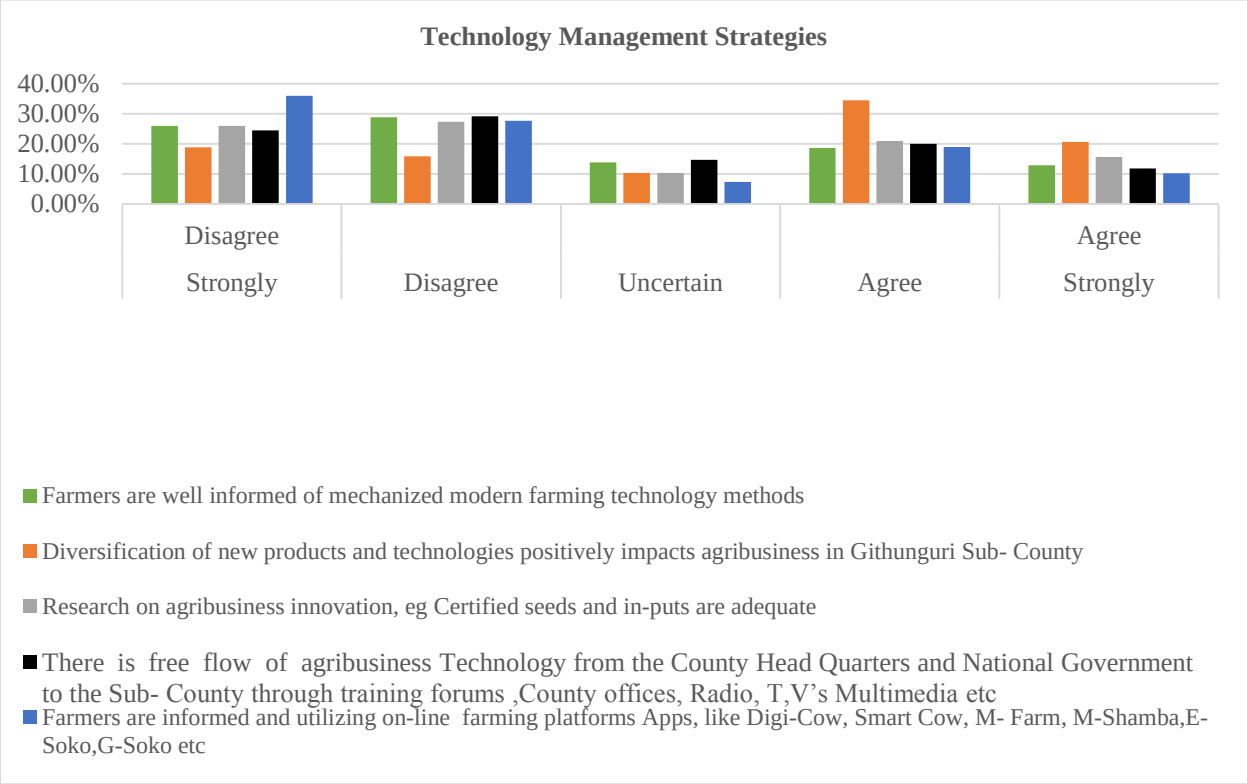

Figure 3 Technology Management Strategies

An overwhelming majority of farmers disagreed to being well informed of mechanized modern farming technology method; they disagreed that there was adequate research on agribusiness innovations; they disagreed that there is free flow of agribusiness Technology from the County Head Quarters and National Government to the Sub- County through training forums, County offices, Radio, and TV Multimedia. Nonetheless, a big percentage of farmers agree that diversification of new products and technologies positively impacts agribusiness in Githunguri Sub- County. On a five point score, the statements obtained a Mean average of 2.71 and a Standard Deviation of 0.30. The results substantiate findings by Koontz (2010), who asserts that

most business in developing country's struggle with how to best utilize IT to enhance business processes.

4.2.3: Supply Chain Management Strategies:

The study sought to determine the level of agreement with the following statements regarding supply chain management and sustainability of agribusiness in Githunguri Sub- County. Figure 4 shows the graphical representation of the statistical data:

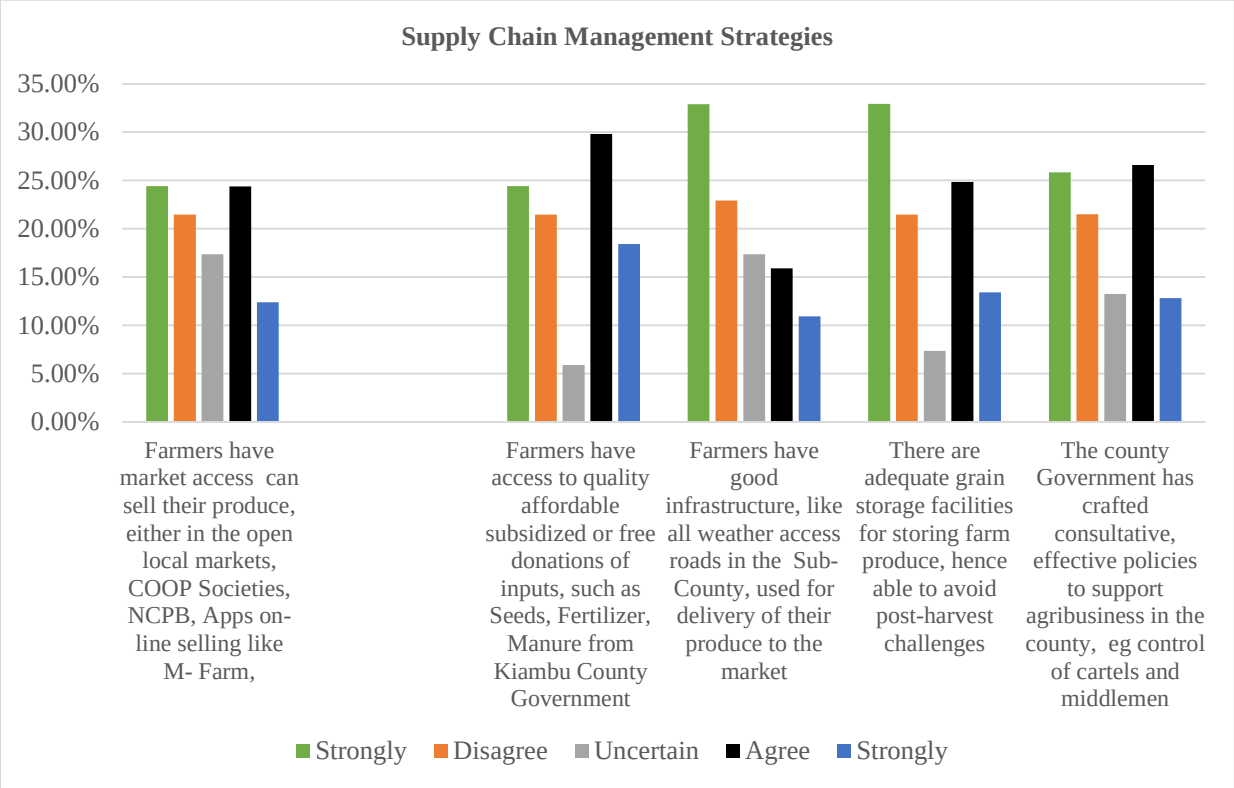

Figure 4 Supply Chain Management Strategies

There was a general dissatisfaction with the supply chain management strategies in place as indicated by the farmers. The majority of farmers disagreed that Farmers have access to quality affordable subsidized or free donations of inputs, such as seeds, fertilizer, and manure from Kiambu County Government. Most farmers did not agree with the statement that farmers have good infrastructure, like all weather access roads in the Sub-County, used for delivery of their produce to the market, there are adequate grain storage facilities for storing farm produce, hence able to avoid post-harvest challenges, and that The county Government has crafted consultative, effective policies to support agribusiness in the county, eg control of cartels and middlemen. On a five point score, the statements obtained a Mean average of 2.73 and a Standard Deviation of 0.78.

4.2.4: Financial Management Strategies:

The study sought to determine the level of agreement with the following statements regarding financial management strategies and sustainability of agribusiness in Githunguri Sub- County. Figure 5 shows the graphical representation of the statistical data:

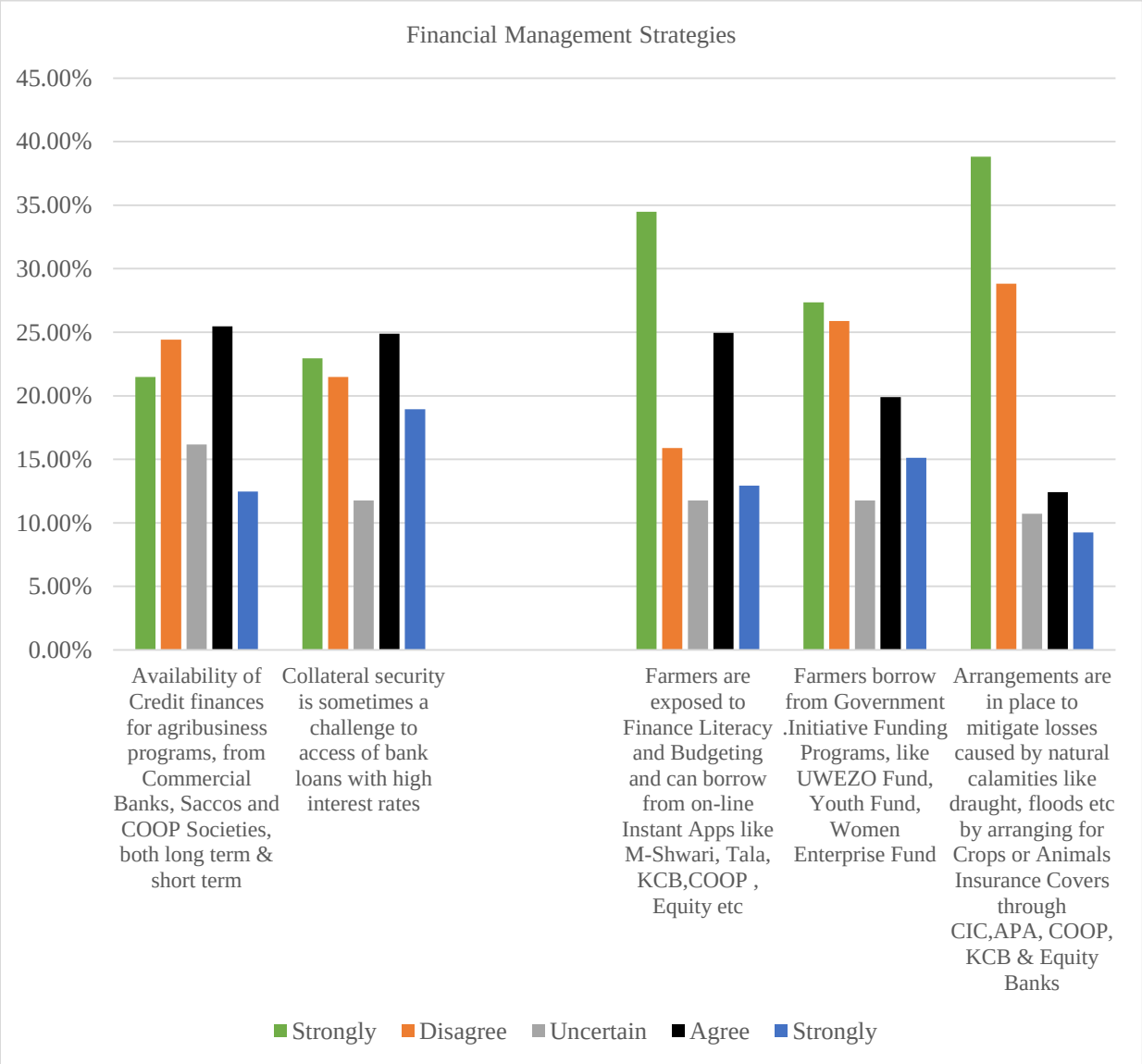

Figure 5 Financial Management Strategies

Financial management strategies are crucial elements in any business. The farmers however indicated that the structures in place limit access to credit. The participants particularly felt that they lacked arrangements to help them mitigate losses caused by natural calamities like draught, floods etc by arranging for Crops or Animals Insurance Covers through CIC,APA, COOP, KCB & Equity Banks. The respondents also felt that they did not have enough exposure to financial

literacy and budgeting. The unrealistic bank loan processes, high interest rates, and lack of collateral to utilize in loan applications also greatly affect their access to credit facilities. . On a five point score, the statements obtained a Mean average of 2.68 and a Standard Deviation of 0.27.

4.2.5: Sustainability of Agribusiness Entrepreneurship:

The study sought to determine the level of agreement with the following statements regarding sustainability of agribusiness in Githunguri Sub- County. Figure 6 shows the graphical representation of the statistical data:

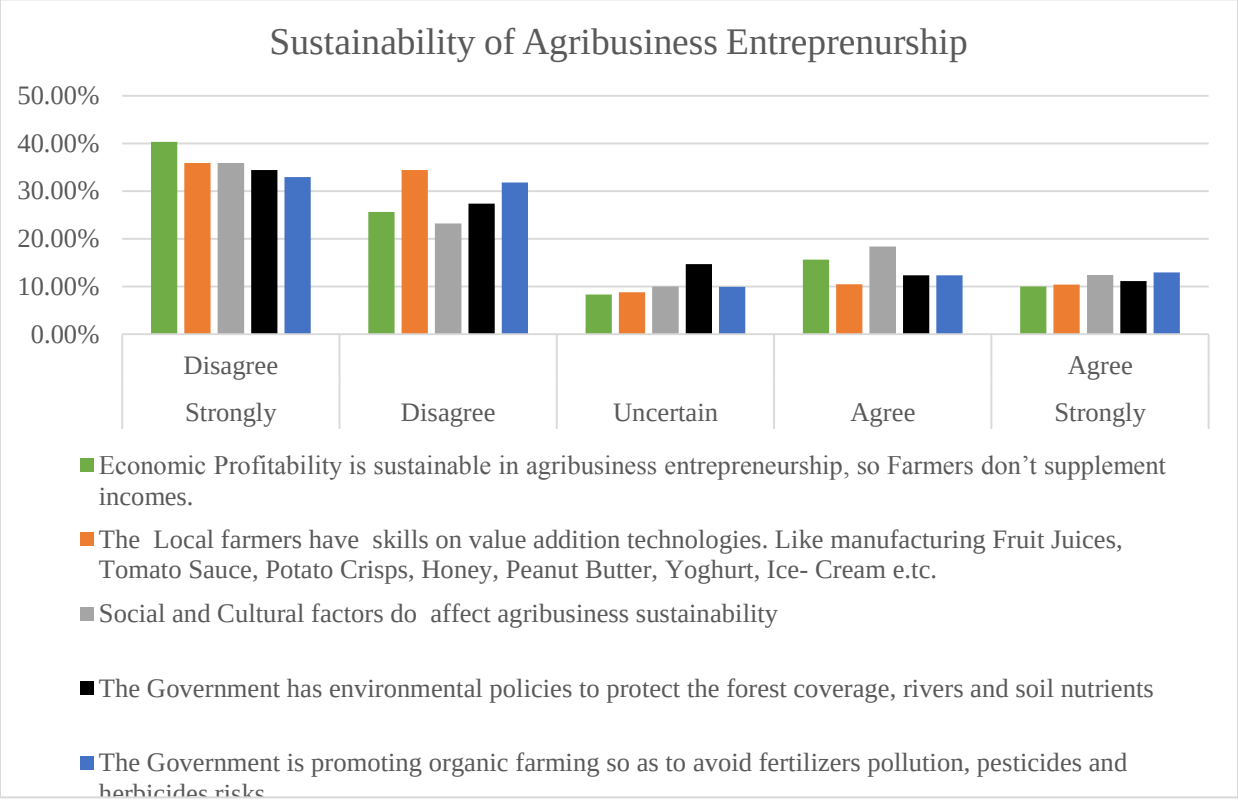

Figure 6 Sustainability of Agribusiness

The majority of farmers held the view that economic profitability would lead to sustainability in agribusiness such that the famers would not need to find other means to supplement their income. The farmers also strongly felt that they lacked value addition skills and technologies such as making of fruit juice, tomato sauce, honey etc. which has the potential to lead to sustainability. There was also a general dissatisfaction with the government policies in place to protect forests, rivers and soil nutrients. Furthermore, the respondents felt that the government does not have adequate measure to promote organic farming so as to avoid fertilizer pollution, pesticides, and herbicide risks. On a five point score, the statements obtained a Mean average of 2.36 and a Standard Deviation of 0.1.

The study findings are in agreement with other studies such as Wiśniewska, (2015) who concluded a survey and found out that, the concept of sustainable agribusiness is a response to ecological, social and health threats in modern society caused by globalization and economic growth. Agribusiness is one of the world's largest huge sectors in terms of output value, employment and international trade. It comprises of: pre-production industries, agriculture, food processing, distribution and trade.

4.3 Inferential Statistics

This involves generating relationships between different sets of data from the findings to identify whether the variables are related.

Table 2: Correlation Matrix Analysis

		H/R Management	Technology	Supply Chain	Financial Management
Accessibility to Human/Resource Practices	Person's Correlation	1.000			
	Sig (2 Tailed)				
Technology	Person's Correlation	0.149	1.000		
	Sig (2 Tailed)	0.000			
Supply Chain	Person's Correlation	0.406	0.392	1.000	
	Sig (2 Tailed)	0.000			
Financial Management	Person's Correlation	0.499	0.18	0.228	1.000
	Sig (2 Tailed)	0.000	0.142	0.061	
Sustainability of Agribusiness	Person's Correlation	0.91	0.58	0.59	0.70
	Sig (2 Tailed)	0.000	0.257	0.078	0.0668

The study shows that there is a positive correction between sustainability of agribusiness with other independent variables. Human resource management (r =0.91) the study shows there is correction between the two variables the correction is positive meaning a closer relationship between these variables. Human resource aspects do affect the sustainability of the agribusiness. Sustainability of agribusiness highly depends on the Hunan Resource capacity available. Pearson's coefficient of correlation of 0.91 indicates that improving human resource can spur great improvement in the agricultural sector.

Sustainability of agribusiness is also closely related to the technology which has a positive correlation (r = 0.149). The researcher also found out that there is a positive relationship between technology and sustainability of agribusiness as they are highly dependent on each other. Pearson's coefficient of correlation of 0.149 indicates that improving technology will result improvement in agribusiness sustainability. Technological modalities are vital in ensuring that the agricultural sector is sustainable. Technological changes greatly affects the sustainability of the agribusiness .if the technological advancements are conducive then agribusiness will be profitable.

Sustainability of agribusiness also is affected by the supply chain. The variables are positively corrected to each other (r = 0.406). There is a positive relationship between supply chain management and sustainability of agribusiness as they are highly dependent on each other. Pearson's coefficient of correlation of 0.406 confirms this. Inefficiencies in supply chain have a great negative impact on agribusiness.

Sustainability also has positive correlation with financial strategies this is indicated from the findings (r = 0.499), managing the financial resource adequately sufficiently promotes greatly sustainability of the agribusiness which promotes the basic survival of the activities in the sector. . The researcher also found out that The study also found out that there is a positive relationship between Financial management and sustainability of agribusiness as they are highly dependent on each other. Pearson's coefficient of correlation of 0.499.

A multivariate regression approach was used to ascertain the relative importance of each of the 4 variables in regards to strategic management practices and sustainability of agribusiness among small scale farmers in Githunguri Sub-County. Emphatically, the regression model is indicated below:

$Y=\beta_0+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+ e$
Where:
Y =Sustainability of Agribusiness Entrepreneurship
(βi, i =1, 2, 3, 4) = various coefficients for the independent variables
X_1= Human Resource
X_2= Technology
X_3= Supply Chain
X_4= Financial Management
e = Error Term

Table 3: Model Adaptability

Indicator	**Coefficient**
R	0.749
R Square	0.562
Adjusted	0.560
Standard Error of the Estimate	**0.4161**

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This analysis indicates that the coefficient of the percentage variation in the dependent variable being demonstrated by the changes in the independent variable R= 0.749 this shows a strong relationship between the factors. Sustainability in agricultural farms depends much on the skills acquired in the training programs, technological positive adoptions and also supply chain management to attain better survival of the business and also to increase profitability of the business. The correlation of determination explain quiet clear how much data in independent variables can be explained in the dependent variables(R^2 = 0.562) this shows that 56.2% of the data about sustainability can be related to human resource, technology supply chain Management and financial management. Table 4 shows the ANOVA results.

Table 4: Analysis of Variance (ANOVA)

	Sum of Squares	Df	Mean Square	F	Significance
Regression	8.414	4	2.103	12.151	0.000
Residual	10.906	63	0.173		
Aggregate	**19.32**	**67**			

In table 4, the standard error from the data shows significance level of about 5% this is acceptable in statistical procedural analysis. This data is enough and sufficient to draw reliable conclusion and for providing guidance and policy adjustments to ensure profitable and lucrative business processes. Table 5 presents the regression results.

Table 5: Regression of Coefficients

	Beta	Std. Error	t	Significance
H/R Strategies	0.064	0.586	0.109	0.914
Technology Strategies	0.284	0.115	2.474	0.016
Supply Chain Strategies	0.242	0.105	2.313	0.024
Financial Management	0.315	0.106	2.967	0.004
Agribusiness Sustainability	0.187	0.091	2.05	0.045

As stated in the table 5, the study established that technology strategies and sustainability of agribusiness have a significant and positive relation of r = 0.284 and 0.016. The study also shows that Supply chain and agribusiness sustainability have a significant positive relation of r = 0.242 and p = 0.024.

5. DISCUSSSION

From the analysis, the respondents indicated that the budget constrains to train human resource are limiting as supported by the standard deviation of 1.19 and an average mean of 3.69 the beta value of 0.064 indicates a positive relationship between the variables. John Bratton and Jeffrey Gold – 6th Edition (2017) conducted a study on the impact of Human Resource management in agribusiness and supported similar findings that Strategic human resources objectives are goals aligned with the organization's goals. In fact, in "Human Resource Management Theory and Practice," authors John Bratton and Jeffrey Gold identify strategic human resource management

as the "managerial process requiring human resource (HR) policies and practices to be linked with the strategic objectives of the organization." A number of human resources objectives support organizational goals, such as profitability, business reputation, ethics and principles.

The research data indicates that most respondents were in agreement that aligning research priorities with the modern farming technology addresses present and future demand of food which in the long run improves sustainability of agribusiness bearing in mind that the correlation of coefficient is r = 0.047and the beta value was 0.284. This indicates that technology is very a important aspect of the production in that technological advancement and adoptions increases the sustainability of the business. Andy Heikkila (2017) conducted a study on the impact of Technology management in agribusiness and supported similar findings that, digitization in the modern age means that almost every contemporary field or industry is becoming more and more reliant on hardware connected to and, in some cases, controlled by software. These industries are being transformed from the inside out by innovative technology and practices, and even traditionally analogue ways of life are finding it difficult to resist disruption.

The research findings confirmed that access to quality affordable subsidized or free donations of inputs, such as Seeds, Fertilizer, and Manure from Kiambu County Government have significant positive influence which is indicated by the correlation r = 0.052 on the sustainability of agribusiness entrepreneurship by small scale farmers with a mean score of 4.04 and standard deviation of 0.94. Sandra Martin (2006) conducted a study on the impact of supply chain management in agribusiness and supported similar findings that, Supply Chain Framework, is a chain envisaged as a value-creation process, whereby all firms in a chain link and align with each other to create value for the chain as a whole.

The research confirms high interest rates by the credit institutions are high with a mean score of 3.91. It signifies that it is also one of the most important aspects which impacts sustainability of agribusiness and it limits small scale farmers from accessing credit both short and long-term. West Obst and Rob Graham (2015) conducted a study on the impact of Financial management in agribusiness and supported similar findings that financial management of agribusiness enterprises that can be used to assist with the financial decision making for these businesses.

From the study's finding, the respondents strongly supported with the fact that there is need to develop and adopt modern technology and strategic management to ensure that economic profitability is sustainable in agribusiness entrepreneurship in Githunguri. Rural infrastructure like roads to must be improved to enhance productivity via reductions in the transport costs. Good road network ensures that all facilities required for production are accessible and readily available for the farmers.it also ensure mobility of factors of production such labor. In the past 20 years, numerous agricultural studies have focused on sustainable agribusiness (Hansford, Cary & Coath, 2003; Horrigan, Lawrence & Walker, 2002; Thompson, 2007). The sustainability of the agrifood system and farming as a multifunctional enterprise is of increasing importance. Häni, Pintér, and Herren (2007) indicated that successful short- and long-term adaptation to endogenous and exogenous, biotic and abiotic, and social and economic forces requires access to

information and indicators on the current situation as well as possible future trends in the ecological, social, and economic domains of sustainability.

6. RECOMMENDATIONS

According to the current study, agribusiness in Githunguri is not sustainable as shown by the analyzed figures. Majority of the people in Kiambu County depend on Agriculture for their livelihood, with more than 1.28 million people directly or indirectly employed in the sector. All Agricultural functions assigned to the County Government under section 185 of the Constitution of Kenya (2010) were transferred from the National Government to the County government thereby taking Agricultural services closer to the people. For this reason the Kiambu Government must ensure that adequate emphasis is given to the Agricultural sector investments, capacity building, value addition, financial access and technology transfer towards farmer empowerment to optimize its benefits. The county must effect a legislative role to continue in identifying key areas that require new legislations and policies. The Sector has a great potential which can be achieved through enabling policies that support service delivery. Appropriate legislative frameworks and guidelines to facilitate and regulate the Sector is key. A strategic plan should also be formulated and implemented.

Other areas which require improvement include, Development of programs to intervene on soil and water management and conservation of the natural resource base for agriculture. Reliance on rainfall fed agriculture should be avoided. Land development services such as construction of water pans, boreholes and irrigation infrastructure for food production. Promotion of market access for agricultural products is key. County Government should ensure there is internet access to enable online marketing of the products and avoid marketing cartels and middlemen who exploit farmers. The county Government must take affirmative actions to remove cartels and middle men traders who exploit farmers. Regulations should be enforced so that the farmers only sell their produce to the direct users.

The research carried out has shown that sustainability of agribusiness highly depends on the Hunan Resource capacity available. Pearson's coefficient of correlation of 0.91 indicates that improving human resource can spur great improvement in the agricultural sector. Based on the above findings the researcher recommends that more trainings to farmers by extension officers needs to be conducted as way of building their capacity thus increased productivity. Provision of adequate agricultural extension services or farmer advisory services is key. These should visit farmers and offer personalized door to door services The unemployed graduates should be trained in agribusiness and deployed in the county, so as to support the farmers initiatives. New agribusiness technologies should be adopted so as to save time and money while increasing on production. There should be structures to support the farmers. Hot spots centers and reliable fast network is key. County Government should post agribusiness information in their website for ease of access. Media, like Radio's, TV Channels and newspapers should be used to disseminate agribusiness information to the farmers. Research on soils suitability and management should be carried out so as to plant the right crops. Mixed farming and crop rotation should be encouraged.

Supply chain management should be streamlined and be able to avail farm inputs such as certified seeds, fertilizer, organic manure and planting tools and equipment like shovel, hoe, digging forks, spades, etc. Adequate subsidized in-puts provision would go a long way in assisting the SME farmers in Githunguri. The Government should carry out campaigns to mobilize agribusiness resources from the private sector entrepreneurs and international community especially those in agro-processing. Also campaign with the NGO's like FAO, AGRA,WFP for support and capacity building in the agribusiness sector.

7. CONCLUSION

Agriculture remains the backbone of the Kenyan economy. It is the single most important sector in the economy, contributing approximately 25% of the GDP, and employing 75% of the national labor force (Republic of Kenya 2005). Over 80% of the Kenyan population live in the rural areas and derive their livelihoods, directly or indirectly from agriculture. Given its importance, the performance of the sector is therefore reflected in the performance of the whole economy. The development of agriculture is also important for poverty reduction since most of the vulnerable groups like pastoralists, the landless, and subsistence farmers, also depend on agriculture as their main source of livelihoods. Growth in the sector is therefore expected to have a greater impact on a larger section of the population than any other sector. The development of the sector is therefore important for the development of the economy as a whole (Alila and Atieno, 2006).

As per the research conducted currently, agribusiness is not sustainable in Githunguri Sub County. The 2018 /19 National budget only allocated Khs 25 Billion to agriculture sector out of the Khs 3 Trillion Budget. This reflects about 26% of the National Budget. This confirms that agriculture is lowly funded yet agriculture is supposed to be one of the four economic pillars of the Kenya government. This budget allocation is not adequate and it's no wonder then that the Kenya Government is not able to feed it's own population. The National Government agriculture policy must change and increase funding to this key sector. Current policies are weak and not well defined. Parliament need to legislate on a well-defined all inclusive bill which will promote the nation's strategic priorities by supporting domestic agriculture to ensure food security. Also establish a multi-annual budgetary framework that provides certainty for farmers and allows them to plan and invest for the future. Promote improvements in the competitiveness and financial resilience of farm businesses, helping farmers to better manage risk and periods of poor market returns. As agriculture is a devolved function, the County Government of Kiambu should be seen to be putting more effort to support agribusiness so as to ensure food security and profitable agribusiness.

This research highlights that sustainability in agribusiness is not only reliant on human resource, technology, supply chain, financial management but also is dependent on strategic management practices which should be implemented by leaders from the conception stages with comprehensive participatory approach with all stakeholders. Particularly, agribusiness entrepreneurs require to create and sensitize all functions based on emerging trends and strategic

management practices. Conducive agribusiness policies are lacking so, both the National Government and County Government need to legislate and come up with practical all inclusive agribusiness policies. Stakeholders should be involved in agribusiness policy formulation, adoption and evaluation so that they can legislate on policies that are practical in execution and also ensure that agribusiness practices are well funded.

REFERENCES

Ampaire A and Rothschild M.F (2010). *Pigs goats and chickens for rural development; Small holder farmers' experience in Uganda*. Livestock Research for Rural Development 22(6)

Balogun, J. (2003). From blaming the middle to harnessing it potential: Creating change intermediaries. *British Journal of Management*, 14(1), 69-83.

Barney, J.B., Hesterly, W.S. (2006). *Strategic management and cases*. Upper Saddle River: Pearson/Prentice Hall.

Birkhaeuser D, Everson R.E and Feder G (2011) *The economic impact of Agricultural extension*: A review. Economic development and cultural change 39 (3)

Boehlje, M., Doehring, T., & Sonka, S. T. (2005). Farmers of the future: Market segmentation and buying behavior. *International Food and Agribusiness Management Review*, *8*(1030-2016-82603), 52-68.

Cherfas J. and Hodgkin T. (2011) *Farmer for Agricultural Biodiversity as an Essential for a Sustainable Improvement in Food and Nutrition Security*. Clark, W.C.,

Choudhury, N. (2009). The Question of Empowerment: Women's Perspective on Their Internet Use. Gender, Technology and Development, 13(3), 341-363.

Christodoulou N and Gray J (2007). *Managing change – building knowledge and skills*:

Dan, K. (2009). The scalability of strategic management principles for Small and Medium sized Agribusiness sector. *Journal of Management Research*, 1 (1), 1- 26.

Delgado L C, Narrod A C, and Tiongco M M 2008 *Determinants and implications of the growing scale of livestock farms in four fast growing developing countries*. Research report 157-International Food Policy Research Institute-IFPRI 73

Delia G, Randolph T, Oumar D and Peter-Henning C 2008 Training farmers in rational drug use improves their management of cattle trypanosomosis: A cluster randomized trial in south Mali. *Preventive Veterinary Medicine* 83 (1), 83-97.

DeWalt, B.R., 2004. Using indigenous knowledge to improve agriculture and natural resource management. *Human Organization* 53(2): 123-131.

Djurfeldt, G., and M. Jirstrom. (2005). *The African Food Crisis: Lessons from the Asian Green Revolution.* CABI Publishing, Cambridge MA, USA, Oxen, UK. 43–63 Djurfeldt, G., H. Holmen, M. Jirstrom, and R. Larsson. (2005). *African Food Crisis – The Relevance of Asian Experiences*. CABI Publishing, Cambridge MA, USA, Oxen, UK. 1–8.

Dollo M., S. Chaudhury and R.C. Sundriyal, 2006. *Traditional farming and land tenure systems in West Kameng district*, Arunachal Pradesh. In: Ramakrishnan, P.S. K.G Sexena and K.S. Rao (eds.). UNESCO-MAB series, Oxford & IBH, New Delhi, India.

Dorward, A. R., E. Chirwa, D. Boughton and V. A. Kelly. (2007). *Evaluation of the 2006/7 Agricultural Input Supply Programme, Malawi Interim Report*,. Imperial College, London: March 2007.

Dorward, A. R.., J. G. Kydd, J. A. Morrison and I. Urey (2004). A Policy Agenda for Pro-Poor Agricultural Growth. *World Development* 32 (1): 73–89. Ellis, F. (2012). *Agricultural Policies in Developing Countries.* Cambridge, Cambridge University Press 74

Ergano K and Nurfeta A (2006) *Economic performance of case study dairy farm in southern Ethiopia*. Livestock research for rural development 18 (1), 1-13.

FAO. (2008). *Current World Fertilizer Trends and Outlook 2011/12*. Food and Agriculture Organization (FAO) of the United Nations. Rome.

Gadgil, M., and F. Berkes, 2011. Traditional resources management systems. *Resource management and Optimization* 8 (3-4), 127–141.

George W. Aljian (2010) *Organizational Behavior and Human* Standard Reference Book on Purchasing Policies, Practices, Procedures. (3rd Edition), Book power Publishers Limited: Detroit, USA

Gold, M. (2009). *What is Sustainable Agriculture*? United States Department of Agriculture, Alternative Farming Systems Information Center. Hogan C (2012). *Understanding Facilitation: theory and principles*, Kogan Page, London

Ittner, C. D., & Larcker, D. F. (2003). Coming up short on nonfinancial performance measurement. *Harvard business review*, *81*(11), 88-95.

Jayne T.S. and Muyanga Milu (2006) *Agricultural Extension by farmer groups in Kenya: Practice and Policy Lessons*. Egerton University, Nairobi, Kenya. 2006.

Juhnyoung, L. (2006). *Data engineering issues in e-commerce and services.* 3rd Edition pp. 290 Chang Hang: China Springer Publishers

Kenya National Bureau of Statistics Website: https://www.knbs.or.ke

Kiambu County Integrated Development Plan (2018-2022)
http://www.kiambu.go.ke/departments /REVISED_CIDP_2018 - 2022

King A 2002 Annex to case study on livestock and livestock products. Joint Donor agencies study on the performance of and growth prospects for strategic exports in Uganda. Delegation of the European Commission Uganda.

Kiser AG (2008). *Masterful facilitation: becoming a catalyst for meaningful change*, Amacom, New York.

Kitetu, C. W. (2005) *Farmer Groups as a way of mobilizing citizen participation in development: an example from Kenya*. 11 December 2005

Kothari C.R., (1990). *Research Methodology: Methods and Techniques. New Age International publishers limited*. New Delhi 75.

Levi-Faur, David (2010) *Regulation and Regulatory Governance*, 4th Ed. UN Paper on Regulation and Governance. Genève, Switzerland.

Ministry of Agriculture & Fisheries Website: www.kilimo.go.ke

Ng, D. W., & Siebert, J. W. (2009). Toward better defining the field of agribusiness management. *International Food and Agribusiness Management Review*, *12*(1030-2016-82760), 1-20.

Nishiguchi T. (2008). *Strategic Industrial Sourcing: The Japanese Advantage* 2nd Edition Oxford: Oxford University Press

Pearce, J. Robinson (2008). Strategic Management. *Mc. Grow-Hill Irwin*.

Saksuna, T.R (2013) *Policies and Procedures in Agricultural Sector* (3rd edition) William Publishers London, United Kingdom