FACTORS THAT INFLUENCE THE PERFORMANCE OF MICRO AND SMALL AGRICULTURAL ENTERPRISES IN NYAMACHE SUB-COUNTY, KENYA

BY

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DECLARATION

I declare that this work is my original work and has not been presented in any other university or institution of higher learning for awarding of a degree or diploma.

Signature…… Date……

MASIRA INNOCENT MOKAYA

REG NO L50/82385/2012

This project has been submitted with my approval as the university supervisor

Sign: ……Date: ……

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DEDICATION

I dedicate this work to my dear parents Henry Masira Isaboke and Angeline Nyamoita Masira for their unwavering financial and moral support that has brought me this far. May the almighty God bless you. I sincerely thank you for your guidance and support.

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Thank you all and may the almighty bless you.

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ABBREVIATIONS AND ACRONYMS

BDS:	Business development Services
GDP:	Growth Domestic Product
KAPAP:	Kenya Agricultural Productivity and Agribusiness Project
K-REP:	Kenya Rural Enterprise Program.
KWFT:	Kenya Women Finance Trust.
LDCs:	Less Developed Countries.
MSED:	Micro and Small Enterprise Development
MSEs:	Micro and small Enterprises
NALEP:	National Agricultural and Livestock Extension Programme
NGO:	Non-governmental Organisation
SBA:	Small Business administration
SACCO:	Savings and Credit Cooperative
SHoMaP:	Smallholder Horticultural Marketing Programme
SMEs:	Small and Medium Enterprises.
SPS:	Sanitary and Phytosanitary Requirements

ABSTRACT

Micro and Small Enterprises (MSEs) in Kenya's agricultural sector have not performed well enough to play their expected vital role in the economic growth and development of the country. This situation has been of great concern to the government, citizenry, sector operators, practitioners and the organised private sector groups. This study begins by undertaking a background review followed by related literature review from global, regional and local perspectives. The purpose of this study was to establish the factors which influence performance of small and micro enterprise in Nyamache Sub-County, Kenya. The study had the following objectives: To determine the extent to which access to financial literacy influence overall performance of agricultural MSEs in Nyamache Sub-County. To assess how managerial skills influence the performance of agricultural MSEs in Nyamache Sub-County. To assess how regulatory environment influence the performance of agricultural MSEs' performance and finally to examine how the firm's size influence the performance of the agricultural micro and small business enterprises. The study employed descriptive survey research design whose purpose was to determine the factors influencing performance of small and micro enterprises in Nyamache Sub-County, Kenya. The sample size consisted of 44 MSEs obtained from a total population of 224 registered MSEs. The respondents were selected through simple random sampling techniques and the businesses were categorized through stratified random sampling. The research instruments used were questionnaires and interview schedules. The questionnaire contained closed ended questions that required a definite answer and open ended questions that required respondents to give descriptive answers. On validity of the instruments, the researcher used content validity while the instruments reliability was determined by the test re-test method. Data, analysis was carried out to fulfill research objectives and provide answers to research questions. The study applied both qualitative and quantitative approaches. The results were interpreted and placed on frequency distribution tables in percentages that display systematically the results and give meaning of reported figures; these were used to provide an adequate statistical report to the findings. Qualitative data was analyzed and interpreted by organizing data into the key areas as per the objectives of the study. The last section of the report contains a summary of findings of the study as well as discussions and conclusions based on the findings.

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

A Micro and Small enterprise can be defined as one, which is independently owned and operated, and not dominant in its field of operation. There is no single criterion for classifying business enterprises as micro, small or medium scale globally; whether they agri-based or otherwise. In a study carried out by International labour Organization (2005), over 50 definitions were identified in 75 different countries. However, evidence from literature shows that in defining small- scale businesses, reference is usually made to some quantifiable measures such as: number of people employed by the enterprises, investment outlay, the annual turnover (sales) and the asset value of the enterprise or a combination of these measures. Kenyan Micro, small and medium size enterprises are business that may be defined by the number of employees. Micro-enterprises have 0-9 employees and small enterprises have 10-49 employees (World development indicators database, 2005). In addition, the Kenyan small-scale enterprises are a mixture of self-employment outlets involving a dynamic array of activities mainly concentrated in urban cities/towns and trading centers in the rural areas while agricultural based enterprises are predominantly in the villages. These small enterprises cut across all sectors of the Kenyan economy and provide one of the most prolific sources of employment, income generation and poverty reduction (Ministry of Labour and Human Resource Development -GoK, 2004).

In successful developing countries, MSEs by virtue of their size, location, capital investment and their capacity to generate greater employment opportunities, have demonstrated their powerful propellant effect for rapid economic growth. The MSE sector has also been instrumental in bringing about economic transition by providing goods and services, that are of adequate quality and are reasonably priced, to a large number of people particularly in rural areas, and by effectively using the skills and talents of a large number of people without requiring high-level training, large sums of capital or sophisticated technology.

The Small-scale investments are also reputed to be behind most of the socio-economic transformation of many world economies currently serving as role models for developing nations. They (MSEs) play a significant role in development especially in the third world countries and generate wide-spread economic benefits. However in Kenya they have not performed creditably well and hence have not played the expected vital and vibrant role in the economic growth and development of the country. This situation has been of great concern to the government, citizenry, operators, practitioners and the organised private sector groups. Often, the governments at various levels through budgetary allocations, development programs and pronouncements have signified interest and acknowledgement of the crucial role of the SME sub-sector on the economy and hence made policies for energizing the same.

Economic studies show that only few countries have achieved either significant or sustained poverty reduction without a coincidental increase in economic growth. For most, agricultural growth underpins this economic growth, and precedes growth in other sectors. China's remarkable annual economic growth rate of 9.5 percent during the 1980s and 1990s was preceded by rural and agricultural policy reforms in the late 1970s and early 1980s. Indonesia and Thailand also experienced strong agricultural growth periods before attaining high non-agricultural growth (National Agribusiness strategy 2012). Survey studies done in some developing countries such as Malawi, by McPherson and Michael (2001) and in Zimbabwe by McPherson and Michael (2008), underscore the importance of the small-scale agricultural enterprise sector in employment participation and income generation for the bulk of low-income workers. Micro and small-scale agricultural enterprises have also been said to be behind most of the socioeconomic transformation in South East Asia, and play a significant role in Latin America's development process. In Kenya, agriculture contributes about 25 percent of gross domestic product (GDP) and provides a livelihood to three-quarters of the population. Food production plays an important part in maintaining the country's food security, while the industrial and horticultural crops subsectors are important foreign exchange earners (National Agribusiness strategy 2012).

Kenya Vision 2030 identifies agriculture as a key sector through which annual economic growth rates of 10% can be achieved. Under the Vision, smallholder agriculture will be

transformed from subsistence model, marked by low productivity and value addition, to an innovative, commercially-oriented, internationally competitive and modern agricultural sector'. One of the key drivers for this transformation is agribusiness, which is defined as including all businesses involved in agricultural production, including farming and contract farming, seed supply, agrochemicals, farm machinery, wholesale and distribution, processing, marketing and retail sales. It, (agribusiness) is the sleeping giant that could realize the potential of the agricultural sector across a wide range of subsectors including food, textile, energy industries and biotechnology (Kenya Vision 2030)

A study conducted Fowler and Kinyanjui in 2004, *Indeginalising Foreign seed on African soil;* The story of K-Rep indicates that some small agricultural business have been able to link up and form merry go-rounds in the micro business sector and have been supported by micro financiers such as K-REP Bank, WFT and other rural based agricultural SACCOS. This micro finance concept originates from the movement founded by Mohamed Yunus in Bangladesh in 1974. According to a book by Yunus, who won the 2006 Nobel Peace Prize, he witnessed abject poverty in his country and decided to initiate micro enterprise financing arrangements, which would help the poorest of the poor. This gave rise to the famous Grameen Bank in Bangladesh.

The national baseline survey of 1999 indicates that the Kenyan government set up specific institutions and programs to provide credit, training and technical assistance to SMEs. These include the Kenya Industrial Estates, the Export Promotion Council and Kenya Institute of Business Training and other forms of support to the co-operative movement for agricultural enterprises among others. The problem is, however, determining the efficiency of some of these institutions. (Business in Africa, July 2007)

Despite their significance, past statistics indicate that three out of five businesses fail within the first few months of operation (Kenya Bureau of Statistics, 2007). According to Amyx (2005), one of the most significant challenges is the negative perception towards MSEs. Potential clients perceive MSEs as lacking the ability to provide quality services and are unable to satisfy more than one critical project simultaneously. Often larger companies are selected and given business for their visibility in the industry and name recognition alone.

Starting and operating a MSE includes a possibility of success as well as failure. Because of their small size, a simple management mistake is likely to lead to sure death of a small enterprise hence no opportunity to learn from its past mistakes. Lack of planning, improper financing and poor management have been poised as the main causes of failure of small agricultural enterprises (longenecker; et al., 2006). Lack of credit has also been identified as one of the most serious constrains facing MSEs and hindering their development (Okech, 2007; Tomecko and Dondo, 2002; Kiiru 2001).

Agribusiness has already shown its potential to integrate smallholder farmers into the sector in a range of innovative ways. First, by farmers organizing themselves into co-operatives which can take advantage of the economies of scale of larger organisations, e.g. for bulk buying of inputs and bulk selling of produce, as well as adhering to quality standards. Secondly this can be realized by becoming contract farmers to a commercial company with responsibility for supplying specific agricultural commodities. These schemes also known as 'outgrower schemes', provide growers with security of supply and product integrity, and protect them from the fluctuations in both price and demand that exist in the open market. Also storage and packaging can be a way of unlocking the potential of the agricultural sector. Through appropriate and attractive packaging, higher prices may be attracted to the benefit of the farmer, while storage increases shelf life and reduces post-harvest losses. (National Agribusiness strategy 2012)

Given this scenario, an understanding of the dynamics of agricultural MSEs is necessary not only for the development of support programmes for MSEs' but also for the growth of the economy as a whole. It is further argued that agricultural MSE development provides a promising avenue for economic development leading to an increased degree of indigenous control over natural resources such as land. While considerable amounts of money have been spent by governments, with the objective of promoting indigenous agricultural businesses, relatively little research has been conducted that addresses questions such as the appropriate scale and type of businesses most likely to have some chance of commercial success within indigenous communities in Kenya.

1.1 Statement of the Problem

Food production plays an important part in maintaining the country's food security, while the industrial and horticultural crops subsectors are important foreign exchange earners, (Economic survey 2012). However, the country's agricultural potential is still unrealized and its growth targets are not being met. Opportunities to realize optimal production levels and add value to agricultural produce are largely unexploited. This, coupled with high production costs arising from escalating energy prices and poor infrastructure, makes Kenyan agricultural exports less competitive in global markets while imported goods end up cheaper than locally produced commodities and imports therefore end up with a higher demand than locally produced commodities, This only works against the local farmer, he lacks adequate incentives to be able to invest his time and resources into optimal agricultural ventures. What are the specific hindrances and obstructions on the farmers' way?

Through various studies, it is recognized that Agricultural MSEs face unique challenges, which affect their growth and profitability and hence, diminish their ability to contribute effectively to sustainable development. The impact of these among other challenges has led to majority of agricultural MSE operators confining themselves to narrow markets where profit margins are low due to intense competition. Consequently, most of the MSEs are stagnating, retrogressing to micro status or closing after few years of operation or they begin operating as subsistence ventures. Very few manage to graduate to medium and large-scale enterprises (Ministry of Labour and Human Resource Development-GoK, 2004). What are the possible causes of these challenges? When agricultural MSEs' profits suffer, those firms are forced to lay off their permanent employees and opt for casual laborers, and without new job growth, the unemployment rates rise. The country needs to 'scale-up' activities such as access to finance, processing, branding, packaging quality certification and accreditation, as well as farm level quality improvements through technical support that increase the market value of primary products. The marketing systems must not only be in place but also should be working effectively and efficiently to meet the agribusiness value chain players' needs. Agribusiness needs to become the driver in improving the agricultural sector's productivity and contribution to economic growth. Despite the efforts by government of Kenya and other stakeholders to

improve the performance of agricultural enterprises, the results have not been encouraging. Several studies indicate that some factors are responsible for this. The factors cited could be influencing the performance of Agricultural MSEs in Nyamache Sub-countywhich is a typical high potential rural area whose challenges are replicated to a great extent all over the country. On the flipside, the said factors may not be having a direct link to the performance of these enterprises. This research sought to confirm if indeed the aforementioned factors are indeed responsible for the poor Agricultural MSE performance.

1.2 Purpose of the Study

The purpose of this study was to analyze the main factors which influence the performance of agricultural MSEs in developing nation's economies based on data obtained from the area under study (Nyamache Sub-County)

1.3 Objectives of the Study

The study was guided by the following objectives:-

1. To determine the extent to which financial literacy influence overall performance of agricultural MSEs in Nyamache Sub-County.
2. To assess how managerial skills influence the performance of agricultural MSEs in Nyamache Sub-County.
3. To assess how the regulatory environment, influence the performance of agricultural MSEs' performance.
4. To examine how the firm's size and age influence the performance of the agricultural micro and small business enterprises.

1.4 Research Questions

The study sought to answer the following research questions:-

1. To what extent does financial literacy influence overall performance of agricultural MSEs in Nyamache Sub-County?
2. How do managerial skills influence the performance of agricultural MSEs in Nyamache Sub-County?
3. To what extent does regulatory environment, influence the performance of agricultural MSEs' performance?

4. How does the firm's size influence the performance of the agricultural micro and small business enterprises?

1.5 Research Hypothesis

The following are the hypothesis which the study seeks to test:

1. Financial literacy has a significant influence on the performance of MSEs' in Nyamache Sub-County.
2. There is relationship between performance of MSEs and of managerial skills or inadequate education and skills of the entrepreneurs.

1.6 Significance of the Study

The findings of this study contributed both to practice and to theory. In terms of their contribution to practice, the findings would help the Ministry of Industrialization and enterprise development together with the ministry of Agriculture, Livestock and Fisheries to find out ways of improving the production performances of agricultural MSEs and farms through creation of a conducive business environment. This will go a long way to ensure the projected job creation and foreign exchange earnings targets are attained, it will also help reveal what problems agro dealers and farmers are experiencing which results in their businesses dismal performance. This would increase production value of these businesses to fetch higher revenue. Internally generated revenue will in the long run leverage this industry which is employing and supporting a substantial number of farmers, agribusinesses, agri- manufacturers, processors and agri traders.

In terms of the theoretical value of the findings, the research makes it possible to understand the dynamics of an emerging agricultural industry, particularly the key variables that needed to be strengthened in order to improve food security and social sustainability.

Finally the findings of this study can make a difference in the way of doing business among Agricultural MSE operators in Nyamache Sub-county particularly if the recommendations given can be incorporated into the development plans of the Sub-county aimed at improving the business environment.

1.7 Basic Assumptions of the Study

There was an assumption in this study that the scale of operation of agricultural business operators at micro and small scale level are different. Consequently one of the specific objectives was to investigate variability in terms of performance in the different business sizes i.e. how size influences performance in the micro and in the small-scale.

Micro and Small scale agricultural business enterprises (MSEs) face many challenges and the operators are open to interventions; it was assumed therefore that MSE operators would co-operate and be willing to provide all the necessary information to make the study a success.

Similarly government agencies have an interest in the contributions of small scale farmers and agri- traders to economic development and therefore the agencies would provide the necessary support for the study to reveal the underlying constraints.

The instruments used in the study were accurate and valid to deliver reliable data; equally the interviewers maintained high ethical standards during the study to ensure the set objectives were realized.

The study assumed that the costs would remain within the budget drawn down considering the prevailing economic conditions.

1.8 Limitations of the Study

The study was constrained by the duration of time over which it sought to study the factors which influence the performance of micro and small agricultural enterprises in Nyamache Sub-County. Ordinarily, to come up with enough details on how the factors affect the agri-businesses, a longitudinal study spread over a number of years would have been more appropriate as opposed to a cross sectional study carried out within only one month. The researcher overcame the challenge by making the research instruments detailed enough to be able to obtain information relating to a longer period of time by further probing to overcome the time limit challenge.

The target interviewees of this study were small scale farmers, traders and micro dealers in rural Kenya, some of whom are illiterate and had difficulties in responding to some technical issues which were being discussed. The researcher used research assistants conversant with the indigenous community who were able to translate and explain the questionnaire contents into the local language to ensure they were well understood by the

respondents. Administration of questionnaires was therefore in such cases face to face interview sessions.

Agricultural traders and small business operators were not willing to divulge enough information relating to the finances of their businesses, they were skeptical and not free to discuss their financial issues with the research assistants. The researcher overcame this challenge by providing personal assurances to the traders on confidentiality of information divulged. Where it was practically impossible to get financial information the researcher used comparative analysis to fill in the gaps

Resources to undertake the exercise were constraining; this was so because of the need for the study to reach a large number of contacts with farmers, traders and micro dealers. To give a more representative picture of the prevailing scenario the researcher deployed an equally proportionate number of personnel in conducting interviews.

1.9 Delimitation of the Study

The study was carried out in Nyamache Sub-county which geographically covered the following wards : Nyamache, Masige West, Bassi central, Bassi Borabu, Bogetaorio and Nyacheki wards, The study relied on data collected from individual owners of agricultural MSEs in Nyamache Sub-county with a focus on farming enterprises(agribusinesses) and also small-scale traders and micro dealers licensed by the Ministry Industrialization and enterprise development (Nyamache Sub-county office) between January and June 2013,. The study was limited to investigate factors that influence the performance micro and small enterprises that focus on agricultural commodities

1.10 Definition of Significant terms as used in the Study

Agribusinesses: Comprises all businesses involved in agricultural production and derivative activities including farming and contract farming, seed supply, agrochemicals, farm machinery, wholesale and distribution, processing, marketing and retail sales. It includes farm-based business activities that involve some form of processing before marketing, thus, if household members process their farm products and sell them from the farm from the roadside or at a market or if households are involved in buying and selling farm based commodities all these activities are considered agribusinesses.

Agricultural Enterprise: These are businesses which derive most of their revenue from agricultural based activities either directly or indirectly and they include: farmers, individual traders, shops and kiosks, brokers, processors, marketers and input firms.

Employment: Simply means people working and not necessarily for salary or wage payment.

Financial literacy or financial education: The knowledge, skills and attitudes required to adopt good practices for earning, spending, saving, borrowing and investing. It also means being equipped with information and tools to make better financial choices, work towards specific financial goals.

Business/Technical Support: It means any assistance from officers or experts in a given field that lead to improved production at farm level or in the process of trading.

Value Chain: Interconnected, co-ordinated set of linkages between input suppliers, service providers, farmers, storage providers, middlemen, transporters and government agencies

1.11 Organization of the Study

Chapter one represents the background of the study, the statement of the problem, the purpose of the study, objectives of the study, the research questions the significance of the study, limitation and delimitation of the study and the definition of significant terms as used in the study. Chapter two discusses literature review on the factors which influence the performance of micro and small farming enterprises. They include global, regional and perspective of these factors. The factors reviewed include: financial literacy, managerial skills (training, education and experience), institutional factors of the farm's size and the regulatory environment. In chapter two the theoretical framework and also conceptual framework and the knowledge gap that the study will fill are also covered. Chapter three discusses studies or Research Methodology which includes Research design, target population, sample size and sampling procedures, data collection procedures data collection instruments, Reliability and validity of instruments, Pilot testing and data analysis techniques. In chapter four the data collected is quantitatively analyzed and presented in frequency tables as per the research objectives. In this section a brief qualitative analysis as per the key informant responses is also provided. Chapter five covers a summary of the findings, their discussion, conclusion and recommendations; it also contains the study's contributions to existing knowledge and suggestions for further studies. The final part of the report has various appendices which contributed to the study in different ways, this includes correspondences, data collection instruments and authorizations required to undertake the research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Micro, small and medium sized enterprises have been of increasing interest for academics and policy makers in recent years owing to their important role in both developed and developing economies. Many different theories have attempted to identify the main factors underlying firm performance; these factors can be divided into two main schools: the first category addresses the influence of firm size and age on growth, while the second deals with the influence of variables such as strategy, organization and the characteristics of the firm's owners/managers. In fact, a huge number of studies have been devoted to examining the relationship between growth and the firm's size and age. For example, Evans (2007) examined the effects of firm size and age on growth using data on manufacturing firms in the United States. Although several previous studies had supported Gibrat's law which hypothesizes that performance is independent of size, Evans (2007) found that firm growth decreases with firm size and age. Empirical literature has suggested that firm performance is determined not only by the traditional characteristics of size and age but also by other firm-specific characteristics, for example, Heshmati (2001) found that the degree of indebtedness (leverage) positively affects sales growth using data on Swedish micro and small firms, while Becchetti and Trovato (2002) documented the effect of external finance on firm performance in the Italian manufacturing industry, apart from the traditional determinants of age and size. Elston (2002) provided evidence that cash flow has an impact on the growth of firms listed in the Neuer Market of Germany, even when controlling the firm size and age. In a recent study Morone and Testa (2008) using a sample of 2,600 Italian MSEs finds that, on average, young firms are more likely to experience positive growth and by extension good performance; moreover, turnover growth is positively associated with firms' size, process innovation, product innovation and organizational changes. In contrast, marketing innovation does not considerably affect Italian SME growth.

While a significant amount of research has been done on the determinants of performance in large firms, much less is known with respect to MSEs, especially agricultural, service and trade MSEs, given that their growth and prosperity are usually more often and

potentially subjected to different constraints and contingencies related to their specificity as business organizations (Raymond, Bergeron and Blili, 2005). The specific characteristics that fundamentally distinguish MSEs from large enterprises relate to their environment, structure, strategy and decision making process, but also relate to their flexibility, proximity to markets, and quickness to react and reorient themselves. Some recent studies (Markovics, 2005; and Lesáková, 2009) emphasize also the role of innovations as a factor of the increased competitiveness of small and medium enterprises in transition economies on the European and African markets.

Detailed literature review shall be based on the research Objectives as spelt out above which revolve around firm-specific characteristics such as access to financing, firms' size, process innovation, product innovation, economic variables and market access, regulatory environment and also decision making process based on managerial training and experience and organizational changes as determinants of MSEs performance.

2.1 Financial Literacy and Access to Credit

Financial education programs teach the knowledge, skills and attitudes required to adopt good management practices for earning, spending, saving, borrowing and investing. Participants in these programs become equipped with information and tools to make better financial choices, work towards their financial goals and ultimately enhance their economic well-being. Henry (2006), Considering limited savings/ retained earnings by agricultural MSEs, their lack of collateral and minimum balance requirements by commercial banks, there is very limited interaction between the two (MSEs and established financial institutions) - Attempts to link them through micro-finance institutions and other potential intermediaries are hampered by the regulatory environment existing within the financial sector. The result is limited financial leveraging (Kimuyu and Omiti, 2000)

Credit markets are partly shaped by lenders' strategies for screening potential borrowers and for addressing opportunistic behavior encouraged by the inter-temporal nature of loan contracts. These problems are acute in the developing countries where information asymmetries are more pervasive especially among the resource base poor and by extension the agricultural MSEs which in many instances fall within this bracket. Financial markets in developing countries tend to be highly dualistic and fragmented with

weak linkages between the formal and informal components. The formal segment of the markets tends to be characterized by market imperfections demonstrated by high concentration ratios with only a small number of financial institutions exerting considerable market power (Kimuyu and Omiti, 2000). Firms with growth ambitions require capital to fuel their growth. Regardless of size or age, access to capital is a matter of paramount importance. According to Timmons (1994) small, young firms tend to draw capital from internal sources, personal sources, and informal investment. As firms grow, they face additional capital requirements and must turn to external sources such as banks and public debt and equity markets. This is consistent with Myers and Majluf's (1984) assertion that MSEs have a "pecking order" of preferred capital sources in which retained earnings will be the first source accessed, followed by bank debt, private external equity and then public debt or equity. Does the limited financial literacy of agricultural MSE operators influence their ability to meet the requirements of the formal financial market? Their limited financial literacy results in alienating them to the informal markets which are not poorly managed but also unreliable to offer concrete financial assistance to these businesses.

In the conventional framework of firm performance analysis, financing of growth is investigated through the growth-size-profitability relationships. A considerable body of literature deals with this question, analyzing the relationship between the performance and the financial structure of the firm. If all firms had equal access to capital markets, external funds would provide a perfect substitute for internal capital, which implies that a firm's financial structure is irrelevant to investment and growth. It is often argued, however, that firms face difficulties in financing from external sources due to asymmetric information problems in capital markets. In fact, a number of studies on capital market imperfections have examined the impact of financial constraints on investment decisions and firm performance. For example, Fazzari (2008) argue that financial constraints in capital markets affect investment, and emphasized that the link between financial constraints and investment varies by type of firm. Audretsch and Elston (2002) assert that financial constraints may be more binding as farm size decreases. In another study, Wagenvoort (2003) uses financial data for more than 200,000 European manufacturing and construction firms, and finds that European MSEs suffer from a structural finance

problem that hinders their growth. In particular, it is observed that financial constraints tend to hamper the growth of small and very small firms and to be less binding for medium sized enterprises. If compared with large enterprises, MSEs are more constrained by the availability of internal finance. Other empirical studies (e.g., Becchetti and Trovato, 2002; Carpenter and Petersen, 2002) have confirmed that the constrained availability of finance affect small firm growth and general performance. Even though smaller firms seek to achieve minimum efficient scale, they are more likely unable to obtain sufficient capital from external sources in order to expand their businesses. In particular, under the present dismal economic conditions, internal finance may have a greater impact on the growth of MSEs. Moreover, the intensive use of internal finance minimizes growth costs since internal resources cost less than external resources. This is due to the fact that access to financial markets and provision of external resources are more problematic for small firms (Sarno, 2008)

It is often argued that MSEs are, in contrast to large firms, informationally more opaque, have on average higher growth rates, are financially more constrained, and are more dependent on bank loans when outside financing is needed. For a bank, the limited information available about the MSE increases the risk associated with providing financing, which induces the bank to reduce loan maturity and increase the interest rate. To optimize loan conditions, MSEs have an incentive to build a relationship with their bank(s) in order to minimize the information asymmetry. The association between bank debt maturity and relationship lending is widely investigated by Ortiz-Molina and Penas, (2004) for US firms; and Hernández-Cánovas and Koëter-Kant, 2008 for EU firms). For example, Hernández-Cánovas and Koëter-Kant (2008) find that, after controlling for firm-specific characteristics such as size, age, debt and financial situation, close firm-bank relationships increase the likelihood of obtaining longer-term bank loans. However, once they allow cross-country heterogeneity to influence the results, the empirical evidence shows that relationship lending and its effect on bank loan maturity for European MSEs is impacted by country-specific factors. This suggests that firms with a higher proportion of bank debt will be able to access external financing more easily. However, MSEs find it very difficult to obtain external finance.

2.2 Technical /Managerial Skills and Education

Managerial skills consist of an identifiable set of actions that individuals perform, which lead to certain outcomes. Managers with different styles and personalities may apply these skills differently (Cameron and Whetten, 2009).Thus, managerial skills are behavioral. General managerial skills are required to organise the physical and financial resources needed to run a business and people managerial skills are needed to obtain the necessary support from others for the business to succeed. Managerial skills and business knowledge are an indication of how well an entrepreneur can perform important tasks and activities related to the functions of a business.

Basic knowledge in management is needed at initial stage of running an enterprise and also later during the development stage. At the beginning, the management of the enterprise is carried out by the sole founder/owner, who must perform all the actions needed with doing the business. Crises occur when the enterprise is successfully expanding and the entrepreneur (usually still the founder and owner) is not capable of running it, due to lack of needed knowledge and managerial skills. With this attitude he/she cannot cover all areas of the enterprise, i.e. due to the enterprise expansion. He/she lacks needed managerial knowledge and skills of running and further developing the enterprise.

Some experiences gained by Gerber from his own consultancy practice (Gerber, 2001, p.13), who coined the following entrepreneurial myth: The fatal assumption is – you understand the technical work of a business, you understand a business that does that technical work ".Gerber points out to the fact, that small enterprises are mostly founded by technicians, specialists or professionals in certain fields. For example, an accountant or a carpenter "know their onions" but have little information and experience in the field of management. They can perform their work on professional level, but seldom do they entrust their enterprise in the hands of manager, or try to acquire this knowledge by themselves. They run into problems with management of their enterprise because they concentrate all attention just to their specialized field of expertise. The management and managerial skills are neglected. Similar results come out of Slovak study (National agency for development of small and medium enterprises, 2005), where the second most

significant reason of not wanting to be in business (right after lack of financial capital) were missing skills and experience needed for conducting a business.

The expertise however mentioned above is assumed not to be applicable in relation to agricultural enterprises (farming)where anybody with a piece of land be it inherited or purchased ventures into farming somehow, the technical skills notwithstanding and hope that the business will thrive on its own. Of course this is equally fatal as the agricultural enterprise requires management skills just like any other business. The structure and content of education and training play and an important role in the management of agricultural enterprises which is one of the developments processes (Mc Cormick 2006). Non-financial services such as training, consultancy and advisory services, marketing assistance, and technology development and transfer, all play a crucial role in increasing the competitiveness and efficiencies of small businesses. But these business development Services (BDS) are seldom available to small entrepreneurs who work in remote physical locations, and do not know what kinds of services are available – and therefore do not make demands of them. In particular they lack access to state-of-the-art advisory and facilitation services that help farmers increase productivity sustainably, and link them to innovations.

African countries including Kenya in this case have with widespread support in their populations invested heavily in education. The education systems have primary been geared towards general academic qualification. The type of education however demanded by farming enterprises in our case has own specific requirements. The development of education and sector specific vocational training relevant for development small enterprise and flexible production has been much slower. As a result the sector specific vocational training has mainly taken place at private initiative and cost. Kanungo (2008) indicated that education is an important aspect since it determines the entrepreneurial orientation in individuals. Education may be formal or informal but all are important in agribusiness enterprise management and also in farming as a source of knowledge. Education is expected to have an important bearing on the performance of MSEs. The relationship between levels of revenue, membership in business associations

and education was analyzed National SME Baseline Survey 1999 (CBS, K-Rep and ICEG) and the gross revenue by level of education exhibited the relationship between these two variables The highest proportions of entrepreneurs with the highest levels of revenue was found in the postgraduate group while the highest proportion of those with the lowest revenues was found among those with no education. Another parameter investigated during the study in relation to education levels is the type of business association or organisation to which MSE entrepreneurs belong. The results clearly showed that most entrepreneurs (76.3%) were not members of any of the indicated associations. The most popular associations were merry-go-rounds but mainly among those who either had no education or those who had gone up to secondary school. Membership to a business association is useful in that it brings one into possible business contacts protection and promotion of business interests and the potential for financial as well as non-financial assistance. Other than formal academic education, performance and growth of MSEs is also influenced by the training received by MSE entrepreneurs in the sector, as per the National SME Baseline Survey 1999 (CBS, K-Rep and ICEG) training which is an important aspect of entrepreneurship, is seriously lacking in the SMEs. On the whole 85% of the entrepreneurs have not received such training.

The typical owners or managers of small and micro agricultural enterprises lack managerial training and experience and thus develop their own approach to management, through a process of trial and error. As a result the management style is more opportunistic than strategic in its concept. Consequently, the owners are ill prepared to face changes in the business environment and to plan appropriately changes in technology like introduction of ICT in business management. However this is worsened by a reluctance or inability of agricultural MSE owners and managers to diversify control over business functions to professional managers (Storey 2004). In some instances this tendency may be magnified by a lack of skilled managers, as well as an absence of business skills in the areas of marketing and business development.

The strength and salience of internal barriers is likely to vary with the size of the firm. In the early stages of a firm’s growth, an owner manager can cope alone with many of the

areas of management such as finance, human resources, marketing, and product development. However, once a firm has reached a certain size, or stage in its life cycle, there is a need to professionalize the management function if a firm is to continue to grow.

Good and effective management has equally been linked to availability of accurate and up to date information. Entrepreneurs operating at all levels of the agricultural value chain lack access to up-to-date information on prices, weather, pest control and other topics that would help them do business in a planned and efficient way. Such knowledge and information management systems are essential to link producers with markets, and to improve long-term planning and quicken reaction times to changing external circumstances. (National Agribusiness Strategy, 2012)

Results from various researches regarding the small enterprises revealed that, managerial skills and knowledge are needed for successful management of small enterprises and at the same time pointed out that there is some kind of indolence of commencing small entrepreneurs to these skills. The self-confidence of small entrepreneurs is so high, that they believe more in their ability rather than hire somebody else or pay attention to education of themselves to gain needed knowledge and managerial skills (Zuzana and Papulová, 2007)

2.3 Regulatory Environment and other Economic Variables

The institutional framework within which firms interact with customers, government and each other can have a profound influence on firms' economic performance. Business growth is often considered to be at risk from heavy-handed bureaucracy, in both African and other developing economies. Official and unofficial institutions each play a part in this. An unsuitable tax system and various discriminatory legal regulations can represent a severe burden for MSEs in many developing countries. Complicated laws, rules and regulations concerning companies can be especially tough on small and growing companies.

Over-regulation of the MSE sector in market economies provides an incentive for entrepreneurs to seek ways to evade regulations leading to the growth of the grey economy. It also provides incentives to them to devote resources to influencing the

regulatory environment in their own favor, encouraging “unproductive entrepreneurship” (Baumol 1990).

In the worst case, the relative newness of market institutions and legislation, and the legacy of the culture of connections inherited from the past, may encourage the growth of bribery and corruption (Schleifer and Vishny, 2003). This may further increase the uncertainties and costs of carrying out business, and reduce the growth and performance of firms. In addition, powerful large firms, whether recently privatized or not, whose managers have good political connections, may also employ a variety of tactics to reduce the growth of smaller firms, from strategic pricing policies to outright threats verging on criminal behavior. These institutional factors may increase transaction costs facing MSEs, and hinder the transition to a competitive market economy with a firm foundation on the agricultural sector.

The national policy and regulatory environment has an important impact of technology decisions at the enterprise level. Unpredictable government policies coupled with grand “corruption” high taxation rates all continue to pose great threat, not only to the sustainability of MSEs but also to the Kenya economy. (Kimuyu, P. K. (2009a).

2.4 Institutional Factors of the Firm’s Size

The size of agricultural enterprises is characterized by many of the indicators: yield (gross and marketable); availability of land, fixed assets, livestock, area of perennial plantations (for specialized horticultural farms), structures (for vegetable farms in protected ground), and the number of employed workers. (F.A.O, 2000)

Depending on the degree of concentration of agricultural enterprises and their units can be divided into three groups: large, medium, small and micro (where a majority of farm enterprises from the high potential areas fall. In conditions of instability and inflation it is difficult to delineate the precise boundaries of these groups, the cost of production or sales. In agriculture micro enterprises include farms with between 0-9 employees, small businesses include farms, with up to 9- 15 employees to the average of 16 to 60 and to a large excess of 60. (F.A.O, 2000) The main indicator of the size of the agricultural

enterprise (association), its production units should be considered a value of the output. This figure is over a certain period of time (usually a calendar year) allows you to compare the size firms, irrespective of their organizational and legal form of specialization, location, technology, permanent and other features. The cost of production can be determined in comparable or prevailing prices. If the firm or unit provides production services, their cost is included in the gross value of production.

Determination of the concentration of firm units is very important for proper organization of production. Much of the economic theory of the growth and performance of small firms has been concerned with the relationship between growth and firm size. The conventional wisdom in economic theory has long held that, due to economies of scale and scope, the growth of firms is positively related to their size. Large firms were typically expected to have advantages over small firms and so grow more rapidly. This process was expected to lead to a growing concentration of industry. This partly explains the emphasis on large scale industry in the former centrally planned economies. But to some extent it no doubt also explains the fascination of economists from both east and west with the newly privatized firms in those countries.

The age of an agricultural business enterprise reflects its market experience and affects its ability to grow and move to the next size class which would generally be aspects of performance. Research findings seem to reflect that the longer a business survives, the greater its chances to survive in the longer term. This is an encouraging finding against the backdrop of the high unemployment rate in the developing world as is the case in Kenya. International experience has shown that births and deaths among small businesses tend to be concentrated among younger and smaller firms (Picot and Dupuy, 2005).

Literature is beginning to show a consistent negative relationship between farm size and firm growth, spanning several studies and many countries. As Hart (2000) observes, “Most studies relating to periods since 1885 show that small firms grow more quickly than larger firms”. In the UK, for example, Hart and Oulton (2006) studied a sample of 29,230 firms and found a negative relationship between growth and firm size, based on a Galtonian regression, for the period 2007-2010. In the USA, Evans (2007) studied a

sample of 24,244 firms which had been in business for over seven years, and found a similar relationship for the years 2006-2010. Alnus and Nerlinger (2000) show the same relationship in Germany, while Farinas and Moreno (2000) confirmed the relationship for Spanish data covering over 2,000 firms. Many other studies have shown similar results, including those by Evans (2007a), Dunne and Hughes (2004) and Hart and Oulsen (2008). These empirical studies confirm that in contrast to the orthodox views, small firms grow faster and perform better than large firms.

There are several possible explanations of the reasons for the faster growth of small firms. Small firms may grow faster than large firms because they are initially uncertain about their costs and therefore enter the market at less than minimum efficient scale and over time grow to reach it, Jovanovic, 2002). However, as Hart has pointed out, if this was all there was to it the dispersion of firm sizes would be very small, whereas the reality is that the dispersion of firm sizes is large. A second explanation relies on the theories of flexibility and adaptability of small firms, emphasized by the students of the phenomenon of the industrial district and of the strength of network economies which can offset the economies of scale enjoyed by large firms (Bartlett and Franičević, 2001). A third explanation is that large firms suffer from diseconomies of scale. This is often linked to the increase in managerial costs as firm size increases and the costs of coordinating across an expanding span of control encounter limits placed by bounded rationality (Penrose, 2000). A fourth explanation is firms react asymmetrically to exogenous shocks in the short run. Given short run U-shaped cost curves, small firms which operate below minimum efficient scale will expand output when prices rise, while larger firms above minimum efficient scale will not. Conversely, small firms will not react to price falls while large firms will reduce output. In the absence of capacity adjustments, small firms have a bias to increase output, while larger firms have a bias to reduce it (Johnson, Conway and Kattuman, 2009). A fourth explanation, emphasized by Hart (2000), implies that the “invisible hand” of the market is not enough to generate economic growth on its own: an activist state pursuing an energetic enterprise policy is a key mechanism to get the most out of the market economy system. Furthermore, market

experience and size of a business are important valuables that determine a business's access to financial sources.

Contrary to the advantageous position enjoyed by MSEs in terms of growth and performance enterprise, age and size is an impediment to credit access this may be attributed to short life expectancy of MSEs, especially informal ones,. The high mortality rate of MSEs means lost opportunities not only for accumulating business experience but also for building credibility and reputation that are necessary for accessing credit from financial institutions and suppliers of inputs and products. Most businesses die due to lack of credit. (Kimuyu and Omiti, 2000) and more so resulting from their young age and small size.

The preceding literature review highlights the salient factors which have an effect in the performance of small and micro enterprises in various parts of the world. However some questions which the study could answer include:

Are some of these factors which are applicable to general merchandise micro and small enterprises the same ones as those impacting on agricultural enterprises and to what extent? Could there be in existence other factors which play a central role to the performance of agricultural enterprises apart from those discussed under the preceding literature review? The research sought to find out if indeed similar factors influence the performance of Agricultural MSEs in Nyamache Sub-County. The research also identified more factors that impact on the performance of agricultural MSEs in the area under study. The findings assisted to know how the entrepreneurs overcome these challenges in quest for solutions or guidelines principles which could help small and micro enterprises improve their performance.

2.5 Theoretical Framework

Fredrick Taylor's Theory of Scientific Management

From the literature reviewed, it is apparent that certain variables or factors play a more important role to improved performance in terms of productivity of the trading unit (Agricultural enterprise). The harmonious interplay of these factors must be operational under scientific management principle as purported by Taylor. According to Taylor a group of ordinary men following a scientific method would outperform the other "personal brilliant". Captain of industry, Taylor argued for consistency and sought to overthrow management by rule of thumb and replace it with actual timed observation, leading to one of the best practice rather than allowing personal discretion in their tasks. He believed that a spirit of hearty co-operation would ensure that the workers follow the one practice.

Under the philosophies he believed that the workload would be shared between workers and management. The management will perform instruction and workers will perform labor, each group doing what is best suited. Taylor's strongest positive legacy was the concept of breaking a complex task down into a number of substances to enable optimistic performance of the task. The principle includes environment principle of success and according to these, Taylor was an extreme success. The application of scientific method of management yielded significant improvement in productivity. This theory relates to the concept of productivity.

Taylor spent greater a part of his work on the problems of achieving efficiency on the shops' floor. Efficiency is ostensibly very important for the government, especially in the provision of business and technical support to smallholder agricultural businesses (agribusinesses). In the application of management theory, the scientific approach requires one to develop a science for each operation to replace opinion and "rule of thumb", determine accurately from science the correct time and the method of each job, set up a suitable organization to take all responsibility from the workers, except on actual job performance. Taylors emphasized on selecting and training of workers to improve

productivity. He argued that an average worker would prefer to be given a definite task with clear cut standards.

Mc Gregors theory x assumption about people are essentially description of managerial style produced by Taylors ideas, according to him efficient business owners should continue to get government support as a way of rewarding productivity without limit. In his view output would be scientifically be determined and it also efficiency will automatically give rise to improved productivity

2.7 The Conceptual Framework

Independent Variables

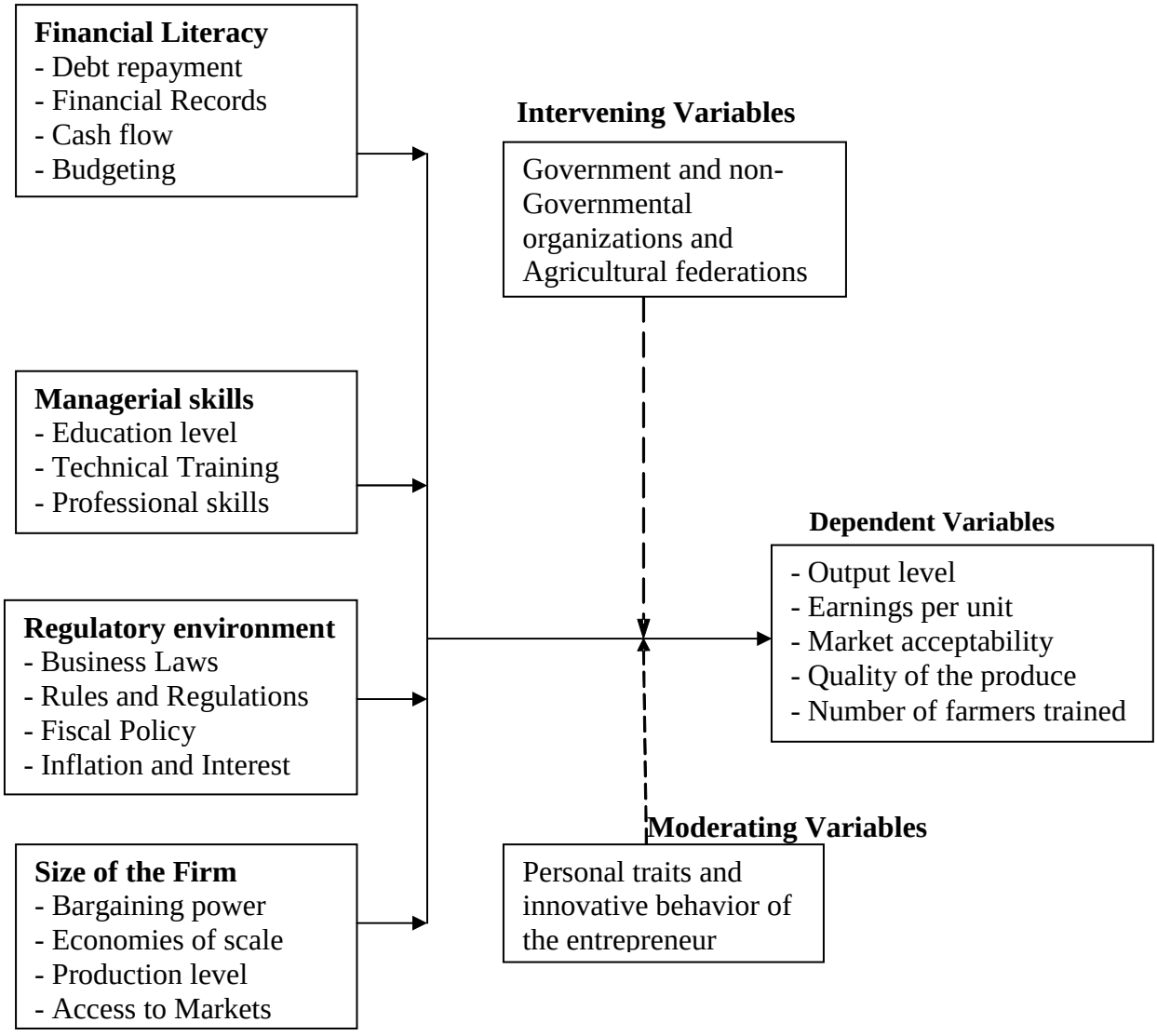

Figure 2.1 Conceptual Framework

The figure above on the conceptual framework brings into view the interaction of the factors that could influence performance of MSEs in Nyamache Sub-County. Financial Literacy variable as an independent factor includes the following indicators: maintenance financial records, the business' cash flow, debt repayment and budgeting. Prevailing regulatory environment also is an independent variable which covers such factors as interest rates, inflation, exchange rate and the economic policy such as fiscal and monetary policy. Managerial skill as an independent variable includes the indicators of education level, training and professional skills. The size of the firm looks at bargaining power of the enterprise during purchase and sale of inputs and outputs, the level of mechanization achievable on the scale of produce and which equally can determine the production levels and if economies of scale can be achieved at that level. These factors were assessed to determine how they influence performance of micro and small enterprises in Nyamache Sub-County, performance can also be looked at in terms of the level of commercialization of the farming activities, production level or output, earnings realized from sale of outputs, acceptability of the outputs realized, quality of the produce, the number of enterprise owners trained and Cost efficiency. Influence of government support and NGOs together with the personal traits of the entrepreneur on their business' performance were considered intervening and moderating variables respectively and were not subjects of analysis in this study.

2.7 Summary of Literature Review

From the literature review, it was noted that agri-based enterprises have about the same problems as experienced in Europe, the United States, Nigeria, and South Africa and in Kenya. Technological assistance, financial management, economic variables including access to markets and educational level and training needs of farmers production process and design offer specific knowledge conducive to form expansion and increase owners flexibility. However detailed exploration and analysis of the relationship between education and production performance of farming enterprises in developing countries has not been achieved.

The main reason why developing countries farmers and traders have complexity in management is that most farmers especially in the clusters have relatively less education. They only try farming as an alternative and do not venture to concentrate on it as a

primary occupation but rather divert their attention to other attractive ventures. Work is needed to improve the prevalent perception held by the public that agriculture is ‘something you do when there is nothing else left for you to do’. This negative attitude is damaging. A positive image of agriculture as a modern sector is crucial to both attract young entrepreneurs, and to give small farmers the chance to transform their subsistence agriculture into effective businesses.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter covers the research methodology under the following topics, research designs, and target population, sample size and sampling procedures, methods of data collection, validity and reliability of Instruments, operation definition of variables and techniques of data analysis.

3.1 Research Design

The study was conducted under the descriptive survey research design. This involved an attempt to collect data from the population in order to determine the current status of that population with respect to one or more variables (Kombo and Tromp 2006) it involved collection of quantifiable information from a sample. This survey method was suitable in this study because it described an existing phenomenon by asking individuals about the perspective attitudes and values. It explained and explored the status of two or more variables at a given point in time, in this study the researcher surveyed producers, traders and middlemen in the agricultural value chain and further gathered information from farmers themselves.

3.2 Target Population

Population is defined as an entire group of individual's events or objects having a common observable characteristic. According to Mugenda and, Mugenda (2006) in order to provide an accurate and reliable description of characteristics, attitude and behavior of its members a sample of the population studied must be sufficient. The target population was drawn from Nyamache Sub-County. The table below shows Wards of Nyamache Sub-county and the main trading centers for each ward. Small-scale enterprises licensed by the County council of Nyamache and those agribusinesses in Ministry of agriculture, livestock and fisheries (Nyamache office) data base between January and December 2013 are also shown. The data for each trading center was further classified to show enterprises involved in the agricultural trade, service and on farm agribusinesses. Total population of the licensed agricultural MSEs shown in the table below was 224 enterprises (152 in trade, 41 in service and 31 in farming).

Table 3.1 Distribution of Agricultural Enterprises in Nyamache Sub-County

Ward	Major Market Centers	Type of enterprise			
		Trade	**Service**	**Farm**	**Total**
Nyacheki	Isena, Nyacheki, Riomoro	20	6	4	30
Masige West	Turwa, Orogare, Nyabisia	22	8	5	35
Bassi Central	Maji Mazuri, Emenwa	24	7	5	36
Bassi Borabu	Riosugo, Bosansa	26	5	6	37
Bogetaorio	Nyangusu, Nyachogochogo	31	3	7	48
Nyamache T	Kiobegi, Gionseri, Nyamache	29	5	4	38
	Total	**152**	**41**	**31**	**224**

3.3.0 Sample size and Sampling Procedures

In selecting a sample one should select that which provide the required information. According to Kothari (2004) an appropriate sampling technique will be used since the entire population is not manageable. The study used probability sampling technique; stratified sampling was also employed where the researcher aimed at getting specific kind of information. It involved dividing the population into homogenous sub groups and then using a simple random sampling to collect the sample. The objective was to divide them into non overlapping groups called strata, the research preferred this method since this method assumes that the sample is able to represent not only the whole group, but also the sub groups of the population. A sample of 10-20% of the population is acceptable in descriptive research, Mbwesa (1999). Taking the upper maximum limit of 20% out of 224 agribusiness operators in Nyamache, 45 were selected with the need to have sufficient statistical power. Stratified sampling ensured that at least one observation was picked from each of the strata. Purposive sampling was also employed in identifying the trade and agricultural officers involved in capacity building agribusinesses, Deming (1990) indicates that the sample design is appropriate in business research and describes this technique as important when the researcher targets respondents believed to have reliable information. By using stratified sampling method, disproportionately the sample from each ward is derived using the formula below.

$$\mathbf{n} = \frac{N\,(N1\times r)}{\{(N1\times r) + (N2\times r) + (N3\times r) + (N4\times r) + (N5\times r) + (N6\times r)\}}$$

Where

n = required sample size per ward

N = sample to be collected from the whole population

N1- N5 = population in each ward.

r = population standard deviation.

Table 3.2 Determination of Sample Mean and Standard Deviation

Ward	**No Agribusinesses (X)**	**(X-U)**	**(X-U)^2**
Nyacheki	30	-7.33	53.73
Masige West	35	-2.33	5.43
Bassi Central	36	-1.33	1.77
Bassi Borabu	37	-0.33	0.109
Bogetaorio	48	10.67	113.85
Nyamache Township	38	0.67	0.45
Total	**224**		**175.4**

U - 224/6 = 37.3 R - √175.4= 13.24

{(N1×r) + (N2×r) + (N3×r) + (N4×r) + (N5×r) + (N6×r)}
= {(30×13.24) + (35×13.24) + (36×13.24) + (37×13.24) + (48×13.24) + (38×13.24)}
= **2970.56**

Nyacheki	$\frac{45(30\times13.24)}{2970.56}$	=	6
Masige West	$\frac{45(35\times13.24)}{2970.56}$	=	7
Bassi Central	$\frac{45(36\times13.24)}{2970.56}$	=	7
Bassi Borabu	$\frac{45(37\times13.24)}{2970.56}$	=	7
Bogetaorio	$\frac{45(48\times13.24)}{2970.56}$	=	10
Nyamache Township	$\frac{45(38\times13.24)}{2970.56}$	=	8
Total Population Sample			**45**

3.4.1 Sample Size

Using the sampling tables, on a population of 224 small and micro enterprises operating in Nyamache Sub-county, 45 enterprises make up the sample size. Details on these enterprises were drawn from a list obtained from county council of Nyamache together with another list of farm business enterprises obtained from the Ministry of Agriculture livestock and fisheries offices in Nyamache. The study targeted to collect some basic information about these businesses such as, business name, physical location, and major trading activity description. The sample frame served as a guide to sampling and data collection.

3.5 Research Instruments

Data was collected through the use of questionnaires, structured interviews and observation. The Questionnaires for use varied in structure and content but they had both closed and open ended questions to enable the respondent to be free in providing the needed information as per the research study. In the questionnaires is a series of questions and other prompts for the purpose of gathering information from respondents especially on the frequency of occurrences, this was designed to make use of action verbs describing primary functions. The research utilized this instrument by filling in the bank spaces appearing after each question to reflect the response given. In other cases the researcher had to tick an appropriate option from a list of possible responses provided. Drop and collect questionnaire technique was used for farmers and MSE business persons not available at the time of interview.

Structured interviews were used to control the verbal exchanges between the respondents and the research owners. This tool listed possible questions to act as guidelines during the face to face interviews which helped the research to remain objective and focus on the study objectives. All questions were prepared beforehand and put across in the same order to each interviewee, this was aimed at guarding against free flow of the interview that may have resulted in irrelevancies and instead helped the study to stick to a fixed format.

Observations and attitude measurement were used to allow the researcher to view the behavior of respondents to take note both direct and unobtrusive observations especially in verifying the hypothesis as drawn earlier. The researchers wrote down exactly what

was seen in as many details as possible and went ahead to make inferences about what was being observed. Observations provided first hand information that was required especially when determining the attitude of farmers and business owners and its effects on performances (Sodhi et al 1994).

3.5 1 Pilot Testing

Piloting draws subjects from the target population and simulates the procedures and protocols that have been designed for data collection.

Pilot testing was conducted to check for validity and reliability of the research instruments. The sample for piloting constitutes 1-10%, Mugenda and Mugenda (2006) of the sample size and therefore it was carried out on only 8 agribusiness owners within Nyamache Sub-County. The questionnaires were distributed filled and collected for analysis, unclear sections were refreshed

3.5.2 Validity of Data Collection Instrument

Validity refers to the degree to which a method, a test or a research tool actually measures what it's supposed to measure. Wellington, (2000), Instrument validity referred to accuracy and meaningful inferences made based on the results obtained.

The researcher endeavored to produce a good interview guide and questionnaire which were not biased. The research depended on the respondents minds set and attitudes in order to get valid data. The content and face validity was addressed. Three independent judges from the Department were requested to assess the extent to which the items in the instrument address the objectives, as well as whether instruments are in a format which is easy to administer and use to ensure their effectiveness. Their inputs and general comments were taken into account in refining the instruments.

3.5.3 Reliability of Data Collection Instruments

Reliability is the judgment of the extent to which a test, a method or a tool give consistent results across a range of similar settings or conditions if used by different researchers. Le compte and Preissle (2004) defines reliability and claims that no research conducted in the social sciences world could achieve total reliability. He describes it as an extent to which studies could be replicated and assumes that a researcher using the same

methods could obtain the same results as those of prior study. The instruments reliability were determined by the test re-test method, whereby the questionnaire was administered to 8 agribusiness operators and farmers which is within the range of 1-10% of the sample size. After a period of six days the same was administered to the 8 respondents who participated in the previous instrument testing exercise. The reliability was ascertained by correlating the scores and correcting areas which could cause deviations. Using Karl Pearson's coefficient of correlation denoted as

$$\textbf{'r'} = \frac{\sum(Xi - X\square)(Yi - Y\square)}{\sqrt{\sum (Xi- X\square)^2 \sum (Yi- Y\square)}}$$

Where:

Xi = *i*th value of X Variable

X□= Mean of X

Yi= *i*th value of Y variable

Y□= Mean of Y

Using the above shown formula the reliability of items and the correlation value was 0.762 which was considered suitable to make accurate inferences. In addition well trained and skilled persons were asked to collect data. Data editing and coding were carried out to spot any inconsistencies or errors associated with data collection, and to minimize errors that occur during data entry and processing respectively.

3.6 Data Collection Procedures

Upon getting a permit from the National Council for science and technology and with a clearance from the university, Introduction letters were presented to the Sub-county agriculture livestock and fisheries office. Two sets of instruments was used to collect data and administered to the sampled population. Arrangements were made to meet the farmers and traders at a date and time convenient to the respondents while taking care to do so within the scheduled dates of the study. Questionnaires and interview guides were administered during the said meeting. The other information was collected through direct observation and this enabled the researcher to know and get the information that the respondents did not provide.

3.7 Techniques of Data Analysis

Data analysis refers to a variety of activities and process that a researcher administers to make certain decisions regarding the data collected from the field Mbwesa (2009). This

done in order to get meaning from data collected and be able to explain various features from raw data. It is also the process of inspecting, cleaning, transforming and modeling data with a goal of highlighting useful information that supports decision making, Rodgers and Hrovat(1997). According to Bryman and Cramer (1997), data analysis seeks to fulfill research objectives and provide answers to research questions. The study applied both qualitative and quantitative approaches. Quantitative data processing and analysis started with editing the questionnaires to minimize errors, this ensured completeness and consistency followed by coding the open ended data entry, The study also employed the statistical package for social sciences SPSS (XP) professional for data input, analysis and presentation of results. The results were interpreted and placed on frequency distribution tables in percentages that display systematically the results and give meaning of reported figures; these were used to provide an adequate statistical report to the findings. Qualitative data was analyzed and interpreted by organizing data into the key areas as per the objectives of this study.

3.8 Ethical Considerations

Confidentiality of all information obtained was observed. Permissions were sought from all relevant authorities before embarking on data collection. While analyzing data any exaggerations were eliminated and not accepted, the study strived to maintain high levels of accuracy. Personal or seemingly intrusive information was not solicited; where necessary absolute sensitivity and caution was exercised.

3.9 Operational Definition of Variables

According to Mugenda and Mugenda (2006) this refers to description of operations that are used in measuring the study variables. This includes research objectives, type of variables, indicators, measure and level of scale, data collection methods and data analysis methods which are put in a diagram to show how they interact with the variables. A variable can be defined as an empirical property that can take two or more values, in these study independent variables include, financial literacy, business management skills and education level, institutional factors of size and the regulatory environment. These were tested to asses if they are determinants of performance of Agricultural based MSEs; the dependent variable.

Table 3.3 Operationalization of the Variables

Objective Research Question	Variable	Type of Information	Data Collection Instruments	Scale	Data Analysis
To what extent does financial literacy influence the performance of agricultural MSEs in Nyamache Sub-County	**Independent** Financial Literacy	Financial records. Cash flow Debt repayment Budgeting Enterprise plans and gross Margin analysis	Questionnaire	Ordinal scale	Descriptive analysis
	Dependent	Efficiency in usage of finances for increased revenue for daily business operations and expansion	Questionnaire	Ordinal scale	Descriptive analysis
How does Managerial skills influence the performance of agricultural MSE's Nyamache Sub-county	**Independent** Education level and professional training on farming and business operation	Academic qualifications, literacy level, Technical knowledge Seminars and workshops attended,	Questionnaire	Ordinal scale	Descriptive analysis
	Dependent	Prudent decision making and use of business strategy realizing increased profits over time	Questionnaire	Ordinal scale	Descriptive analysis
Does regulatory environment influence the performance of agricultural MSEs in Nyamache Sub-County?	**Independent** Regulatory environment and economic variables	Permits and licences Taxation regime Interest rates Market structures Product standard enforcement	Questionnaire	Ratio	Descriptive analysis
	Dependent	Favorable government policies for businesses	Questionnaire	Ratio	Descriptive analysis

Objective Research Question	Variable	Type of Information	Data Collection Instruments	Scale	Data Analysis
How does the firm's size influence the performance of MSEs in Nyamache Sub-County	**Independent** Institutional factors of size	Access to credit Government projects support Economies of scale Bargaining power	Questionnaire	Ratio	Descriptive analysis (Mean)
	Dependent	Operational efficiency attained due to size	Questionnaire	Ratio	Descriptive analysis (Mean)

CHAPTER FOUR

DATA ANALYSIS PRESENTATION AND INTERPRETATION OF RESULTS

4.0 Introduction

This chapter presents data analysis, presentation and interpretation of results based on response rate of study, demographic characteristics of the respondents, and access to credit indicators by the agri-business owners, management skills of agri-business operators, regulatory environment of the businesses and firm size factors. The data was collected by the researcher and assistants whereby the researcher was one of the field officers who directly administered questionnaires to the respondents. The response rate is as illustrated.

4.1 Response return rate

This section shows the response rate of respondents who were targeted during the study. Quantitative data was sourced through administration of questionnaires whereby the respondents were farmers and other agribusinesses operators in Nyamache Sub-county

Table 4.1.0: Questionnaire Response Rate

Category	Sample	Returned	Percentage (%)
Farmers /Traders	45	40	89
Agri-business officers	4	4	100
Total	**49**	**44**	**95**

Table 4.1 shows that 45 agribusiness practioners were targeted in the study. Questionnaires were administered to all the 45 practioners targeted and 40 respondents answered and returned the questionnaires; this translates to an 89% response rate. Similarly the study targeted 4 agribusiness officers based within the sub-county and in this case the response rate was 100%. Overall 96% response rate was realized from agribusiness practioners and other agricultural officers to whom questionnaires were administered

Table 4.1.1: Key Informant Response Rate

Category	Sample	Response	Percentage (%)
Farmers	10	10	100
Extension officer	1	1	100
Total	**11**	**11**	**100**

In order to guide the study in the data collection process there was need to identify key informants to take the lead and introduce the research assistants to the targeted respondents, questionnaires were also administered to key informants. Table 4.1.1 shows a summary of the responses obtained and (100%) was achieved from key informants in this study. The researcher analyzed the data based on this response rate as it was considered to depict a true representation of study population.

4.2 Demographic Characteristics of Respondents

The study sought to establish the gender, age and location of the respondents in an effort to descriptively analyze and ascertain their demographic characteristics. The results on the gender distribution of the respondents are summarized in table 4.2 below

Table 4.2.0 Demographic Characteristics of the Respondents

Gender	Frequency	Percentage (%)
Male	31	72.09
Female	13	27.91
Total	**44**	**100**

The results indicate that 31 (72.09%) out of the targeted 44 were male while the rest 13(27.91%) were female.

To understand and the age distribution among respondents the research categorized the respondents age into a graduated scale for ease in data analysis. The responses obtained are shown below in table 4.2.1

Table 4.2.1: Ages of the Respondents

Age	Frequency	Percentage (%)
20 - 30	4	9.3
30 – 40	7	16.3
40 -50	12	25.6
50 and above	21	48.8
Total	**44**	**100**

The findings as presented in Table 4.2.1 indicate that respondents between 20-30 years of age were only 4 comprising of (9.3%). Within the age bracket of 30-40 there were 7 (16.3%) of the respondents, 12 fall between the age of 40-50 and the rest who constitute of (25.6%) and majority of the respondents are above 50 years.

The respondents are distributed in different locations. The study sought to establish the respondents' business location within the area of study. The study findings are presented below in table 4.2.2

Table 4.2.2: Location of the Respondents

Ward	No. of respondents	Percent (%)
Nyacheki	6	13.9
Masige West	6	13.9
Bassi Central	7	16.3
Bassi Borabu	7	16.3
Bogetaorio	9	20.9
Nyamache	8	18.7
Total	**44**	**100**

The study findings on the location of the respondents indicate that Bogetaorio Ward had a majority of respondents with 9 respondents accounting for 20.9% of the target respondents this was followed by Nyamache township Ward which had 8 (18.7%) respondents, Bassi Borabu and Bassi central had an equal number of respondents each with 7 (16.3%) and finally Nyacheki and Masige west also had the same number of respondents 6 (13.9%) respondents each.

As part of the demographic characteristics of the respondents, the study sought to enquire on the age of the businesses targeted. The study findings are summarized in table 4.2.3 below.

Table 4.2.3 Duration of Time an Agribusiness has been in Operation

Indicator	Response	Frequency	Percentage (%)
No of years a business has been in operation	0-1 Year	9	20.7
	1-3 Years	16	35.4
	3-10 Years	14	31.8
	10 years or more	5	12.1
Total		**44**	**100**

The results obtained show that 16(35.4%) of the agribusinesses have been in operation for a period of one to three years and 920.7 % of the respondents had only operated for less than a year. Between 3 and 10 years constituted 31.8 % of the sample, while those who had been in operation for more than 10 years were 12.1 % of the sample.

4.3 Financial literacy of the respondents

The study sought to find out how various factors interact and influence the performance of agricultural enterprises within the area under study. One of the indicators used in the study is the maintenance of business records in the analysis of financial literacy. The findings are summarized in table below

Table 4.3.0: Responses on Maintenance of Financial Records

Indicator	Response	Frequency	Percentage (%)
Agricultural MSEs which maintained financial records	Yes	24	53
	No	20	47
Total		**44**	**100**

24 (53%) agribusiness operators maintain records and 20(47%) do not, they only keep incomplete records with other records missing, these business records help track the performance of their agricultural enterprises.

The second indicator deployed by the study to gauge the financial literacy of the respondents is cash flow. The study sought to know the level of adequacy among agribusiness operators in relation to their cash flow by seeking responses to indicate the adequacy.

Table 4.3.1: Responses on the Level of Adequacy of Cash flows

Category	Frequency	Percentage
Level of adequacy of cash flow		
Very adequate	2	4.65
Adequate	5	9.30
Inadequate	28	65.12
Very inadequate	9	20.93
Total	**44**	**100**

The results obtained indicate that 86.05% (65.12%+ 20.93%) percentage of agribusiness operators were experiencing cash flow inadequacies which constrain their ability to meet their day to day financial obligations such as paying wages and input supplies while the rest 13.95% (4.65+9.30) are comfortable with the cash flow from their businesses.

Another indicator deployed to interrogate the respondent's financial literacy is as to whether agribusiness operators in the area under study prepare budgets. The responses obtained are shown in table 4.3.2.

Table 4.3.2: Number of Farmers that Prepared Budgets

Indicator	Response	Frequency	Percentage
Number of agribusiness operators preparing budgets	No	34	76.75
	Yes	10	23.25
Total		**44**	**100**

The study show that majority of agricultural business operators do not budget for their agribusiness operations, out of the 44 respondents, 33 do not prepare budgets accounting for 76.75% of all respondents while the rest (23.25 %) prepare budgets.

The study also sought to know whether agricultural business operators incurred debts of restocking their input supplies and whether they are able to pay back from income realized from their investments. Table 4.3.3 shows a summary of the findings

Table: 4.3.3 Number of Agribusiness Operators able to Repay Debt

Indicator	Response	Frequency	Percentage (%)
Agribusinesses able to repay Debt from internal operations	No	36	81.4
	Yes	8	18.6
Total		**44**	**100**

Out of 44 respondents 36 (81.4%) incurred debts of which most of them were not able to pay back while the rest 18.6% were able to repay the debts albeit with some difficulties

Table: 4.3.4 Earnings per Season from Agribusiness

Indicator	Response	Frequency	Percentage (%)
Earnings in a season	6000 or less	20	44.18
	7,000-20,000	9	20.94
	□20,000	15	34.88
Total		**44**	**100**

A majority of the agricultural enterprise operators earn less than Kshs 6000 from their business operations per season where a season in this case is defined a cropping cycle of the dominant agricultural commodity traded in the area under study. When asked whether the earnings are sufficient to support all their business operations the respondents indicated that they supplement their earnings from their main economic activity and they therefore undertake the agribusiness as a part time occupation.

4.4 Test of the Hypothesis 1:

The hypothesis states: "The financial literacy of agribusiness operators significantly influences the performance of their agricultural MSEs in Nyamache sub-county".

To test this hypothesis the researcher used the correlation approach whereby two sets of data one representing the adequacy of cash flow as an indicator of financial literacy was correlated against the earnings realized which in this case is used as an indicator of performance of the agribusiness enterprises under study. Cash flow is represented in the

analysis as the 'X' variable while earnings from agribusiness operations are represented as the 'Y' variable to effectively utilize the Karl Pearson coefficient of correlation 'r'. This co-efficient is calculated using the formula:

$$\textbf{'r'} = \frac{\sum(Xi - X\square)(Yi - Y\square)}{\sqrt{\sum (Xi- X\square)^2 \sum (Yi- Y\square)}}$$

Where:

Xi = i^{th} value of X Variable

X□ = Mean of X

Yi = i^{th} value of Y variable

Y□ = Mean of Y

The correlation result obtained was 0.832. This indicates a positive strong relationship between cash flows (financial literacy) and (earnings performance). Based on the correlation result we accept the alternative hypothesis and reject the alternative hypothesis hence confirm that indeed financial literacy has a significant influence on the performance of agribusinesses in Nyamache sub-county.

4.5 Managerial Skills of Agribusiness Operators

The study sought to establish the level of education and any other formal training as indicators of their managerial skills. The responses obtained are presented in table 4.5.0 below.

Table 4.5.0: Education Levels of Agribusiness Operators

Level of Education	Frequency	Percentage (%)
Primary	5	11.64
Secondary	26	60.48
Diploma	9	20.95
Degree	3	6.93
Total	**44**	**100**

The findings show that the respondents posses the following academic qualifications: Primary 5 (11.64%), Secondary 26 (60.48%), Diploma 9 (20.95%) and degree 3 (6.93%). Out of 43 respondents, the findings of the study showed that majority of participants are secondary school graduates which comprise (60.48%).

Besides the formal academic qualifications the study sought to establish whether the respondents have received any other forms of training formal or informal which are equally important in determining the business management skills of respondents. The findings are shown in table 4.5.1

Table 4.5.1 Trainings Received by Agribusiness Operators

Agribusiness Operators trained	Frequency	Percentage (%)
No	29	67.5
Yes	15	32.5
Total	**44**	**100**

The results show that 15(32.5%) of the respondents posses professional qualifications relating to the operation of agricultural enterprises having attained some level of training on business management, crop and animal husbandry. The rest accounting for 32.5% had no training or business management skills.

In recognition of the role played by extension and trade officers in improving the business management skills of the entrepreneurs the study sought to establish the level of interaction between agribusiness officers and the entrepreneurs. The responses are tabulated in table 4.5.2 below.

Table 4.5.2 Interaction Level with Agribusiness Officers

Category	Respondents	Frequency	Percentage (%)
Level of interaction	Passive	37	83.72
with officers	Active	7	16.28
Total		**44**	**100**

The level of interaction with extension officers was interrogated for purposes of seeking advice and training from professionals deployed to offer extension services. Table 4.5.2 shows the responses obtained. Out of the 44 respondents targeted, 37(83.72%) said their interaction with agribusiness officers is passive and the remaining 7 accounting for (16.28%) indicated that their interaction with agribusiness officers is active.

The quality of inputs sourced in this study is taken as an indicator of the business operator's managerial skills and therefore was interrogated. The inputs quality aspect was

analyzed in terms of whether the quality of inputs was a factor in determining the agricultural business performance. The responses obtained are presented in

Table 4.5.3: Quality of Farm Inputs

Category	Response	Frequency	Percentage (%)	Cumulative percentage
Farm inputs used	Good quality	37	84	84
	Poor quality	7	16	100
Total		**44**	**100**	

Of the 44 farmers who responded 84% confirmed that their inputs are sourced from the certified and recommended outlets were of good quality leading to higher productivity while the other 7(16%) intimated that their inputs are poor quality and this results in low productivity.

The study sought to establish the relationship between the output realized at farm level and technical support services provided to the agricultural business operators build their managerial capacity. The responses obtained are shown below in table 4.5.4

Table 4.5.4: Output Realized after Receiving Technical Services

Indicator	Increment in Output	Frequency	Percentage (%)
Increments in output from technical support services	0-10 Kgs	6	13.5
	11-30 Kgs	14	31.0
	31-70Kgs	9	20.5
	70Kgs and more	15	35.0
Total		**44**	**100**

The results obtained indicate different increments to the primary producers upon receiving technical support from the extension and trade officers. The biggest proportion (35%) of the respondents experienced a bigger increment in output upon receiving technical support of over 70kgs. 13.5% of the respondents realized about 10kgs increment in output

4.6 Test of Hypothesis 2

The hypothesis states: “There is a significant relationship between the performance of agricultural MSEs and the managerial skills of the entrepreneurs in Nyamache sub-county” To test this hypothesis the researcher sought investigate the relationship between

two sets of data i.e. trainings received as an indicator of the managerial skills of respondents and their earnings per season as an indicator of performance. The two indicators are denoted as 'X' and 'Y' respectively. In this respect the Karl Pearson's Co-efficient of correlation was employed and the resultant coefficient was calculated as 0.756 which indicates a strong positive relationship between the performance of agricultural business performance and the managerial skills of the entrepreneurs

On the basis of the results obtained from the correlation test, we accept the alternative hypothesis which states that there is a significant relationship between the performance of agricultural MSEs and the managerial skills of the entrepreneurs.

4.7 Regulatory Environment Influence of Agricultural MSEs'

The environment in which agricultural businesses operate can be analyzed using various other variables such as industry entry restrictions, product quality standardizations, trading rules, tax regimes, tariffs and non tariff barriers, other indicators include licenses and permits to be provided by the industry regulators, in order to determine the relationship between performance and the regulatory environment the study sought responses as to whether existing industry regulations have an impact on their earnings, the responses obtained are tabulated below.

Table 4.7.0: Influence of Industry regulations on agribusinesses performance

Indicator	Response	Frequency	Percentage (%)
Influence of restrictions	Yes	27	58.4
on performance	No	17	41.6
Total		**44**	**100**

The results presented in table 4.5 shows that 58.4% of the respondents have experienced poor performance on their farm based and off farm agricultural enterprises resulting from entry restrictions such as permits and licences. Out of 44 farmers 17(41.6%) of them are of the opinion that permits and licences had an adverse effect on their profitability.

4.8 Size of agricultural enterprises

The study sought to find out whether business expansion and growth is influenced by the size of the agricultural enterprise; this query is based on the fact that the growth rate or

expansion of a business is an indicator of performance. Preceding literature review indicate that large businesses have operational advantages and access to finance while small scale businesses are disadvantaged by their small scale of operation. Table 4.8.0 below summarizes the findings as provided by the respondents.

Table 4.8.0: Firm Size Influence on Business Growth and Expansion

Indicator	Response	Frequency	Percentage
Agricultural MSE growth and expansion rate	Slow	33	75
	Fast	4	9
	Moderate	7	16
Total		**44**	**100**

Table 4.8.0 above indicates that out of 44 agribusiness operators that responded 26 of them (60.4%) said that they are experiencing a slow growth rate because of their size, 4 (9.3%) indicated that their agribusiness growth rate was fast and 14 (30.3%) indicated that the growth rate was moderate adding that the growth rate is has been affected predominantly by their small size

The study sought to establish whether operators had a poor bargaining power as a result of their business sizes or scale of operation. The findings as provided by the respondents are presented in table 4.8.1 below

Table 4.8.1: Firm Size Influence on Bargaining Power

Indicator	Response	Frequency	Percentage (%)
MSEs Bargaining power	Yes	32	72
	No	12	28
Total		**44**	**100**

The research findings as presented in table 4.8.1 above it is shows that 32 (72%) of the 44 respondents have been experiencing a poor bargaining power. On the other hand 12(28) % of the respondents however cannot confirm that their poor bargaining power can be attributed to their size or scale of operation.

The research sought to establish if the MSEs limited market access is influenced by the sizes of their firms. The findings are presented in table 4.8.2 below

Table 4.8.2: Firm Size influence on Market Access

Category	Response	Frequency	Percentage
Firm size influence	Yes	40	90.06
Market Access	No	4	9.94
Total		**44**	**100**

Out of the 44 respondents 40 (90.06%) indicated that they had difficulties reaching some far markets because of the costs involved, tolls charges, fees and the quality specifications set out for certain commodities in certain markets due to their disadvantages. Only 4 of the respondents accounting for 9.94% indicated that their size is not responsible for their limited market access.

4.9 Qualitative Data Analysis

Qualitative data analysis was based on the key informant interview administered to the 10 agricultural enterprise operators and one agribusiness officer. The agribusiness officer based in Bogetaorio ward which had the highest number of respondents pointed out that the area is a high potential ecological zone for horticultural high value crops which would fetch high returns for agricultural enterprise operators and traders. The farmers needed appropriate agronomic training to improve productivity and to carry out agricultural based businesses to optimal levels, equally the other off-farm agribusiness operators need trainings on business planning and management to take advantage of the high production levels likely to be realized from the farmers in the area. The agribusiness officer also explained that the limited technical and business support available to farmers and other agribusiness operators is a result of lack of adequate transport pausing mobility challenges in reaching their clients. Among other challenges the agribusiness officer mentioned poor infrastructure especially dilapidated road network and lack of storage facilities, few extension officers in the region while the areas to be covered were very expansive and inaccessible.

The agribusiness owners interviewed gave responses which showed that they were not aware of existence of business training services and need specific projects rolled out to

address their business management deficiencies. These can be sponsored by the government and other development partners. Out of 10 agricultural business operators interviewed 6 (60%) confirmed that they are only aware of the extension services for best farm practices which existed in 1970s and 1980s. The respondents are not aware of the existence of business support service through government ministries and specific projects meant to boost agribusiness operations.

Most farmers felt that the trainings done are not well publicized and that a few participants who benefited are those called for the seminars as individuals depending on their proximity or relationship with the organizers. However, they concluded that the agribusiness staff needs to be increased in numbers to be more visible and to reach as many agricultural business operators as possible.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter covers a summary of findings as well as discussions and conclusions based on the study findings. The chapter also has recommendations while the last part of the chapter contains the study's contributions to knowledge and suggests other areas in which further research can be carried out.

5.1 Summary of Findings

An entrepreneur's attributes such as gender, age and location are the demographic independent variables that may influence the performance of an agricultural enterprise. Out of 43 respondents targeted, 31 (72.09%) were males and 12 (27.91%) were females this shows that there were more males than female respondents. In terms of age the results obtained shows that agribusiness operators of all ages participated with majority of the participants belonging to age 50 years and above and minority being between ages 20-30 years. The data shows that most of the agricultural businesses (56.1 %) in existence were less than three years old. 68.3 % of agricultural businesses that had been in operation for a shorter period (less than one year) reported that their agricultural business performances were on the decline.

Financial literacy of the respondents was also a factor of performance being interrogated in this study; results of the findings show that 53% of the respondents maintain records and 47% do not have any records. In terms of cash flows, bigger proportions (65%) of the respondents have inadequate cash flows on the other hand 76% of the respondents do not prepare budgets while the rest accounting for about 24% prepare budgets. Overall these are indications of low financial literacy among the agribusiness operators in the study area based on the indicator results analysis.

As per the research findings, the majority of the respondents had acquired some level of education primary 11.64%, O level 60.48%, Diploma 20.95% degree 6.93%.The interaction level the agribusiness operators and the extension officers on the ground stand

at 84% active and 16% passive pointing to low levels in technology transfer and information dissemination. The results are an indication of low managerial skills amongst the agribusiness operators.

The regulatory environment within which the agribusiness operations are being undertaken is a performance factor resulting from the operational costs encountered in complying with the rules and regulations governing the industry. 59% of the respondents confirmed that indeed the permits, licenses and membership subscriptions contribute to higher operational costs hence poor performance the rest (41%) of the respondents however are not in agreement with this statement. On this basis the results generally indicate that the regulatory environment is a major that influence the performance of agricultural MSEs in Nyamache Sub-County.

The study sought to establish whether the growth and expansion rate an indicator performance of the agricultural MSEs can be attributed to the size or age of the firm.75% of the respondents were of the opinion that indeed they are experiencing a slow growth rate which mainly is because of their size while 16% of them attribute their moderate growth rate to their size. 9% of the respondents however differ and cannot directly link their growth rate to their size. The research findings also shows that 32 (72%) of the 44 respondents have been experiencing a poor bargaining power. On the other hand 12(28) % of the respondents however cannot confirm that their poor bargaining power can be attributed to their size or scale of operation. These findings is evidence enough that in the area of study, firm size has an influence on their performance

5.2 Discussion of Findings

More males than female respondents participated in this study. However, according to Ministry of Labour and Human Resource Development-GoK, (2004), female entrepreneurs tend to mainly concentrate on micro-businesses due to gender inequalities in income distribution. The research findings may probably be explained by the fact that Kenya like most African countries is a patriarchal society where men dominate in most spheres of life and especially so in economic matters. It is important to note that within

the Kisii community, social roles and norms still dictate segregation of activities by gender.

The research sought to establish the duration of time that the agricultural MSEs have in operation since inception, young businesses face serious challenges that make the owners consider their businesses as doing poorly within the first year of start up. This finding is clearly supported by the literature reviewed at the beginning of the study. It also shows that most micro and small businesses hit their peak at the fifth year. After the fifth year, most entrepreneurs seem to suffer from what may be described as entrepreneurial burnout and the excitement declines. This may partly explain why most businesses that are more than 5 years and above consider their businesses as being in the process of failing. This finding seems to confirm the observation made by Longenecker et al., (2006) that entrepreneurial burnout may lead to entrepreneurs losing interest in one business venture and instead look out for other opportunities.

In relation to respondents' financial literacy the research focused on the ability of the agribusiness community to maintain income and expenditure records, business cash flow adequacy, budgeting and ability to repay debts when borrowed. In terms of records maintained a good proportion (47%) of the respondents, do not keep any forms of records especially amongst the farmers; however most of the other off farm businesses maintain incomplete records which averaged (53%), this can be utilized to construct complete records. The Records come in handy when carrying out farm budgeting and planning and they are also important since they guide business operators keep track of costs and income and eventually profit determination.

The study findings also indicate that cash flows resulting from the agricultural enterprises operations are either insufficient or poorly recorded. Up to 65 % of the respondents are not satisfied with the cash flows from their enterprises. The finances are seasonal with some periods having enough cash while at times liquid cash is totally lacking, this leads to inability to meet their day to day financial obligations. These findings are in agreement

with Hardwork (1997) who explains that the basic economic problem is that of allocating scarce resources among competing ones.

The results obtained also signify that agricultural business operators are also unable to repay debts incurred during the production or procurement period and attribute this to insufficiency in cash flow. The study revealed that 36(81.4%) out of 44 incurred short term debts of which many were not able to pay back due to various reasons. Some of these reasons include lack of a ready market for their commodities, poor prices and high input costs and they can therefore not breakeven to allow them recoup production costs.

In terms of budgeting many agribusiness operators carried some form of budgeting whether in the prescribed format or in some informal way, the respondents not budgeting also indicated that their purchases were based on need to need case (impulse) otherwise nearly half of them budgeted. This is in line with the findings of Kapoor (2011) whose findings revealed that planned spending through budgeting is the key to achieving organizational goals and future financial security. In his research he explained that most projects fail within the first few years of formation, due to financial difficulties caused by poor financial management.

The study findings show positive relationship between financial literacy as interrogated by the above discussed indicators on business performance. We may therefore infer that not only do businesses need to have adequate access to finance but they also need the financial literacy to be able to optimally utilize whatever resources at their disposal. Existing policy interventions should be geared towards successful linkages and support services to farmers and other agricultural businesses such as training on investment and financial management to empower the recipients make prudent use of the credit advanced. Effective financial management would help expand their businesses and diversify to related ventures aimed at improving their ability to generate a constant flow of income, to fulfill repayment schedules as spelt out by financiers.

Managerial competencies are sets of knowledge, skills, behaviors and attitudes that contribute to personal effectiveness (Hellriegel et al, 2008). Managerial competencies are very important to the survival and growth of agricultural MSEs. Martin and Staines (2008) found that lack of managerial experience and skills are the main reasons why new firms fail before their fifth birthday. The research sought to interrogate the academic qualifications, trainings attended and the technical services received by the agribusiness operators consulted as indicators of their managerial competencies. It was ascertained that all the agricultural enterprise operators interviewed had some formal education acquired either from formal academic institutions or from other trainings conducted by government agencies and other development partners. The skills gained assist the respondents in making crucial decisions relating to their business operations based on available information, this in the long run has a significant influence on the agribusiness' performance. Some of the trainings the operators had attended include those organized by Smallholder horticultural marketing Programme (SHoMaP) being implemented in the area in collaboration with international fund for agricultural development (IFAD) and therefore had professional skills acquired through the projects' training sessions. Similarly one other respondent had attended a training organized by ministry of trade on business management and investment opportunities targeting MSEs.

Respondents with professional skills were able to apply the knowledge in their day to day operations of their businesses. Informal trainings are also carried out through peer seminars among the operators on best agricultural practices, financial management and identification of investment opportunities during self help group meetings commonly known as 'chamas'. These informal trainings have significantly contributed to the pool of business management skills exhibited by some of the respondents outside the formal trainings. The levels of interaction with extension staff is also taken to be an indicator of managerial skills since during the interaction, the agribusiness operators gain technical knowledge and skills to improve their business managerial skills. According to Fowler and Rock (2010) lack of training can impact negatively on growth of projects.

The regulatory environment in this context includes Economic factors which have a direct impact on the potential attractiveness of some business ventures and consumption patterns in the economy. These factors have significant and unequal effects on organizations in different industries and in different locations. Economic variables include the fiscal and monetary policies of the government, inflation, interest rates and foreign exchange rates, taxation rates and licensing procedures. Kenya's current economic environment is characterized not only by high interest rates but also by low growth rates (low consumption) high inflation rates and declining exchange rates. All these factors can affect sales, revenues and market potential of new MSEs (The Economist, 2009).The extent of competition and potential competition also impact on the market potential and growth opportunities of agricultural MSEs. The study findings showed that out of 44 agricultural MSEs who responded 27 of them which is (58.4%) said that the regulatory environment such as permits and licences had an impact on their profitability. These findings agree with Ehlers and Lazenby's (2007) study which found out that these variables influence the demand for goods and services and hence the performance MSEs such as small holder agricultural enterprises. The effects are brought about by the fact that the restrictions increase the cost of operation and therefore overall expenditure.

Overall small and micro agricultural enterprises incur higher operational costs. The firms suffer from diseconomies of scale, the MSEs have been experiencing difficulties in accessing lucrative markets for their products Market accessibility can be influenced by the size of the firm, micro and small enterprises may not be able to access far off markets, on the other hand larger companies enjoy the advantages of economies of scale and can therefore be able to access far off markets. Given the importance of enterprise age and size in access to credit, short life expectancy of MSEs, especially informal ones, is an impediment to market access. As part the study findings, the growth rate and expansion of agricultural MSEs is directly influenced by the size of the firm, data obtained show that a majority of the respondents (75%) are experiencing a slow growth rate which they directly attribute to their micro or small scale of operation.

High mortality rates experienced by most MSEs mean lost opportunities not only for accumulating business experience but also for building credibility and reputation that are necessary for accessing credit from financial institutions and suppliers of inputs and products. The findings are in agreement with existing literature which often links the diseconomies to high managerial costs which are not affordable to small size firms hence encountering limits placed by bounded rationality (Penrose, 2000).

5.3 Conclusions

The aim of this study was to examine the extent to which performance of agricultural MSEs is associated with business operation factors (viz., financial literacy, education and managerial skills, regulatory environment and firm size). The study utilized percentage tables and correlation models in trying to analyze the data obtained.

The empirical findings on the farmers' personal characteristics and demographic data reveal a bias in gender distribution on the part of the respondents. The study therefore concluded that most agricultural MSE operators in Nyamache Sub-county are males and therefore agricultural based economic activities are dominated by male gender especially on agribusinesses dealing in trade, brokerage and transportation of agricultural produce. In this regard there is need to put in place strategies that would encourage more females to participate effectively in non-farm based activities and be well distributed along the agricultural value chains.

As per the study findings in terms of the ages of the respondents the majority of agricultural MSE operators who operate the agribusinesses are aged more than 50 years or more and the lowest are between the ages of 20-30, the study therefore concluded that most of the youth do not participate in agricultural enterprises while the aging population who have opted out of other professions (retirees) are actively engaged in agriculture as an economic activity either directly or indirectly. There should be interventions to attract the young and energetic population to these ventures to guarantee its growth and secure its future.

The study concluded that most agricultural enterprises are micro in size and are also at their infancy having been operation for less than 3 years. Significant proportions are also less than ten years of age and therefore facing the challenges brought about by age and size.

The findings also concluded that the level of education and training on agricultural best practices and business management has a direct and positive relationship with the performance of the agricultural enterprises studied which was analyzed in terms of earnings realized per season. The participants with basic education i.e. primary and secondary level qualifications are the majority of the participants involved in agricultural based economic activities. Owing to the fact that this group of respondents posses no additional skills or training, efforts should be put in place to facilitate their more active participation because they have no alternative jobs , these are their primary occupations. It also concluded that irrespective of the level of education all agribusiness operators require specialized training to equip them with skills on current technologies and bring them up to date on production and market trends.

The findings also revealed low levels of interactions with the agribusiness officers on the ground implementing government projects to transform agriculture from subsistence focus to commercial ventures while providing demand driven trainings.
The regulatory environment directly impacts on the performance of agricultural MSEs as it stipulates trading rules, taxes and licences which are direct costs that work to reduce the incomes realizable by the enterprises.

5.4 Recommendations of the study

The results are relevant for policy makers and owners MSEs in developing economies. Evidence shows that micro- and medium-sized agricultural firms in these countries still rely on internally generated sources to support their growth and find it very difficult to obtain external finance largely due to their poor financial management history. Thus, the governments in developing economies need to pay increased attention to small- and medium-sized enterprises financial literacy rather than access where they have put a lot

of emphasis. In addition, concessional loans for agricultural MSEs should have low interest rates in order to ease the loan burden on the emerging ventures.

In order to overcome environmental challenges that constrain agricultural MSEs from achieving growth and their full potential, the following recommendations are suggested:

Agricultural MSEs should be able to produce business plans that forecast cash flow requirements, have an operational plan and demonstrate viability and sustainability in order to secure and effectively manage finance. The agricultural MSE owners may not be able to do this on their own but with the help of agribusiness officers' expertise, the plans can be developed.

Thorough market research is needed to ensure that there is adequate demand for the products or services being offered by emerging agricultural MSEs.

Choice of the business location needs to be considered carefully in order to minimize distribution costs, meet demand and beat competition. There is also need to choose the product or service that appeals to customers in order to fully satisfy customer needs.

Provide up-to-date training programmes that focus on the needs of entrepreneurs rather than outdated programmes. It is important to include technology in the school curricula as well as adult education programmes to ensure that the wider population becomes more familiar with technology.

It is beneficial to the growth and sustenance of new agricultural SMEs to have reforms in the regulatory environment in order to reduce red tape and lengthy procedures in the registration and licensing of new businesses.

Tax incentives need to be put in place to favor new venture creation and development. Interest rates reviews should consider the uniqueness of agricultural MSEs. Further, Transport and communication facilities as well as reliable power must be provided in rural areas where a majority of agricultural MSEs are located.

Unfortunately, the research does have some limitations. The most notable one is related to the lack of complete data for some proxy variables (e.g., short- and long-term direct earnings directly derived from agricultural activities mainly because such information is juggled up with data relating to earnings from other sources. These variables are not included in the analysis. In addition, the empirical results are derived from a sample of only one Sub-county which is a high potential agro ecological zone and may not be a good representation of all Kenyan Sub-Counties. The study will improve if more agricultural MSEs with full data records from different counties are included in the sample as farm and off farm agricultural enterprise characteristics vary from region to region. The analysis will beneficial if more of the smallest (micro) and youngest (less than 5 years of existence) firms are included in the dataset in order to examine whether the impact of the identified determinants of performance differ between the different groups.

5.5 Contribution to knowledge

While examining the factors which influence performance agricultural MSEs in Nyamache Sub-County, the study made the following contributions to knowledge.

Table 5.5.0 The study's contribution to knowledge

Research question	Contribution to knowledge
To what extent does financial literacy influence overall performance of agricultural MSEs?	Effective financial management of internally generated resources would help agricultural MSEs expand their businesses and diversify to improve their ability to generate a constant flow of income and fulfill repayment schedules Increased attention to small- and medium-sized enterprises should focus on financial literacy rather than the emphasis on access before seeking external credit

How do managerial skills influence the performance of agricultural MSEs in Nyamache Sub-County?	The study contributed to the knowledge that people with basic education have agricultural businesses as their primary occupations and technical trainings aimed at equipping them with agricultural and business skills should be rolled out. In terms of training, study reveals that all groups of agribusiness operators irrespective of education levels require further training.
To what extent does regulatory environment, influence the performance of agricultural MSEs' performance?	Entry restrictions such as lengthy procedures in the registration and licensing of new businesses increase the cost of operation and therefore impact negatively on overall agribusiness profits. Requirements that agribusinesses are members of SACCOs and marketing associations help regulate the agricultural sector. They also provide the MSEs with the advantages of economies of scale and overall they boost their performance
How does the firm's size influence the performance of the agricultural micro and small business enterprises?	The size of an agricultural business enterprise reflects its market experience and affects its ability to grow and move to the next size class. Agricultural MSE slow growth rate and inability to access some markets can directly be attributed to their micro or small scale of operation, Generally small and micro agricultural enterprises incur higher operational costs due to their size.

5.6 Suggestions for further studies

Similar studies should be replicated in other Sub-Counties in Kenya to assess the performance agricultural enterprises especially considering the unique features of agribusinesses from region to region. The case studies should take into account the specific differences in terms of infrastructural endowment and location of the business units. Further studies on how to increase the number of youths participating in agricultural activities ought to be undertaken, while measures to improve record keeping for farm based enterprises need further examination to devise simple templates on record management.

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APPENDIX I

INTRODUCTION LETTER

MASIRA INNOCENT MOKAYA
P.O. BOX 3184-00200
CITY SQUARE, NAIROBI
CELL PHONE 0725 738 277
8TH AUGUST 2013

THE MINISTRY OF AGRICULTURE,
NYAMACHE SUB-COUNTY
P.O BOX 185
NYAMACHE

Dear Sir,

RE: REQUEST TO CARRY OUT ARESEARCH IN YOUR AREA

I am a student at the University of Nairobi pursuing a master's degree in Project planning and management. As part of my course, I am required to carry out research on the factors which determine the performance of micro and small agricultural enterprises, within Nyamache region. Of interest are trade, service and on farm enterprises operating as agribusinesses as inventoried in your existing database

I also have the pleasure to inform you that your staffs are part of the respondents in this research. The researcher will maintain strict confidentiality and the identity of the participant will not be linked to the information received by the researcher.

Thank you.

Sincerely,

Masira Innocent Mokaya

APPENDIX II

TRANSMITTAL LETTER

MASIRA INNOCENT MOKAYA
P.O. BOX 3184-00200
CITY SQUARE
NAIROBI
08 /08/2013
CELL-PHONE: 0725 738 277

To

ALL RESPONDENTS

Dear Sir/Madam.

RE: REQUEST TO COMPLETE A RESEARCH QUESTIONNAIRE

I am a student persuing a masters of Arts degree in project planning and management at the University of Nairobi. As a partial fulfillment for the award of the degree, am expected to carry out a research study whose topic is "the factors which determine the performance of micro and small agricultural enterprises, in Nyamache Sub-County, Kisii County".

I am kindly requesting you to complete this research questionnaire to enable me to complete my study. The information you shall give will not be used against the stated purpose nor will it be accessed by any other person but me, kindly be honest and co-operate in providing the information.

I highly appreciate and thank you in advance for giving you invaluable time to complete the questionnaire. Thank you.

Sincerely,

Masira Innocent Mokaya

APPENDIX III

FARMERS AND AGRICULTURAL TRADERS QUESTIONNAIRE

The purpose of this questionnaire is to collect information about the factors which influence the performance of micro and small agricultural enterprises, in Nyamache Sub-County, Kisii County. This will help in identifying possible solutions to the problems faced. The answers you give will be important to the study. Kindly try to answer all the questions to the best of your knowledge. The information filled in the questionnaire will be treated with utmost confidentiality.

Kindly tick as appropriate to provide the right information where applicable.

PART A: PERSONAL DATA

1. Gender: Male ☐ Female ☐

2. Age 20-30 ☐ 30-40 ☐ 40-50 ☐ 50 and above ☐

3. Physical Location (Indicate nearest major market center)……

4. Name of farm/business……..

5. Number of employees either casual or permanent and includes those paid and the unpaid

   a) 0-4 Employee ☐
   b) 5-9 Employee ☐
   c) 10 or more ☐

6. Size of the farm (applicable to farmers)

   a) 0 - 2 Acres ☐
   b) More than 2 Acr ☐

7. Year when the farm/business came into operation

   a) 0-1 Years ☐
   b) 1- 3 Years ☐
   c) 3-9 Years ☐
   d) More than 10 ye ☐

8. Kindly identify the primary activities of your business?

   a) Farming ☐
   b) Other agricultural support ser ☐ s

PART B: FINANCIAL MANAGEMENT INDICATORS

1. Do you maintain any farm/business financial records?

Yes ☐ No ☐

2. What is your level of satisfaction in terms of cash flow from your agricultural enterprise?

a) Very satisfied ☐

b) Satisfied ☐

c) Dissatisfied ☐

d) Very dissatisfied ☐

3. Are you able to repay all your debts in time or you have been facing serious difficulties in meeting your financial obligations?

Yes ☐ No ☐

4. Do you prepare partial or complete farm budgets to assist you maintain your expenditure within the planned levels?

Yes ☐ No ☐

5. Do you have enterprise specific plans or gross margin analysis to help you operate the most economically viable enterprise with relative advantages?

Yes ☐ No ☐

6. What are your total earnings from the sale of farm produce during the month?

a) Less than 5,000 ☐

b) 6000-10,000 ☐

c) 11,000-15,000 ☐

d) More than 20,000 ☐

7. What are your expected earnings under ideal conditions?

a) Less than 5,000 ☐

b) 6000-10,000 ☐

c) 11,000-15,000 ☐

d) More than 20,000 ☐

8. What was the source of the start-up capital for your business?

a) Friends and relatives ☐
b) SACCO ☐
c) Bank ☐
d) Merry go round (Chama) ☐
e) Agricultural Finance Corporation ☐
f) Any other (please specify)…….

PART C: MANAGERIAL SKILLS INDICATORS

1. What is the highest level of education you have attained?

a) None ☐
b) Primary ☐
c) Secondary ☐
d) Diploma ☐
e) Degree ☐

2. Have you previously received any technical support or training on business management and farming as a business from the extension staff in your area?

Yes ☐ No ☐

4. Do you apply any business management tools leant in managing your agricultural enterprise?

a) Yes ☐
b) No ☐

5. Do Agribusiness officers and other extension staff provide information on any of the following? (Tick if provided)

a) Record keeping ☐
b) Marketing ☐
c) Capital sourcing ☐
d) Farm business planning ☐

6. What is your level of interaction with extension officers?

a) Active (1) ☐

b) Passive (2) ☐

7. What other profession/skills do you posses in relation to farming have you received from trainings carried out in your area?

a) Land preparation(1) ☐

b) Pest and disease control (2) ☐

c) Propagation of planting materials (3) ☐

d) Routine field practices such as weeding, pruning and trailing (4) ☐

e) Livestock feeding (5) ☐

PART D: REGULATORY ENVIRONMENT INDICATORS

1. Are there any licences, tariffs or permits which are required by the authorities to allow you operate your business within the existing legal guidelines?

   Yes ☐ No ☐

2. Do you feel these entry restrictions have an effect on you business operations?

   Yes ☐ No ☐

3. Are your business profits are taxed, does the tax rate affect your productivity or expansion plans? Yes ☐ No ☐

4. Do the prevailing interest rates influence your ability to service loans borrowed and consequently your overall business performance?

   Yes ☐ No ☐

5. Are there any direct government regulatory interventions on produce marketing which directly affect your business operations? Kindly tick if any of the following is applicable.

   A requirement to belong to:

   a) A cooperative society (1) ☐

   b) A marketing society (2) ☐

   c) A professional marketing association (3) ☐

   d) A producer federation (4) ☐

PART E: FIRM SIZE INDICATORS

1. Do you think firm size limits your expansion and growth plans, in other words do you achieve optimal production levels as a small scale producer?

Yes ☐ No ☐

2. Do you feel disadvantaged because you are a small-scale producer?

Yes ☐ No ☐

3. Have you missed out on external support e.g. from government because of you are a small scale business operator?

4. Do you face any of the following limitations as a result for your small scale operation level?

a) Purchase of farm inputs (1) ☐
b) Trainings and extension services (2) ☐
c) Marketing of the produce and market access (3) ☐
d) Satisfying market demand (4) ☐
e) Bargaining for better product prices (5) ☐
f) Transportation of inputs and outputs (6) ☐

4. How would you rate your business performance in terms of productivity, sales, gross margin, and asset base?

a) Very Satisfied ☐
b) Satisfied
c) Dissatisfied
d) Very dissatisfied ☐

APPENDIX IV

QUESTIONNAIRE FOR OFFICERS

Instruction: Please tick the appropriate box or fill in the spaces provided with appropriate information required.

PART A: PERSONAL DATA

1. Gender: Male ☐ Female ☐

2. Age 20-30 ☐ 30-40 ☐ 40-50 ☐ 50 and above ☐

1. What are the challenges faced in the provision of extension services and implementation of Agribusiness projects and in Nyamache Sub-County? Kindly tick the most pressing in your opinion

    a) Poor facilitation ☐
    b) Lack of technical skills ☐
    c) Lack of managerial skills ☐
    d) Poor quality of inputs ☐

2. Are your systems of monitoring and evaluation of Agricultural business projects and farm follow-up visits effective? Do you feel they positively impact on the clients' business operations

    a) Least effective ☐
    b) Effective ☐
    c) Most effective ☐

3. How often are follow-ups conducted?

    a) Monthly ☐
    b) Quarterly ☐
    c) Yearly ☐

4. What level of importance would you attach to the importance of the role you play as extension officers in improving farmers' technical support and business management?

    a) Minimal level ☐
    b) Average ☐

c) Highly effective ☐

5. How can you rate the production and income level of farmers in your Area?

a) Good ☐

b) Bad ☐

c) Improving ☐

d) Stagnating ☐

6. Does all the produce effectively reach the market in time? If not please provide the possible reasons in your opinion?

a) Lack of effective transport means
b) Poor road network
c) High transport costs

7. How can you rate the performance of farming enterprises in this extension area in terms of prices of produce and ultimate profitability?

a) Good ☐

b) Bad ☐

c) Improving ☐

d) Stagnating ☐

12. What challenges does your business encounter because of its size or scale of operation?

a) Low market bargaining power
b) Inability to access credit
c) Difficulties in input sourcing
d) Transportation difficulties

APPENDIX V

INTERVIEW GUIDE

1. Are you aware of the existence of projects and technical aid promoting agricultural businesses in your area?
2. If, yes how did you come to learn about these?
3. Are you aware that there are agribusiness officers in the ministry of agriculture who provide business support services within the agricultural sector?
4. What innovations have you made to improve your farming or business operations?
5. Are you aware of the existence of SHoMaP, KAPAP, SHEPUP, and NALEP? What is your feeling about Technical support offered on the projects?
6. What do you think is the contribution of financial management to the performance of agricultural enterprises?
7. Comment on the market acceptability of farm produce varieties available within this area.
8. What is your opinion on trainings if any offered to farmers and other agricultural business operators?
9. Do you think there is any relationship between the level of education and performance of farmers/agribusiness operators?
10. How can farmers/Agribusiness owners be assisted to improve their production performance?
11. Are you a member of an association? Has the formation of producer groups and marketing cooperatives improved your operational efficiency?
12. Are government regulations of any consequence to your business operations?

APPENDIX VI

RESEARCH PERMIT

PAGE 2

THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Innocent Mokaya Masira
of (Address) University of Nairobi
P.O Box 30197-00100, Nairobi.
has been permitted to conduct research in

Location
Nyamache	District
Kisii	County

on the topic: Factors that influence the performance of micro and small agricultural enterprises in Nyamache District, Kenya.

for a period ending: 30th September, 2013.

PAGE 3

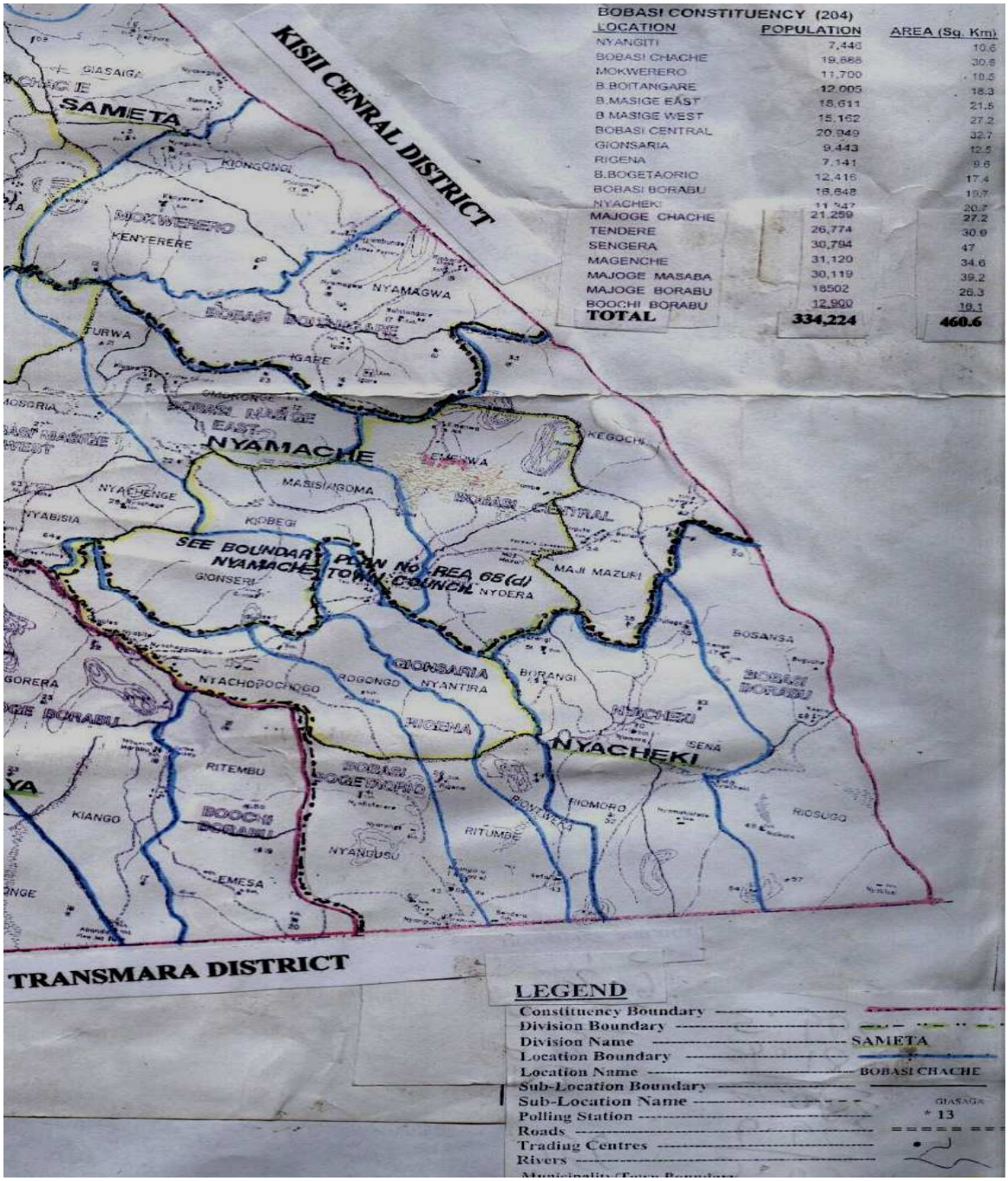
Research Permit No. *NCST/RCD/14/013/1263*
Date of issue *11th July, 2013*
Fee received *KSH. 1000*

Applicant's Signature

For Secretary
National Council for
Science &Technology

APPENDIX VII

Nyamache sub-county map March 2013



APPENDIX VIII

LETTER AUTHORIZING THE RESEARCH

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349, 254-020-2673550
Mobile: 0713 788 787 , 0735 404 245
Fax: 254-020-2213215
When replying please quote
secretary@ncst.go.ke

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/RCD/14/013/1263**

Date: **11th July 2013**

Innocent Mokaya Masira
University of Nairobi
P.O Box 30197-00100
Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application dated **9th July, 2013** for authority to carry out research on ***"Factors that influence the performance of micro and small agricultural enterprises in Nyamache District, Kenya."*** I am pleased to inform you that you have been authorized to undertake research in **Nyamache District** for a period ending **30th September, 2013.**

You are advised to report to **the District Commissioner, District Education Officer and District Agricultural Officer, Nyamache District** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioner
The District Education Officer
The District Agricultural Officer
Nyamache District.

"The National Council for Science and Technology is Committed to the Promotion of Science and Technology for National Development".

APPENDIX IX

Table for Determining the Needed Size of a Randomly Chosen Sample from a Given Finite Population

Population	Sample	Population	Sample	Population	Sample
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10 000	370
150	108	750	254	15 000	375
160	113	800	260	20 000	377
170	118	850	265	30 000	379
180	123	900	269	40 000	380
190	127	950	274	50 000	381
200	132	1000	278	75 000	382
210	136	1100	285	1 00 000	384

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30,* 607-610.