

Investment Climate
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Public Policy and Enterprise Development in Kenya

Edited by

Francis W. Wambalaba and Sunday A. Khan

This book documents case study strategies for enterprise development in Kenya based on three key areas; public policy and stakeholder involvement; corporate support and capacity development; and entrepreneurial support and leadership. It is the work of Kenyans, meant to foster development in Kenya. It is fairly clear that these externally driven strategies along with poor and less participatory governance has not been effective enough to move African economies forward. It is therefore important that locally generated strategies, informed by locally relevant evidence, especially research, are pursued. It is anticipated that such a development in concomitance with globally proven practices would have the potential of anchoring a transformative impact on African economies, including that of Kenya.

“The book, *Public Policy and Enterprise Development in Kenya*, presents and analyses issues of significance to Kenya’s Vision 2030, the blue print aimed at transforming Kenya into a newly industrializing country by the year 2030. In particular, it supports KenInvest’s work of promoting and facilitating investments in Kenya.”

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MANAGING DIRECTOR,
KENYA INVESTMENT AUTHORITY

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United States International University and TrustAfrica

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Foreword

I am happy to have the opportunity of writing this foreword to a book that addresses a subject that I have been associated with for more than a decade, public policy. The book also addresses enterprise development, which is of utmost relevance to my current work at the Kenya Investment Authority (KenInvest). I wish to commend the two editors, Prof Francis W. Wambalaba and Dr. Sunday A. Khan, for their good work.

The book, *Public Policy and Enterprise Development in Kenya*, presents and analyses issues of significance to Kenya's Vision 2030, the blue print aimed at transforming Kenya into a newly industrializing country by the year 2030. In particular, it supports KenInvest's work of promoting and facilitating investments in Kenya. In a very specific way it reinforces KenInvest's research and policy advocacy efforts aimed at "undertaking research, reviewing and analyzing policies, and engaging in policy advocacy geared towards improving the business environment". The book focuses on three thematic areas; public policy and stakeholder involvement; corporate support and capacity development; and entrepreneurial initiatives and leadership. In each of the themes, scholars from Kenyan universities and practitioners from industry have endeavored to identify and confront the critical issues facing the country's business investment climate. With funding from the Investment Climate and Business Environment (ICBE) Research Fund sponsored by TrustAfrica and International Development Research Center (IDRC), the researchers have done comprehensive research on the respective issues.

The book presents a conceptual framework on how to positively engage the private sector to contribute towards improvement of the business environment. Moreover, the authors have espoused on the role of Public-Private Partnerships in unlocking business potential for enterprise development and investments growth in Kenya, and especially in urban areas. It further explores best practices for managing Public Private Partnerships (PPPs), and the need to design communication strategies that work for initiating, developing and sustaining public private partnerships and the requisite public participation.

PPPs are the latest forms of contractual arrangements that aim at unlocking investment potential through shared vision between interest groups, stakeholders and the public. Kenya has enacted a law on Public Private Partnerships that became effective in February 2013, and the regulations required for its implementation are currently being developed through a consultative process. The publication of this book therefore could not have been better timed. The law provides the legal framework for managing PPP arrangements by providing for participation of the private sector in the financing, development and operation of government projects through concession or other contractual arrangements. This is an important landmark in the history of investment promotion in the country.

The book provides also an insight on policy options and recommendations on competition and regulatory requirements affecting commercial private provision of energy services. In addition, an expose on policy and strategic options for enhancing the performance of youth-run-enterprises in Kenya paints a graphic picture of the current situation afflicting the youth and other marginalized groups in enterprise development. This is timely, given the Government's commitment to create more employment opportunities for the youth.

Challenges confronting investment promotion and facilitation, such as lack of provision of relevant information and facilitation to entrepreneurs, markets access, and ambiguity in regulation of certain sectors such as coffee and cut flower, are also discussed in the book.

The research leading to the publication of this book adopts the increasingly recommended approach of collaboration between academic scholars and industry practitioners. This helps to blend academic rigor with policy relevance. Not surprisingly, it emphasizes the need for proper policy formulation and implementation in order to reduce the cost of doing business. The book is therefore informative and relevant to a wide range of users. I would therefore not hesitate to recommend the book to researchers, donor communities, university students, technocrats, and policy makers in Kenya. It is my hope that implementation of the findings and recommendations made in this book will help to transform the manner in which business regulation, approval and facilitation are conducted in this country.

Finally, I wish to commend TrustAfrica and IDRC through the ICBE Research Fund, for supporting this important research project.

Dr. Moses M. Ikiara, PhD, MBS

Managing Director

Kenya Investment Authority

Preface

This book is a collection of studies about the Kenyan economy undertaken by Kenyan researchers with funding from the Investment Climate and Business Environment (ICBE) Research Fund. The ICBE Research Fund is a partnership between TrustAfrica and IDRC of Canada, initiated in 2006. The overall goal of the Fund is to promote reform of the business and investment climate in Africa so as to enhance the performance of private enterprises and their impact on livelihoods. The ICBE uses competitive research grant mechanisms, capacity strengthening and policy dialogues to enhance evidence-informed policy making on the African continent.

The publication of this volume falls in line with one of the key objectives of the ICBE Research Fund, which is to disseminate research findings to interested stakeholders, in a bid to promote reform of the business and investment climate and performance of private enterprises for poverty reduction in Africa.

It is our fervent hope that policy makers and other relevant stakeholders would closely study findings and the proposed recommendations and translate them into action points. This is equally the desire of the respective researchers from various universities and institutions in Kenya who contributed towards this publication. We hope policy makers and practitioners will view themselves as partners and stakeholders in this project since these researchers also benefited from local infrastructures funded by the people of Kenya. It is further hoped that when pertinent recommendations of the respective research projects are implemented, they could have a profound effect on the Kenyan economy.

The issues addressed in these studies are not unique to the Kenyan, but also reflect problems encountered by other African countries in creating a conducive environment for enterprises to thrive. It is therefore our intent that the findings and recommendations are replicated by other countries where applicable. We also expect that this publication would add to the literature and inform further studies by others researchers in the domain and in other parts of the world; and also encourage other researchers and their partners, especially funding entities to always consider sharing their findings through publications or other means. One of the reasons why

Africa has a dearth of research publications is because most of the locally produced research is hardly published as most funding organizations hardly support such efforts. TrustAfrica and IDRC stand tall as concerns dissemination of research findings to a wider audience. It's our hope that any funding for research should include a budget item for dissemination and publications.

Without such publications, African scholars will continue to remain in oblivion on the international scene. And without their presence being felt in the international arena, their relevance to their immediate society will remain questionable as their governments will either at best, continue to rely on foreign literature to inform and guide their strategies or at worst, make decisions not informed by any evidence. Hence, it is the responsibility of all stakeholders; researchers, funders, policy makers, practitioners and other interested parties to reconsider their past practices and embark on reversing this type of outcome.

Francis W. Wambalaba

Sunday A. Khan

Acknowledgement

Many people deserve to be acknowledged for their contribution to this book. I wish to thank, first, TrustAfrica and IDRC for initiating the ICBE Research Fund and providing the funds for the studies in Kenya and also financing the publication of this edited volume. I equally extend special gratitude to members of the ICBE Steering Committee: Akwasi Aidoo (Executive Director), Bhekinkosi Moyo (Director of Programs) and Rose Maruru (Director of Operations), from TrustAfrica; and David Schwartz (Director, Donor Partnerships Division) and Flaubert Mbiekop (Senior Program Officer) from IDRC; for their constant support and overseeing the implementation of the ICBE Research Fund.

I am also greatly appreciative of the continuous assistance of the management and my colleagues at TrustAfrica, without whom ICBE won't achieve its objectives; and especially Facoumba Gueye who works daily on the ICBE Research Fund. The efforts of everyone at TrustAfrica has facilitated the publication of this volume, but more importantly, the implementation of the ICBE project over the past seven years.

I similarly acknowledge the invaluable contribution of members of the ICBE Jury and the many peer reviewers across the continent who play a critical role in the selection of grant winners and also review the research reports to assure the high quality of ICBE research findings.

Special thanks are extended to the Managing Director of the Kenya Investment Authority (KenInvest), Dr Moses Ikiara, for accepting to write the Foreword to this book, thus establishing a useful relationship with the local research community and promoting local ownership of the research findings. This also solidifies the good relationship existing between KenInvest and the ICBE Research Fund.

There will be no book without the authors who did the research and worked tirelessly with the editors to polish the papers for publication. Their immeasurable contribution is highly acknowledged.

The co-editor, Professor Francis Wambalaba of the United States International University in Nairobi, played a crucial role in getting this volume out. The ICBE Research Fund and its initiators can't compensate him enough for his contribution to this book. He will always be a true friend of the ICBE Research Fund. Also thanks to Edwin Mokaya, USIU

graduate student and John Otsola, a research associate in the USIU research office who coordinated the publication process.

However, none of the organizations or individuals acknowledged above take responsibility for any errors in this work, apart from the authors and the editors. And further, all views, interpretations, recommendations, and conclusions expressed in this volume are those of the authors and not necessarily those of the supporting or cooperating organizations or individuals.

Sunday A. Khan

Director, ICBE Research Fund

TrustAfrica

Part I:

Introduction

Chapter 1:
Introductory Overview and Context.
Sunday A. Khan

Chapter One

Introductory Overview and Context

Sunday A. Khan

Economic growth in Africa has remained high at 5 percent and above for several years and some of the world's fastest growing economies in the world are in Sub-Saharan Africa, like Ethiopia, Ghana, Rwanda, Tanzania and Uganda. Average growth is almost five times that of the Euro zone and Africa's resilience to the global economic and financial crisis has been remarkable. Trade has been rising rapidly as export markets diversify and the private sector is contributing enormously to economic growth on the continent. The generalized pessimism about Africa has given way to somewhat unguarded optimism.

While part of this performance is attributable to high commodity exports and prices, some of it is also explained by sound economic policy and the generally improved investment climate and business environment on the continent, which has created a business-friendly atmosphere and encouraged both local and foreign investors. According to The World Bank's Doing Business Report 2013, among the 50 economies with the biggest improvements since 2005, the largest share, a third, are in Sub-Saharan Africa (P.1); including Rwanda, Burkina Faso, Mali and Egypt in the top 10. Despite this progress in recent years, Africa remains the worst continent in which to do business in the world.

How is Kenya faring as far as the improvement of the business environment is concerned? According to Doing Business 2013, Kenya ranked 3rd after Rwanda and Uganda among the 5 countries of the East African Community and 121st in the world. In 2005, Kenya ranked first in

the sub-region and has been surpassed by Rwanda and Uganda. This doesn't imply that the regulatory environment for businesses in Kenya has not improved, but that the progress has been less than in other countries, and that challenges remain. The Kenyan economy has been growing at an average rate exceeding 5 percent over the past 5 years, but could probably do better if further reforms of the business and investment climate are implemented. The goal in the country's long-term development strategy, Vision 2030, is to achieve and sustain a growth rate 10 percent annually.

One of the major problems in Africa is the limited use of evidence to inform policy making. Some of our governments resort to making of decisions based on a myriad of impromptu circumstances. In some cases, the decisions have been based on popular beliefs such as the "Africanization" policy whose interpretation in the context of Uganda under Idi Amin meant expropriation of property from Asians to Africans. In other cases, they have been personal whims such as was the "back to land policy" in Kenya under Jomo Kenyatta which meant disregard and sometimes harassment of the informal urban sector. Other examples include Mobutu's "Zairinisation" initiative in DR Congo (former Zaire) and Mugabe's land redistribution policy in Zimbabwe. Regardless of the anticipated potential benefits, real or imagined, some of such decisions often cost society more than they benefit it, and they typically create inconsistencies in the development strategies.

In a similar vein, development policies in Africa have been largely influenced by external forces, and informed more by ideology than by evidence that reflects the realities of the various countries on the continent. This was the case during the colonial period, and has continued with the Structural Adjustment Programs (SAPs), the enhanced-SAPS, the Poverty Reduction Strategy Papers (PRSP), the Highly-Indebted Poor Country's Initiative (HIPC), the Millennium Development Goals (MDGs). Discussion on the post-MDG agenda is rife at moment, and it is our fervent hope that it will involve local expertise and reflect the peculiarities of African countries.

It is fairly clear that these externally generated strategies along with poor governance that has not been actively participatory have not been effective enough to move African economies forward. It is therefore important that locally generated strategies, informed by locally relevant evidence, especially research, are pursued. It is anticipated that such a development in concomitance with globally proven practices would have

the potential of anchoring a transformative impact on these economies. In particular, such a transformation will need to not only improve the economic environment, but to also reduce the growing inequality within African countries.

The goal of this book is to document case study strategies for enterprise development in Kenya based on three key areas; public policy and stakeholder involvement; corporate support and capacity development; and entrepreneurial support and leadership. It comprises only nine of the fourteen studies funded by ICBE in Kenya so far, and hopes to cultivate public policy for enterprise development in Kenya but with implications to other countries in East Africa and the African continent as a whole. We provide an overview of the different chapters in this volume below.

Public Policy and Stakeholder Involvement

It is hypothesized that for enterprises to flourish, the government must first provide an enabling environment for business startups and growth. In section one; the book explores potential of a public policy on Public-Private Alliances as an opportunity for engaging entrepreneurs into contract and partnerships with government entities towards an effective urban development. The section also explores potential for public policy in the energy sector to highlight the essence of competition in the public utility sector that has major cost implications on business activities. Similarly, the section covers the tax modernization as a policy area on another cost sensitive measure and how to ensure fairness of the tax burden. Finally, the section reviews issues of youth enterprise policy options as a means of promoting enterprises with possible implications to other marginalized groups.

Chapter two presents a conceptual framework for managing Public Private Partnerships (PPPs) in urbanized areas for improvement of the business environment. The chapter identifies and documents experiences of partnerships between local authorities and private interest groups for service delivery. It also documents different effective communication strategies that would promote dialogue between a City Council and its businesses and citizens. Finally, it makes recommendations for a framework for implementing PPP projects.

The chapter also presents findings based on the study done for the City of Nairobi. In the study, it appeared that in general, an average public-private partnership among participating organizations was initiated by the private sector with the goal of providing public service. Most of the participating stakeholders were local private sector organizations as compared to the international organizations. The partnership agreements were found to be by formal contract. However, some were through informal collaboration. One of their major challenges however had to do with the unilateral or conflicting decisions made by the governmental entity and these problems seemed to continue without much effort on the part of the governmental entity to mitigate them.

Based on these findings for the Nairobi study, the chapter makes recommendations, specifically calling for developing a policy framework, establishing a clear legal framework, and ensuring consistency, as well as clarity of the PPP policies to reduce uncertainty. The chapter also makes recommendations with respect to public involvement. It specifically recommends the need to distinguish public involvement from public relations. This distinction is subsequently clarified by arguing that public involvement is an inclusive process of proactively seeking out groups and individuals anticipated to be affected by a decision and engaging them in the dialogue prior to the decision. This would further require that the decision process must be defined, structured, and transparent.

Therefore, for the city, or any public institution to be able to achieve these public private partnerships and also public participation process (PPP²), there would be a need for a dedicated central PPP office with similar others for each city council.

Chapter three covers competition and State regulation of public utilities for electricity and petroleum in Kenya. This study looked into the competition policy and regulatory mechanisms in Kenya's electricity and petroleum sub-sectors. It examined how competition and regulations affect commercial provision of energy services involving private investment. It highlights the major issues in the energy sector in Kenya as the gaps related to enforcement of infringements related to *pricing, fair trade practices* and *consumer protection* by various regulatory agencies. Ideally, introducing competition in the regulated utilities is expected to increase private sector participation and investments in the sector. It would also improve service quality and stabilize consumer prices. However, despite far reaching

energy-sector reforms in Kenya from the mid 1990's, which included deregulation of competitive segments that were deemed to have natural monopolistic characteristics, there have been limited achievements of the expected regulatory outcomes. The study recommends strengthening the competition and regulatory system in the energy sector and other public utilities in order to attract private sector investments service delivery to consumers among others.

Chapter four covers policy and strategic options for enhancing the performance of youth-run-enterprises in Kenya. The chapter argues that once an enabling environment has been created, the established businesses have the responsibility to supplement the government's efforts through corporate social responsibility, especially in creating goodwill for the two primary stakeholders. The case for corporate social responsibility presents an opportunity for positive association between businesses and consumers. The enterprise based training case presents an opportunity for positive association between business and employees.

Youth-Run-Enterprises (YREs) are defined as businesses owned and run by people aged below 35 years. The performance of such enterprises continues to attract a lot of policy and scholarly attention. However, empirical evidence on the determinants of performance of youth run enterprises is limited. This limits policy initiatives aimed at improving the performance of youth run enterprises. The configuration approach is used as the framework of this study. In this approach the determinants of performance are categorized as entrepreneurs' personality, personal resources, environment and organization. The interactive effect of these four configurations of factors is a useful feature of this model that begs for validation among YREs. Consequently, a survey of 465 YREs in Machakos District in Kenya was undertaken. Sixty percent of these enterprises were owned by males. Eighty eight percent of the enterprises were in the customer oriented sectors. Ninety four percent of the surveyed enterprises employed less than three workers. On average, the businesses have been in operation for 3.35 years. Moreover only one in every ten YREs had positive performance.

A multiple regression model that was done indicated that measures of perception namely need for achievement, self-efficacy, and moderate risk taking, perception of opportunities are important predictors of the performance of YREs. In addition, financial resources and membership into

business associations were associated with better performance of YREs. The evidence provided in this study suggests that perceptual factors are dominant predictors of the performance of YREs. This study highlights a new frontier for government policy, namely, the possibility that programs aimed at improving perceptions of youth entrepreneurs may lead to higher performance. Another important strategic option includes the strengthening of the financial resource base of households.

Social Responsibility and Capacity Building

This section makes a strong argument that once the preceding enabling environment has been created, it is suggested that established businesses, and well off individuals too have the responsibility to supplement the government's efforts through corporate social responsibility, especially in creating goodwill not only for the two primary stakeholders, the customers and employees, but also for the greater public interest. Thus, from a customer's perspective, the section initially explores the case for corporate social responsibility as an opportunity for positive association between businesses and consumers. This is followed next from the employees perspective analysis on how enterprise based training is also an opportunity for positive association between business and employees. And from a greater public interest perspective, the section investigates dilemma arising from the benefits of financial contributions towards public goods and the consequent potential for corruption.

Hence, chapter five reviews the effect of Corporate Social Responsibility (CSR) on consumer behavior. Corporate social responsibility is a concept that many companies both in the developed and developing world are embracing to show concern for the less privileged in society. Various companies have also used Cause Related Marketing (CRM) programs to support worthy causes.

However, despite the numerous calls for companies to behave ethically towards their stakeholders, many companies are noted to continue to exploit or take advantage of the vulnerability of consumers. Consumers in Africa especially still remain at the mercy of some irresponsible and unscrupulous corporations. While the objectives of undertaking CSR and CRM activities are evident (image building, giving back to society, uplifting the welfare of the needy etc.), what seemed unclear is whether practicing

socially responsible behavior, leads to increased purchase of a company's products. The question is - does it matter to consumers if firms whose products they buy do engage in CSR activities? A study was therefore undertaken to determine if consumers' purchase decisions are in any way influenced by the social concern displayed by a specific company. Such insights are useful to businesses that wish to further enhance their image in the market. The key findings of the study were that though majority of respondents seemed to be aware about what CSR is all about and the related activities, the CSR and CRM efforts by respective companies did not seem to heavily influence the purchase decision of customers; instead, quality and price of the product were the dominant factors influencing consumer purchase behavior. In addition, the majority of respondents did not know their rights as consumers and hence often found themselves in a helpless situation when confronted with irresponsible behavior by companies.

Chapter six presents an investigation of enterprise based training and entrepreneurial performance based on the industrial training and manufacturing enterprises in Nairobi. Enterprise based training is any form of skill transfer that results from identified training needs of an enterprise. In Kenya, the Directorate of Industrial Training (DIT) is mandated through the Industrial Training Act (cap. 237) to direct and enhance this type of training for all persons engaged in industry. The goal is to improve the quality and efficiency of the training and to share the cost of such training as evenly as possible amongst employers. Although the DIT has been coordinating industrial training since 1973, it was not known whether such training had resulted in significant entrepreneurial performance for the participating firms since no empirical studies to this end had been carried out. Secondly, from officially available data, DIT supported industrial training appeared to have reached only about 10% of its formal customers. However, the informal sector that contributes about 30% of the Gross Domestic Product in Kenya had been ignored in industrial training delivery although the law does not discriminate against the informal sector enterprises.

This study investigated whether DIT supported industrial training had contributed to improved entrepreneurial performance among participating enterprises relative to non-participating enterprises. It also investigated the constraints encountered by industrial training delivery and proposed

appropriate interventions for enhancing training delivery in line with the legal mandate and the demands of national aspirations of industrialization. The study focused on 168 manufacturing enterprises in the Nairobi area which accommodates 74% of the manufacturing firms on the Kenya Association of Manufacturers (KAM) countrywide list. About 80 training manufacturing enterprises were randomly selected from the DIT list of enterprises that trained with DIT in the 2002-2004 year period. Another 88 non-training enterprises were also randomly selected from among enterprises in Nairobi on the KAM list but did not train with DIT during the above period. The study collected data using three surveys and used three categories of questionnaires. The questionnaire category 1 was administered to the 168 manufacturing firms. The questionnaire category 2 was administered to 40 purposively selected key informants while questionnaire category 3 was administered to 40 purposively selected informal sector operators. Data analysis was conducted through content analysis as well as through descriptive and inferential statistics using computer packages. The investigation established that: training enterprises outperformed the non-training enterprises; there were high levels of Enterprise Based Training (EBT) among both training and non-training enterprises (87%) although EBT was higher among the training enterprises. The study also established that EBT contributed to a fair extent (10%) to the Entrepreneurial Performance of the enterprises in Nairobi. The chapter recommended that: the relevant industrial training law be reviewed by the Government of Kenya (GOK); industrial training be expanded to cover all registered SMEs and that it be used by GOK and other Development partners as an instrument for both policy and program intervention.

Chapter seven investigates into the role that "Harambee" (pull together fundraising) contributes towards corruption in Kenya. This study used a game theory experiment involving a public good game and a common pool resource game to investigate if individuals compensate their "Harambee" contributions by engaging in corruption. The results show an inverse relationship between public good contributions and common pool resource extractions. This is explained by the fact that cooperators in public good contributions extract less from the common pool resource. To the extent that the experiment mimics the alleged link between contributions to Harambee and corrupt acts of embezzlement ex-post, the basis for blaming Harambee on corruption is not established by the results. Consistent with the findings

documented in Henrich *et al*, 2001 which showed that Kenyan subjects brought their everyday experience of Harambee into the public good setting, this study also documents the fact that participants in the games brought their real life experience of Harambee to bear on their decisions. This highlights the important and potentially positive reinforcing role that social norms and institutions can have on individual decisions.

Entrepreneurial Initiatives and Leadership

With government's enabling environment on one hand and the business goodwill on the other, it is anticipated that the ground would be fertile for enterprise development. The case of transformational leadership exemplifies entrepreneurial leadership strategies. The Earthware Manufacturers' case highlights on the entrepreneurial strategies for accessing markets. Finally, the cut flower and coffee case study demonstrates entrepreneurial ability to capture markets through value addition.

Chapter eight covers entrepreneurial strategies for earthenware manufacturers in access to new markets. Despite the significant role played by earthenware manufactures in tourism and in job creation, the sector is a neglected lot within the craft industries in Kenya. An enabling environment for this indigenous sector can thrive if entrepreneurial skills of the potters are sharpened. This can be achieved through various interventions that include- training, seminars, and workshops to enhance innovations in product development and marketing. Targeted workshops and outreach may be developed through collaborations between stakeholders which include relevant ministries, galleries, established co-operatives, and education institutions.

The study indicated that two firm characteristics, namely; registration of business and higher levels of production are associated with access to new markets. In addition, recognizing that women are the majority players in the earthenware industry, gender specific programs need to be developed to enhance the ability of women to register their businesses. Lack of registration is a fact that contributes to women potter's inability to access and enter new markets. Furthermore, women entrepreneurs should enhance their negotiation skills as this was found to be critical to entries into new markets.

Chapter nine presents a case of value addition in coffee industry versus cut flower sector in Kenya. This paper surveys the value addition in coffee and cut flower sectors. The performance of coffee sub-sector has been declining since late 1970s, a complete contrast from the way the cut flower industry which has grown to be second leading foreign exchange earner in the country. By comparing the value chains in coffee and cut flower sub-sectors, this chapter therefore aims to find out the constraints that hamper value addition in the coffee industry. There exist large differences in the role various actors play in coffee and cut flower value chains. Whereas farmers participate in almost all stages of the processing in cut flower sector, the processing and marketing structure in coffee industry is dominated by institutions that thrive on information asymmetry in the sector to maximize profits. In addition, there is excessive regulation in coffee sub-sector which provides fertile ground for emerging of middlemen and extracting of rents through taxes and licensing by government. To improve value addition in coffee sub-sector the study recommends better governance structures in cooperatives, millers and coffee board of Kenya, regulation reforms to increase private participation and networks and alliances formation among coffee farmers.

Part II

Public Policy and Stakeholder Involvement

Chapter 2:
Public-Private Partnership Strategies for Urban Development. *Francis
Wambalaba and Akosa Wambalaba*

Chapter 3:
Regulatory and Competition-Related Reforms in Kenya's Power and
Petroleum Sectors. *C. Onyango, G.N. Njeru, and B. Omori*

Chapter 4:
Policy and Strategic Options for Enhancing Performance of Youth-
Run-Enterprises in Kenya. *Patrick Muthama Kilonzo*

Chapter Two

Public-Private Partnership Strategies for Urban Development

Francis W. Wambalaba and Akosa E. Wambalaba

2.1.0 INTRODUCTION AND OVERVIEW

During the 1960's and 1970's, the city of Nairobi was referred to as the "Green City in the Sun" by visitors, impressed by its cleanliness, abundant greenery, and sound land, service and transport practices. However, by the 1990's, its residents had renamed it, "City in the Garbage," due to visible mounds of uncollected garbage on city streets. Foreign visitors also renamed it "Nairobbery" to underscore the prevalence of carjacking and robberies. Nairobi had over a span of twenty years tumbled into socio-physical decay. Nothing seemed to work. Alarmed at how the rate of insecurity and the dirty environment were impacting business growth, businesses formed alliances and began seeking partnership with City Council in project development and implementation, with the goal of reversing the socio-economic decline. A sample of good projects included rejuvenation and beautification of Mama Ngina street into a one way driveway hugged by open spaces and wide walkways on both sides; installation of police manned kiosks at strategic locations within the city center; rehabilitation of public toilets; and introduction of a city shuttle service.

In 2002, political leadership went to the new NARC regime, which committed itself to create a fertile democratic space, promote public transparency and dialogue, and revitalize the city. Several projects were

embarked on, including improvements in downtown's Uhuru park, relocation of street hawkers, removal of illegal structures in residential areas, re-carpeting, re-striping and re-labeling of city streets, and introduction of safety conscious public transport rules affecting jitney services called "Matatu".

While these changes have been welcomed by the business community and residents of the city, fear and uncertainty exists about their sustainability. Most political appointees are not hired on the strengths of their professional experience. This has, in the past led to hastily conceived policies and short term "quick fixes" to city problems whose implementation runs out of steam within a few months. Implementation of policies also becomes personalized and is seen as a project of the political appointee and not a team effort. Legal structures are also not put in place to assure continuity in case of change in political leadership. The exit of a political appointee therefore results in the death of "his" or "her" initiatives.

Mechanisms for public participation or consultation and input such as "notice" and "comment" are rarely used, if ever. As a result, "popular" changes to policy are made at the altar of politics, with the goal of satisfying a section of constituents, and without a comprehensive study of the long term social-economic effects. For example, in the 1960's President Kenyatta, due to pressure from a section of constituents, and in total disregard to city laws, opened investment in public transport to anyone who had a vehicle. No public transport licenses were required and no laws were put in place to regulate this new industry. Forty years later, this industry known as "matatus" has grown into an untamable monster, that is a law unto itself.

How do we move away from the personality cult of policy and project control without causing a political "Tsunami"? We believe that the solution lies initially in wooing the private sector into partnership with the public sector, coupled with a culture of public participation. While we cannot transplant solutions from other communities wholesome without regard to differences in community dynamics, we can place them in context. According to Sampson (Ferguson & Dickens. 1999: 242) since communities are complex and vary, relationships and structures must be contextualized.

The 1990's can best be described as the decade of chaos in urban planning and service delivery in Nairobi city. The seeds of apathy and disorder were planted in the late 1980's but their full effect would be felt in the 1990's and into the new millennium. Evidence of chaos included growth

of numerous illegal settlements, uncollected mounds of garbage on city streets, a neglected road system, insufficient and erratic power supply, untreated city water, perennial herding of livestock along city streets, dry taps in homes and businesses due to theft along water pipes, a neglected public health system, falling enrollment in primary schools due to escalating costs of education; and city rivers choking in garbage and sewage. Crime was so high that most downtown businesses closed by 6 p.m. People avoided the city center due to the high incidences of crimes by gangs of muggers, who robbed in broad daylight, without fear. It was an accepted practice not to stop the car at “roundabouts” - on red lights, lest one was carjacked. Services by the Nairobi City Council were non-existent. Business investment had dropped to an all-time low and employment figures were high. Nairobi’s population increased approximately 200% within a period of 50 years, statistically from 120,000 in 1948 to 2.3 million by 1999.

With political rigidity and inertia, economic stagnation and escalating costs of living, new forms of strategic thinking were needed in order to avoid economic suicide. Sections of Nairobi residents, decided to form community alliances with the goal of improving the socio-economic and physical life of the city. Their motivations and interests varied, but they found collective expression, energy and strength in these movements for change. Ferguson (1999:51), in his book on urban renewal stresses the importance of citizen participation as a vehicle for future growth, he asserts “each new and successful collaboration among residents develops social capital for solution building on other issues.” The Nairobi Central Business District Association (NCBDA) was motivated by the desire to improve the quality of community life and the business investment climate. Others like the Green Belt Movement sought to protect the natural forested environment and parks that were in danger of being sold. Neighborhood groupings like Karen’gata Association were energized due to frustration at paying property taxes for no services and also by a desire to be players in decisions that affect their welfare. Others were concerned about the dehumanizing aspect of poverty, as symbolized by “flying toilets” leading Amref to invest in slum toilet projects. Some simply longed for a sense of satisfaction that money can’t buy or pride in the legacy left for their children (Roseland, 1998:2).

Within these alliances, there are signs of emerging disillusionment towards cooperation with political leadership within the private sector. This is due to lack of political commitment, rampant political interference and poor negotiation structures that form the basis of current partnerships, and leave them fluid and vulnerable to failures. There is also mystery and misunderstanding of the role of the private sector and the benefits to society of Public-Private Partnerships (PPP's). City Council just by itself does not have the capacity to improve Nairobi city into a well-managed first city. Nairobi is too large to be managed by one central body. Only participation from the public will result in equity, equality and empowerment (Brohman, 1996).

Public private partnerships are a strategic attempt to try and solve some of community's major problems in order to bring about development. The few projects that City Hall has collaborated with the private sector provide hope and are a pointer to development. For example, rehabilitation of public toilets and running them as SME's has provided employment and much needed service facility for the public, and has reduced wetting on the streets. Adopt A Light project has been an unqualified success. It has not only lit up streets in the wealthy parts of Nairobi, but also the slum areas, and this has improved security and allowed small informal business activity to continue into the night, not to mention children studying at night under these lights.

Nairobi, with a population of almost 2.3 million is in need of many more PPPs on a micro level in order for the socio-economic benefits to be felt on a macro level. Current commitment and success on the micro level shows that there is need to multiply the number of PPPs in order to attract businesses for job creation, improved quality of life and a reduction in poverty levels. However, there is little evidence of a deliberate, coordinated and aggressive outreach strategy by City Hall to form solid partnerships with the private sector for positive economic impact. At the moment, businesses approach City Hall and seek approval to carry out a service improvement project which may take months to approve. There have been situations where City Hall has rejected privately financed road improvement projects from individuals due to suspicions about their motives. Trust has a special and important role because participants differ in interests, values and concerns (Ferguson, 1999:42). It is important to be aware of such perceptions for ignoring them may stall the process. There is also a need to design

communication strategies that work for initiating, developing and sustaining public private partnerships along with public participation that work within a developing country context; where public participation is limited, democratic space is not all embracing, finances limited and administrative capacity is poor.

2.1.1 Issues and Options

The concept and practices of PPP are new to Africa, and Kenya in particular. A lot of literature has been written on the concept of PPP elsewhere. At a global level for example, Heald (1997) compiled literature on PPPs in Europe with emphasis on the private finance initiatives. Greve (2003) did a study on PPP in Scandinavia. Another study by Browne-Cooper (2003) investigated potential for standardization of procurement contracts in Australia while Lienhard (2006) focused on experiences, risks and potential of PPPs in Switzerland. Similarly, Gallow (2007) advocated for PPP in New Zealand.

In Africa, the Infrastructure Consortium for Africa (World Bank, 2009), did a comprehensive documentation of PPP strategies in Africa. Similarly, the Institute for PPP compiled several PPP case studies in Africa including; Kahama Gold mine in Tanzania, Kankola Copper mines in Zambia, Singida Peri-Urban Water Supply and Sanitation Project –Tanzania, Eastern Cape & Northern Provinces Water Project - S. Africa.

In terms of scholarship however, there has been very little literature on PPPs in Kenya. Both the development of the procurement law and the PPP legislation generated several writings, especially in the newspapers on PPP strategies. However, very little has been written on PPPs in Kenya, let alone PPP in Kenya's urbanized areas. This study will attempt to meet this shortcoming by assessing the status of public private partnerships in Nairobi and identifying factors affecting their development and sustainability.

From the perspective of the practice, the few projects that City Hall had collaborated with the private sector provided hope and were a pointer to development. For example, rehabilitation of public toilets and running them as SME's has provided employment and much needed service facility for the public, which reduced wetting on the streets. Adopt A Light project was an unqualified success. It had not only lit up streets in the wealthy parts of Nairobi, but also the slum areas, which had improved security and

allowed small informal business activity to continue into the night, not to mention children studying at night under these lights. Public private partnerships are a strategic attempt to try and solve some of community's major problems in order to bring about development.

Unfortunately, despite the private sector efforts, there were signs of emerging disillusion among businesses towards cooperation with the political leadership. There were also mystery and misunderstanding of the role of the private sector and the benefits to society of Public-Private Partnerships (PPP's). City Hall just by itself did not have the capacity to improve Nairobi into a well managed first city. Nairobi was too large to be managed by one central body. Only participation from the public would result in equity, equality and empowerment (Brohman, 1996).

Nairobi, with a population of almost 2.3 million was therefore in need of many more PPPs on a micro level in order for the socio-economic benefits to be felt on a macro level. Commitment and success on the micro level showed that there was need to multiply the number of PPPs in order to attract businesses for job creation, improved quality of life and a reduction in poverty levels. However, there was little evidence of a deliberate, coordinated and aggressive outreach strategy by City Hall to form solid partnerships with the private sector for positive economic impact. At the time, businesses approached City Hall and sought approval to carry out a service improvement project which sometimes took months to approve. There were situations where City Hall rejected privately financed road improvement projects from individuals due to suspicions about their motives. Trust had a special and important role...."because participants differ in interests, values and concerns" (Ferguson, 1999:42). It was important to be aware of perceptions for ignoring it could stall the process. There was also a need to design communication strategies that worked for initiating, developing and sustaining public private partnerships along with public participation that worked within a developing country context where public participation was limited, democratic space was not all embracing, finances were limited and experienced poor administrative capacity.

The general objective of this qualitative case study was therefore to assess the status of public private partnerships in Nairobi with City Hall and identify factors affecting their development and sustainability. Specifically, the key objectives of this case study were:

1. To document partnership practices by; a) identifying existing private partnerships with the city council, b) collecting information on factors affecting the success of the partnership, and c) analyzing and documenting the nature of these partnerships.

2. To develop a partnership strategy by; a) identifying and describing the socio - economic relationships that had taken place in the city of Nairobi between the public and private sector, 2) identifying and documenting the best practices elsewhere, 3) and developing a framework within which the external best practices could be infused and blended within the local context.

3. To develop a participative strategy by; a) identifying strategies to increase collaborations between different public and private interest groups and local authorities for service delivery and project implementation, and b) identifying and designing communication strategies to initiate and promote dialogue between the public and private sector in a developing country context.

4. To develop a framework for a multi-objective approach by combining PPP strategies and public participation process based on experience with similar projects for which the researcher was responsible for in the City of Portland, Oregon.

Qualitative research was the best method for investigating complex and sensitive issues related to feelings and opinion that required descriptive detail. This research used both primary and secondary sources of data and information. The primary source of data included direct structured interviews as well as unstructured interviews (including a snowballing method) and focus group discussions. Since the nature of the questions were both exploratory and descriptive (what, when, how), the use of qualitative research methodology in which some form of case study design was employed. The analysis utilized a content analysis approach presented in a matrix format.

2.2.0 THE CONCEPT OF PUBLIC PRIVATE PARTNERSHIP

Based on previous experiences with PPP's globally, there seems to be no distinct or absolute definition of the term Public-Private Partnership (PPP). It covers a range of business structures and partnership arrangements, varying with regard to legal status, governance, management, policy-

setting prerogatives, contributions and operational roles (Jamali & Olayan, 2004). Its definition evolves and takes on different characteristics and meanings depending on the context of the partnership, players, motivations and goals. It is regarded as a middle path between state capitalism and privatization (Leitch and Motion, 2003).

In general however, a Public Private Partnership (PPP) is collaboration between the public and private sector for the purpose of delivering a project or service traditionally provided by the public sector. It is basically just a different method of procuring public services and infrastructure by combining the best of the public and private sectors with an emphasis on value for money and delivering quality public services. Public Private Partnership recognizes that both the public sector and the private sector have certain advantages relative to the other in the performance of specific tasks. By allowing each sector to do what it does best, public services and infrastructure can be provided in the most economically efficient manner

Typically, public-private partnerships are cooperative relationships involving a public sector partner and a partner not in the public sector, such as a private company, a non-profit organization or an association of citizens. Both partners form a co-operative relationship based on a mutually beneficial agenda that relies on the complementary and diverse strengths of each partner. The nature of their strengths varies. But the strengths are not employed as a form of control or competition, but rather complementary. They may be managerial or financial. In forming these relationships, there is always a potential financial risk involved, which one partner agrees to assume and this is usually the private sector partner, which can cushion it. A relationship qualifies as a partnership if it involves the joint definition of specific goals, and a clear assignment of responsibilities and areas of competence between the partners in the pursuit of a common endeavor, which is public good (Jamali & Olayan, 2004). The success of a partnership model is ultimately judged by how positively it impacts the community for whose ultimate benefit it was intended.

In his book "Defending Interests", Shaffer describes PPP's as a third form of governance, termed public-private networks. Rhodes (1997) declares that the world has become more complex and governments are delegating traditionally "public" functions to the private sector and western societies are increasingly governed through "self-organizing inter-organizational networks" composed of public and private actors pursuing

shared goals and maneuvering for advantage. The government's role has changed and it is less of the producer of goods and services, and more of the supervisor of proxies who do the actual work.

Networks according to Rhodes are not accountable to the state. They are self-organizing. Although the state does not occupy a privileged, sovereign position, it can indirectly and imperfectly steer networks. He outlines three basic characteristics of governance, different from the traditional notion of government.

i. Interdependence between organizations. Governance is broader than governments, covering non-state actors. Changing the boundaries of the state meant the boundaries between, public, private and voluntary sectors became shifting and opaque.

ii. Continuing interaction between network members meant, caused by the need to exchange resources and negotiate shared purposes.

iii. Game like interactions, rooted in trust and regulated by rules of the game negotiated and agreed by network participants (Rhodes,1996).

What advantages do partners seek in engaging in formal partnerships? The public sector generally is focused on public good and so its concern will be mainly improved program management, better service provision, proper allocation of risks responsibilities and operational cost savings (Pongsiri, 2002). The private sector will ultimately expect a return on its initial investment through reasonable profits and the potential to secure more business and grow.

2.2.1 The Significance of Public-Private Partnerships

According to the Millennium Development Goals Report, developing countries have invested 4% of national output in infrastructure but 1.1 billion people lack access to clean water, 2 billion lack electric power, 2.4 billion lack adequate sanitation, and 4 billion lack sound sewage disposal. Unfortunately, the poor have tended to bear a proportionately larger burden of these costs. While the tendency has been to search for more money to increase public service and subsidies to benefit the poor, this has not typically been the outcome. For example, public monopolies have delivered limited access and poor quality of formal services to the poorest. Subsidized services have often been consumed by higher income customers. The poor have tended to be limited to costly alternatives including consumption of paraffin which may be 10 times the cost of

electricity. And water consumed by the poor from informal vendors may be 20 times as much as piped water. Therefore, lack of money may either be just one of the many problems or simply a symptom of a bigger problem. Other equally potential causes for lack of provision of services for the poor could be limited revenues to improve service due to low tariffs relative to operating costs inefficiency due to high operating costs and poor cost recovery due to government non-payment and unwillingness to cut service. As a consequence, a vicious cycle may arise, leading to further deterioration of services and eventually a financial crisis.

Therefore given limited public funds, PPPs become very critical frameworks within which such projects like infrastructure, access to clean water, electric power, adequate sanitation, sound sewage disposal etc. can be developed and hence reduce the burden of these costs from the poor. The PPP will help mitigate the threat of the vicious circle.

2.2.1.1 The Vicious Cycle of Service Deterioration

This situation typically results when most public service providers such as utilities are operated without consideration of market principles, especially where there is complacency due to lack of competition. The vicious cycle concept is based on the potential for escalation of public service deterioration of an infrastructure or utility into a crisis with huge rehabilitation cost implications. This may typically be triggered by low tariff charges below market value or poor collections due to inefficient system. Due to low costs, consumers may use the service very inefficiently, for example using clean purified drinking water to water plants. Such inefficient waste would then drive up operating costs which in turn may cause postponement of new investments and maintenance. Without maintenance and new investments to match the growing population, service levels begin to deteriorate. Faced with poor service, customers begin to resist paying invoices and this forces the company to rely on state subsidies. Since state subsidies come with strings attached, managers lose autonomy and incentives to work hard, which results in further inefficiency. Furthermore, due to inefficiency, state subsidies too may be reduced or cut off leaving the company unable to pay off its wages, recurrent costs and new assets. This sets in a spiral of both service deterioration and asset deterioration that would require huge rehabilitation without any clear source of revenue, not even for operating costs.

As shown in the figure below, given the causal problems of the vicious cycle, logic would require three possible solutions, i.e., increase tariffs, reduce operating costs and improve service. However, to effectively administer these solutions, a variety of structural transformations in the service delivery process may be necessary. These range from minor to radical reforms depending on the level of the crisis and the embedded causal factors. One such transformation is to employ a Private/Public Partnership. The benefits of private involvement include access to capital efficiency incentives resulting from competition and productivity greater accountability (and possibly service reliability) and better know-how due to access to management expertise (and possibly introduction of new techniques).

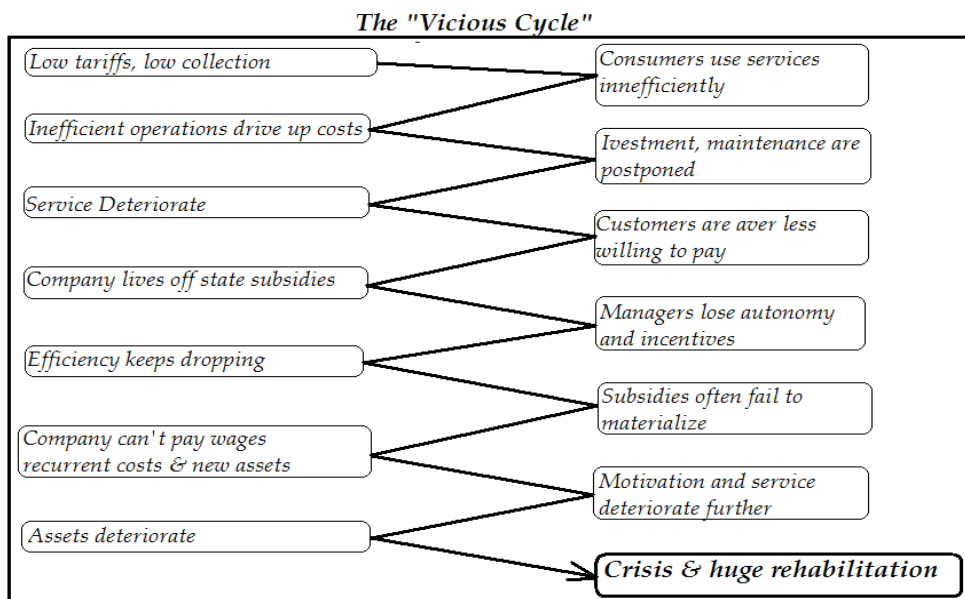


Figure 2.1: The Vicious Cycle

Adapted from the Institute for Public-Private Partnerships

2.2.1.2 Types of PPPs around the World

According to the Institute for Public-Private Partnership (IP3), recent trends show a significant growth in PPPs, especially in areas of infrastructure. For example, there have been more than 500 PPP deals yielding \$100 billion in proceeds, primarily in telecoms and energy. Recent increase in growth of PPP has spread to sectors such as education, health, and water. Similarly, “Tri-Sector Partnerships” (private, public and civil society) have been

gaining popularity. While there exist many variants of PPPs, the most typical ones include service contracts, management contracts, leases, concessions and divestitures (IP3).

2.2.1.2.1 Service Contracts: These are contracts involving provision of services. Their goal is to reduce the cost of non-core services through competition. They are typically run for three years, and for specific tasks such as installing or reading meters, security, janitorial services, collecting accounts etc. For example, in Chile, Santiago de Chile contracted out services equal to 30% of its operating budget with two contracts for each service area for computer services, engineering consulting and network repair, maintenance & rehabilitation. The contracts were to last for three years and to be re-bid.

2.2.1.2.2 Management Contracts: Management contracts engage a private firm to run an enterprise with the goal of improving management, typically for five years. Compensation includes a fixed fee and/or performance based payments. In this case, the government owns assets and all capital investments while the private operator does the day-to-day management, preventive maintenance, assistance with long range planning etc. For example, in Cambodia, some hospitals were contracted out to an NGO for primary health care for four year contracts in 12 districts. The contractor had full line responsibilities with performance targets in immunization, antenatal care, family planning, services to the poor etc.

2.2.1.2.3 Leases: Leasing involves temporary ownership of the infrastructure for a fee with the goal of improving performance of the infrastructure and supplementing government funds with limited private investment typically for a period of 8 to 15 years. Compensation includes tariff revenues split between the lessee (operator) and the government. The lessee is responsible for operation, maintenance and collecting of tariffs while the government is responsible for the capital investment. Institutionally, the government transforms a state-owned infrastructure into an asset holding company (AHC) while the private operator creates a new special purpose company (SPC). For example, in Guinea, there was a ten year lease for water services in Conakry and 16 other cities. SONEG was the state-owned AHC with responsibilities for planning

and implementing new investments while SEEG which was 51% privately owned SPC was responsible for operating, maintaining water facilities, and billing customers and collecting charges.

2.2.1.2.4 Concessions (BOTs): Sometimes known as Build-Operate-Transfer (BOT), this requires the operator to build and operate the infrastructure before transferring. However, there is a difference between a concession and a BOT in that in a concession, the operator inherits an existing infrastructure, while in a BOT, the operator builds a new infrastructure. The goal is to improve performance while attracting private finance. The contract typically runs for 20 to 30 years and compensation is in the form of tariffs collected and is kept in full by the operator. Thus, the operator is responsible for the capital investments, operation, and maintenance while the government retains asset ownership and is also the regulator. For example, in Argentina, the ports were to be decentralized to regional levels and concessions contracted for different ports.

2.2.1.2.5 Divestitures (BOOs): This is similar to a Buy-Own-Operate (BOO) since the goal is to transfer government responsibility for service provision and investment to private sector through sale of assets/shares to private owners. Like in BOT/Concession, the difference between the two is inheritance of existing assets versus building new assets. They are typically of permanent transfer or as long as the license lasts. The private owner's compensation accrues from tariffs and the government's only role is to regulate. A good example is Mexico's Telecoms when TELMEX divested through sale of about 20% shares to a new special purpose company (SPC-only Mexican nationals), about 20% to TELMEX employees and 60% sold via world capital markets.

In general, there is a correlation between the type of PPP and the contract duration and the amount of private investments required. The larger the investment size, the longer the duration as shown in the next illustration.

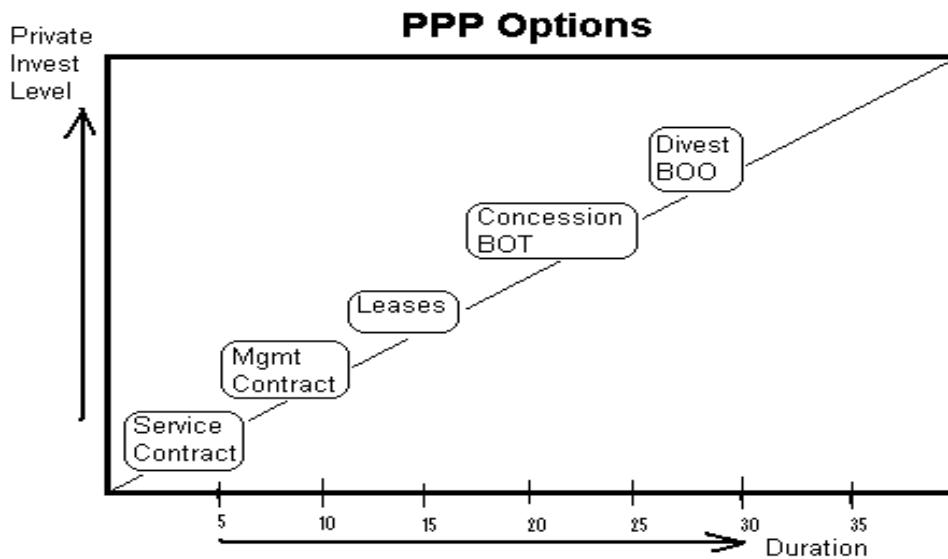


Figure 2.2: PPP Options

Adapted from The Institute for Public-Private Partnerships

Given the nature and variability of different types of PPPs, there is potential for accomplishing both the PPP process while strategically designing the process to similarly stimulate small and medium enterprises (SMEs). It is therefore being hypothesized that restructuring the regulatory framework and policy orientation at both national and local government levels towards use of PPPs would have several implications to SMEs. Thus, it is hypothesized that:

1. In general, a PPP policy would improve efficiency in the public sector
2. A strategically designed PPP policy could increase capacity development for local businesses
3. In general, PPP participating enterprises would be more likely to grow faster than non PPP enterprises

2.2.2 PPP Investments in Africa

While Sub-Saharan Africa’s share of PPP investments has been growing, a lot needs to be done. In general, Sub-Saharan Africa has fared very poorly except for North Africa and Middle East. As shown in the figure below, the Latin American countries have performed the best followed by East Asia and Europe in both value and number of projects.

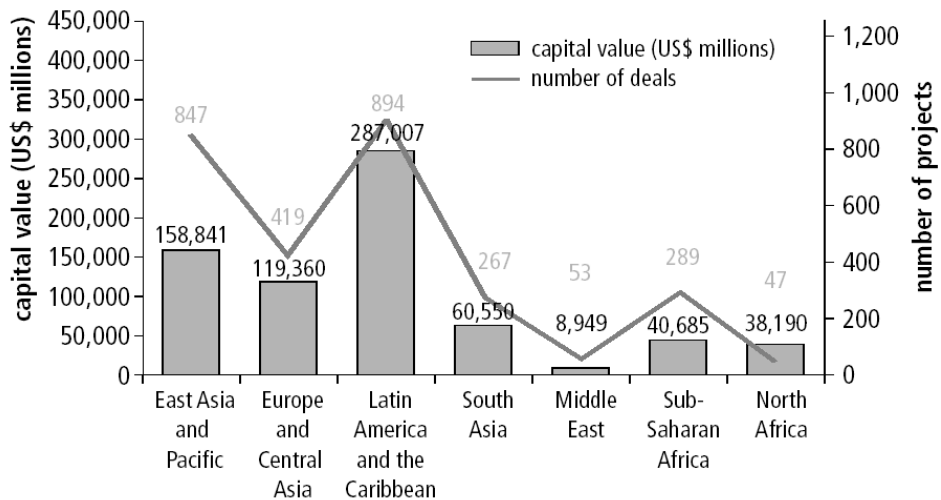


Figure 2.3: Number and Value of Private Participation in Infrastructure Projects, by Region, 1996–2006

Source: World Bank PPI Project Database

For Africa, the trend of most of the PPP efforts have been felt in the infrastructure sector. The typical PPP infrastructure sectors of the economy include telecommunications at the top, followed by energy and transport, and finally water and sewage. In The transport sector takes the lead in terms of concessions, followed by the energy sector as shown in the following figure.

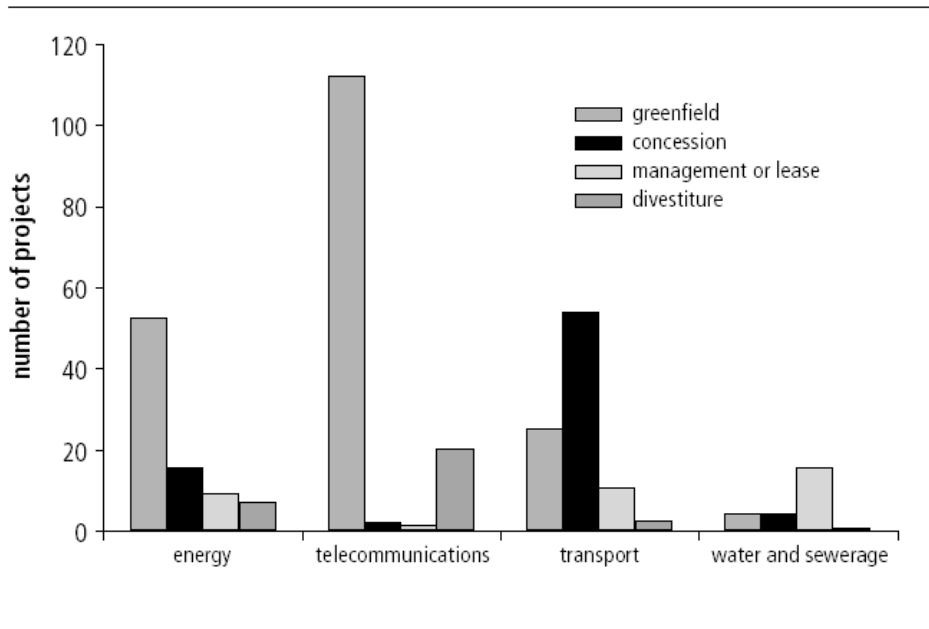


Figure 2.4: Number of Private Participation in Infrastructure Projects in Africa, by Sector and Type of Contract, 1996–2006

Source: World Bank PPI Project Database

2.2.3 Prerequisites for Public-Private Partnership

In developed countries, governments have long acknowledged that the public sector has inherent limitations and cannot be effective in all areas at the same time. And so, routinely, some have turned to the private sector to fund and provide the social programs they cannot afford to provide or are unable to provide efficiently. At various points, they have analyzed their human and capital capacity in projects and services and concluded that in certain developments, the society would benefit more if the private sector played a stronger role. They have then reached out to the private sector through partnership alliances. The next section will discuss the key prerequisites to PPPs, including the role of the private sector, the role of a participative process and the role of leadership as exemplified in the United Kingdom’s experiences.

2.2.3.1 The Role of the Private Sector

For a Public Private Partnership to work, the public sector must first recognize and appreciate the significance of the private sector in contributing towards development. This must also be embedded in the government's strategy to meet its social responsibility to the public at the lowest cost and for the longest term possible. Generally, the underlying motivation for initiating and consolidating public-private partnerships has been the urgent need to protect the public's common future, by promoting sustainable development through actions of social responsibility. This motivation must, however be based on financial and moral considerations. It is generally agreed that, "sustainable development denotes equity, fairness, and growth...". As such, the process of public private partnership must, as its goal, reflect equity, fairness and growth. The PPP's are therefore a link between development and social responsibility.

Why is there need to involve the private sector? Public-private partnerships not only provide governments with a mechanism for financing needed public services at lower costs, they also promote the delivery of higher quality public services. Public need is identified clearly and risk and reward are allocated fairly. Government maintains control of what its best at and forms partnerships to benefit from commercial discipline and greater ability to innovate within the private sector.

The private sector is also society's greatest beneficiary, in monetary terms. It logically follows that for social cohesion, society should expect more from the sector, in return. From a moral perspective business should be expected to assume a central voluntary role in coming up and participating in initiatives to help solve forms of society's problems that aggravate poverty. And nowhere is the problem of poverty graver than in Africa. It is also generally agreed that for "balanced social development and improved governance, it is important to make the private sector aware about its social responsibility" (ADB, 2000). In partnerships, the private sector needs to consider its social responsibility, while the public sector needs to create the appropriate legal and regulatory structures, as well as a democratic and participatory process in decision making (ADB, 1999).

The focus is also on the stewardship of present capital resources with a view to sustaining future qualitative social growth for larger sections of the public, based on a cooperative social agenda. When governments pursue

policies that promote PPP relationships, the public is indirectly involved in projects that directly affect them. This also nurtures a cultural attitude of cooperation and common national agenda across diverse income groups for common social good.

Evidence suggests that PPP relationships have the potential to dramatically reduce incidences of social instability borne out of large socio-economic inequities. The deliberate and systematic redirecting of private industry to projects or services that directly or indirectly provide opportunities for the poor to enjoy a better quality of life humanizes the private sector to sections of society that otherwise views them as aloof and uncaring. On the other hand, through opportunities for improvement, the poor view themselves, no longer as socially excluded groups, but as important players in transforming society. This gives them hope for the future, and with hope, the courage and energy to face the future and the possibility of a better quality of life. Through this form of governance the socio-economic inequity agenda can be partially addressed, as this allows for the voluntary and spatial access to capital resources through acts of social responsibility. It also convergences the energies of multiple players and their skills towards a common social agenda, that promotes ..."equity, fairness and growth..." within society and as such sustains the common good.

Socio-political agendas involving alliances between governments and the private sector have for many years been developed and implemented successfully in many developed countries, such as Canada, parts of Western Europe and recently in South Africa. It has not been easy. There have been numerous hurdles, such as opposing work cultures of the private and public sector, suspicions, and power struggles. The processes have been tedious and long, but numerous success stories have cleared underlying ambiguities about public private alliances leading to their general acceptance in the developed world. This has been possible because of the general awareness that the public is the major beneficiary of a well thought out, people sensitive partnership.

Speaking at the 2nd Enabling Environment Conference in Kabul, the Aga Khan called for "a great alliance bringing together government, communities and business to help drive growth...and sustain it... in the developing world". By growth, his focus was on improving the quality of life of people in the developing world. This he believed could be done only

if politicians created an enabling socio-economic and political environment as a first step, thereby creating space for civil society to play its role and for the private sector to come in and share its capacities. This should be within a complementary and not a competitive environment, with the government. One of the chief obstacles to development today is that the efforts of all three sectors are too often scattered and fragmented. Their impacts are therefore minimal without any large scale changes. Africa's problems are gigantic and require large scale interventions that will have maximum impact on the quality of life. The Singapore government also acknowledges that, in order to realize the full potential of PPPs, it needs to continue to promote dialogue between the public and private sectors, to exchange ideas, share experiences and find appropriate solutions to problems.

2.2.3.2 The Role of a Participative Process

An open and participative process is an oasis for sustainability of Private-Public Partnerships. It is an engine that spins the wheels of trust, creativity and generation of wealth in a community. What then is participation? Participation denotes a relationship. Fundamental to the successful survival of humanity is the ability to develop and sustain relationships. Individuals function at their best when engaged in mutually beneficial and meaningful interactions. Relationships serve economic, psychological, and emotional needs. Just as individuals depend on relationships for psychological stability, so too do groups and organizations. Poverty within a section of society however disables a community's relational equilibrium. It creates a discriminatingly uneven power structure that prevents the economically disadvantaged group from fully harnessing available resources and psychologically enriching its sphere of relationships. This creates an opportunity-survival relationship, driven by power and powerlessness.

Clearly developing voluntary working relationships across sectors in society appears to be a potentially effective option for the developing world to seize in order to help improve the living standards of its people. Relationships are multifaceted and complex by nature. Many variables compete for attention during the initial stages and building of a relationship. These include self-interest, attitude, past experiences, economics, personal perceptions, existing socio-political environments and the communicative culture. Because each partner or group comes with a background of experiences and interests that vary in some aspects from

other partners, it is important that effective communication strategies are employed to minimize the differences and focus all attention and energy on the multiple benefits of a common agenda for the common good. How then can we define partnerships and measure their relevance, effectiveness and sustainability?

Organizational partnership is a fluid multidimensional relationship. To keep it cohesive, it must consistently be fed with a communication diet that recognizes and appreciates the value of each partner's contribution to its continued unity and success. Organizational relationships like human relationships are not formed with a view to ending them. As with humans, a lot of investment is put into sustainable relationships with the objective of mutual benefit. The nature of investments could range from emotional to monetary. Sustainable relationships are also not spontaneous creations. Rather, they are the result of a deliberate and systematic thought process motivated by the desire and need to contribute and affect positive change in the quality of life of individuals or a community.

The anchor that stabilizes an effective partnership is communication. Without appropriate communication strategies, differences surface and the common agenda is drowned in a wave of confusion and self-interest. The goal is to explore ways to increase and maintain communication, with eyes fixed on a common development agenda, i.e., governments, civil society and business have to find ways of talking to one another often, as they work to better lives.

What then is communication? Communication is an active and dynamic two way process of sharing meaning through verbal and non-verbal channels. The process begins with a sender whose attitudes, beliefs and value systems having been molded by past experiences, initiates interaction with a receiver, whose perspectives have also been shaped by his or her field of experiences. The sender transmits a message expressing ideas, feelings and hoping to stimulate similar ideas and feelings within the receiver, so that he or she might understand the sender's experience in light of the receiver's own experience. Once the message is received, communication is determined to be complete if the receiver of a message decodes it into meaning that correlates with the sender's meaning. Verdeber asserts that "the variable of feedback is fundamental to the communication process to determine whether communication-stimulation of meaning-really took place". If, however the feedback indicates that communication

was not received or was received incorrectly or was misinterpreted, the sender can send the message again, perhaps in a different way, so that the meaning he or she intends to share is the same meaning received by the listener.

In light of this, communication may be described as a relational, dynamic, multi-coded system, whose effectiveness depends on the interpretation of the cognitive – (a person’s beliefs), affective – (a person’s feelings of dislike and like) and behavior- (action tendencies or predispositions towards the person) of the sender.

The basic tenet of this book is alliance building and the glue that holds alliances is communication. What then do we need to build alliances for maximum social benefit? This research set out to investigate the dynamics of public/ private sector partnerships (PPP) within a developing country context, in this case, Kenya. One of its areas of emphasis was to dissect and analyze how the relational processes have influenced the creation, development and sustainability of such partnerships.

A review of literature on public-private partnerships and communication shows that successful partnerships have skillfully used communication to breed inclusiveness and promote fairly the advantage factor to all parties involved. In Ireland for example, the education authorities realized that consultation and sharing of information was an essential continuous process in its PPP projects. Communication plans with tangible and realistic objectives were therefore essential. For successful communication, it was essential that:

- i. The needs of stakeholders on a project were understood
- ii. The expectations of stakeholders and users were managed
- iii. Consultation was undertaken as and when appropriate.
- iv. Stakeholders were informed of developments
- v. Community needs to private sector were communicated

2.3.3.3 The Role of Leadership: The United Kingdom’s Experience

The United Kingdom government, which considers itself a pioneer in the public-private partnership movement, serves as a model demonstrating a sense of purpose. In mid-1997, Prime Minister Gordon Brown, took policy steps to extensively include the private sector in the UK’s development agenda. Brown’s government partly based its decision on the realities of the public and private sector experience.

The realities of the private sector market place exert a powerful discipline on private sector management and employees to maximize efficiency and take full advantage of business opportunities as they arise. These disciplines can never be fully replicated in the public sector, since there are a multiplicity of policy objectives, and a more risk averse culture driven in part by the desire to safeguard taxpayers money. Compared to the private sector, therefore, the public sector can be less equipped to challenge inefficiency and outdated working practices, and to develop imaginative approaches to delivering public services and managing state owned assets.

Prime Minister Brown's ultimate goal was the modernization of Britain and PPP's were seen as a key element in the government's strategy for delivering modern, high quality public services and promoting the UK's competitiveness internationally. Between 1997 and 2000 the United Kingdom government entered into partnership with the private sector for 150 projects involving capital investment of over 12 billion pounds and between 2000 and 2003, the UK signed contracts for projects with an estimated capital value of over 20 billion pounds. According to the UK government, PPPs are "delivering better quality public services, by bringing in new investment and improved management, and are helping state owned businesses achieve their full potential."

The nature of the collaborations was diverse and covered a range of business structures. Equity stakes were sold to the private sector to help state owned businesses to compete and provide improved services for their customers. Long term concessions were given to the private sector partners to upgrade and modernize the London Underground rail system, and strategic partnerships to outsource services, such as the National Air Traffic Services were created and entered into joint ventures to establish new hospital facilities, schools and prisons.

PPP's evolved out of the success of the Private Finance Initiative, (PFI), created and championed by the government. Based on the PFI, the Brown government was committed and passionate about the ability of partnerships to have a transformative effect on government delivery of services through modernization. As a government, they initiated and championed the process through legislation and dialogue, which facilitated the building of alliances between different sectors. To protect public interest, regulation was legislated and independent regulatory bodies were created. "This provides assurance to the private sector that the regulatory

system includes protection from expropriation, arbitration of commercial disputes, respect for contract agreements, and legitimate recovery of costs and profits proportional to the risks undertaken” (Pongsiri, 2002). The government’s goal was to ensure high standards were maintained, the public got value for money, and that monopoly power was not abused. This was made possible by retaining responsibility and democratic accountability for:

- i. Deciding between competing objectives
- ii. Defining the chosen objectives, and then seeing that they were delivered to the standards required
- iii. Ensuring that wider public interests were safeguarded

The UK government in reaching out to the private sector through public-private partnerships was guided by themes and principles that sought to meet the needs of customers, protect the wider public interest, allow for greater public accountability, recognize the contribution of staff and provide value for money for the tax payers. These themes and principles were based on a clear sense of purpose which must be guided by a community answering the following questions: what do we want to be; what do we intend to achieve; and what is going to drive us?

2.3.0 SAMPLE CASE STUDIES OF PUBLIC PRIVATE PARTNERSHIPS

If there was ever evidence that public-private partnerships (PPP) can act as a catalysts for transformative change within African communities, then Kenya is an inspirational example of the latent potential of public-private alliances to improve the business operating environment, elevate the living conditions of communities and provide opportunities for income generation across diverse economic groups. The PPP’s fit within the cultural environment of African communities that are fundamentally group oriented and value participation as reflected in problem solving processes involving extended family lineages. However, there is need to strategically use PPPs to also stimulate entrepreneurial interest among prospective entrepreneurs. Thus, taking a PPP perspective in the private sector does not only encourage efficient allocation of public and private resources through leverage and long term capacity development, but also provides an opportunity for innovation and competitiveness. This is because the private

sector, especially the Small and Medium enterprises (SMEs) in developing countries may not usually get good opportunities to subcontract with large corporations. It is therefore anticipated that government policies and regulatory mechanisms that encourage a variety of Public-Private Partnerships (PPP) would strengthen local enterprise while at the same time stimulating entrepreneurial interest. PPPs can be a means of leveraging public and private resources to enhance the private sector and thus entrepreneurship. The success of PPP projects depend on their being perceived by prospective entrepreneurs and the public in general as contributing to quantifiable socio-economic benefits for local business capacity development and eventual economic growth. Hence, the goal of this section is twofold: 1) to present sample case studies of PPPs in Eastern and Southern African examples and; 2) to review sample PPP projects based on two related Portland, Oregon projects in the United States that the author was responsible for.

2.3.1 Sample of African PPP Case Studies

To appreciate the diversity of PPP projects, this study reviewed several case studies of PPP projects in Southern and Eastern Africa. It is anticipated that with the understanding of a variety of PPPs and review of actual samples, there will be more public openness to different PPP concepts and approaches. This section specifically provides a quick survey of sample case studies in East and Southern Africa where PPPs have been employed to not only provide services, but to also enhance SMEs. These include two samples related to mining ventures in Tanzania and Zambia respectively and two others related to water supply in Tanzania and South Africa respectively.

2.3.1.1 Kahama Gold Mine - Tanzania

Kahama Mining Corporation Limited (KMCL), a private company operated an underground gold mine south of Lake Victoria in the Shinyanga Region of north-western Tanzania. In 2000 and 2001, KMCL funded the construction of a water and sanitation (watsan) system in the nearby villages of Bugarama and Ilogi. The water system had two aims:

1. To provide WATSAN services in new housing stock built primarily for KMCL workers.
2. To provide the two village communities and KMCL workers in the surrounding communities with better quality communal Watsan services.

It was also the medium-term intention of the partnership to give local residents the skills and capabilities necessary to operate and regulate the WATSAN services themselves and for the scheme to become financially independent. Assets were also to be transferred to the local community. WEDECO, an expert in delivering rural WATSAN services in Tanzania, had a permit to operate and maintain the WATSAN infrastructure and to build local capacity until the point of handover to the community. Thus, KMCL's objectives in forming the partnership were to:

1. Provide a sustainable and affordable service to both mine workers and the surrounding community.
2. Transfer ownership, funding and management of the water facilities to the community by December 2005.
3. Build the necessary capacity in the community to do this.
4. Make the WATSAN service financially independent.
5. Have KMCL withdraw from the partnership having successfully transferred the system to local hands

2.3.1.2 Kankola Copper Mines - Zambia

Zambia Consolidated Copper Mines (ZCCM) retrenched a large number of employees from operations that became owned by Kamkola Copper Mines (KCM) and anticipated further retrenchment to transform the operations from the previously over-manned condition to a position where they could become internationally competitive. In the medium-term, some of the operations were to close as they reached the end of their economic lives and this was to lead to additional job losses at the KCM operations.

In order to lessen the effects of retrenchment, KCM aimed at encouraging retrenched employees to establish their own commercial enterprises or to use their skills to enhance the capacity of established small and medium sized businesses. KCM was committed to developing and implementing a Local Business Development Program in partnership with local communities and the government. Ultimately, this was with a view of encouraging and assisting the establishment of businesses within the Copper belt and with emphasis on businesses directly or indirectly majority owned by Zambian citizens to supply materials, equipment and services to KCM.

Objectives of Partnership included:

1. Finding the most efficient use of the available resources, expertise, leadership and opportunities, in the vicinity of KCM in order to promote local business development
2. Promoting the provision of supplies and services to KCM and markets elsewhere, both mining and non-mining related by local SMBs
3. Developing local businesses and contributing to poverty alleviation in the short- term
4. Diversifying the economy of the Zambian Copperbelt in the longer-term

Objectives for Business development included:

1. Establishment of a venture capital facility for small and medium sized enterprises (SMEs)
2. Mapping of SME facilitation and capacity building services
3. Preparation of a feasibility study to look at the constraints and opportunities for micro-enterprise development in the agricultural sector
4. Securing of a 'champion' within central government to further the 'enabling environment' for effective SME development

2.3.1.3 Singida Peri-Urban Water Supply and Sanitation Project - Tanzania

Established in mid-2002, Singida Peri-Urban Water Supply and Sanitation Project was a partnership that aimed at providing water and sanitation services (WATSAN) to the peri-urban areas of Singida Town and at building local capacity for the delivery and maintenance of WATSAN services. The duration of the partnership was to be three years.

The aim of the partnership was to “improve the health status and reduce poverty of the peri-urban population through improved access to adequate and safe water”. Their four key objectives were to:

1. Provide WATSAN infrastructure.
2. Integrate water, sanitation and hygiene approaches.
3. Build and accelerate community capacity and demand.
4. Develop local organizational capability.

The project included the formation of local Water User Groups (or WUGs, also considered partners over the longer term). WUGs are responsible for day-to-day operations and maintenance of the infrastructure and they contribute financially to its installation. Private sector

organizations have been contracted to deliver other services (such as drilling). Many of the partners are local and build on existing assets and local capacity.

2.3.1.4 Eastern Cape & Northern Provinces Water Project - S. Africa

The BoTT (Build, Operate, Train, Transfer) was a public-private partnership - whereby scheme funding was from the public sector & private partners undertook project implementation. The BoTT aimed at building up capacity within institutions, communities and councils in order to pursue an integrated and participatory project development approach. A 'one-stop shop' capacity was created via a consortium of service providers with expertise in five key disciplines: design, construction, operation and maintenance (O&M), on-site sanitation, and Institutional and Social Development (ISD)

Upon its creation in 1994, the Department for Water Affairs and Forestry (DWAF) assumed control of Water and Sanitation in the former black homelands with the goal of transferring the national government's responsibilities to local government. It funded construction and approved projects. The Project Implementing Agencies (PIAs) were contracted to DWAF. Individual organizations within the PIAs were to win spin-off contracts and had to be specialists in one of the five disciplines that had been predetermined.

Stakeholder involvement was facilitated by Mvula in the Eastern Cape, and by private sector partners in the Northern Province which evolved into a Water Committee that ran the system. The Mvula Trust also worked on ISD implementation with sub-contractors (Amanz'abantu) and ISD strategy and quality control (Metsico). Communities selected a representative for Project Steering Committees (PSCs) and Project Working Committees. They also contributed labor, operated and maintained schemes and set user fees. Community labor was used for construction and there was also training of plumbers, operators, water bailiffs and revenue collection officers.

The overall aim was to harness the comparative advantages of each sector, to provide a holistic 'drop-down' structure that can deliver rapid, yet sustainable, W&S solutions in poor rural areas. However, there were also three types of partnership objectives:

1. The contractual relationships between DWAF, the ER, local governments, the PIAs and the communities

2. The working relationship within the PIAs between private sector firms and Mvula

3. The project implementation partnerships of the private sector, Mvula (and various sub-contractors) with communities and / or local governments

2.3.2 The Portland (Oregon) Urban Transport Related PPP Projects

This sample case study has been selected for two reasons. First, it is based on the urban environment with a focus on urban transportation. Secondly, the PPP projects were led by the lead project investigator of this study. The case study outlines process through which the project was prepared and implemented, including research and review of similar projects.

It had been clear that various transit agencies in North America had creatively attempted to not only increase the variety of services they provided, but had also advocated for other transportation options and more transportation choices. They had, with a good measure of success, called public attention to the concept of modal choices, along with non-transit options such as land use, telecommuting, alternative workweek etc, which had positioned them as both impartial and responsive stewards for the greater public good. At the time, legislations such as the 1991 ISTEA and the 1998 TEA21 that required transportation planning to comprehensively include all transportation alternatives had further enhanced the trend. Unfortunately, the major debate among supporters of public transit tended to oscillate between (BRT) and light rail. This pattern reflected one previously imposed on transit by transportation planners and engineers whose earlier focus was on road capacity. This Portland project challenged this trend by not only looking at opportunities for service options, but also engaging PPPs in the provision of transit service.

2.3.2.1 Shuttle Service Operations

The operation of shuttle service systems in the United States was partially based on the 1990 Americans with Disability Act (ADA), whose passage ushered in a flood of para-transit services. This also opened up wide opportunities for transit agencies to subcontract services with the private sector. Since then, several shuttle services were initiated, ranging from contracts for elderly services to contracted vanpool services for commuters. In some cases, transit agencies partnered with private institutions such as

Transportation Management Associations (TMAs), Commuter Assistance Programs (CAPs), and large businesses to provide shuttle services. But the major push was the Job Access program, which was closely associated with the 1998 TEA21 legislation. Apart from targeting poorly served niche markets previously overlooked by the traditional routing orientation of transit service agencies, the program went to great lengths to emphasize the need for collaboration:

The Job Access and Reverse Commute grant program is intended to establish a coordinated regional approach to job access challenges. All projects funded under this program must be the result of a collaborative planning process that includes states and metropolitan planning organizations (MPOs), transportation providers, agencies administering TANF and WtW funds, human services agencies, public housing, child care organizations, employers, states and affected communities and other stakeholders. The program is expected to leverage other funds that are eligible to be expended for transportation and encourage a coordinated approach to transportation services.

While this trend was impressive and appeared promising, there were still a lot of untapped opportunities. The potential for partnerships with taxi providers and consolidation of duplicative shuttle services provided by hotels in common service areas still existed. Therefore, these two projects involved two opportunities for transit agencies to engage with taxi service providers and to consolidate hotel shuttle services respectively.

The first project was based on a set of three pilot projects using taxi shuttles to complement existing transit service. While the results were inconclusive due to a short operational period, the projects showed great potential. Data from the oldest of the projects indicates ridership remained high, the cost per ride was competitively low and an overwhelming number of customers were satisfied. The second case study was based on the potential for public and private partnership to integrate existing shuttle services especially in areas overcrowded with duplicate shuttles such as airports. Even though this latter project was still in progress, lessons so far learned are critical for future applications.

2.3.2.2 Portland's Tri-Met Taxi Shuttle Service

The final program that Tri-Met implemented was a hybrid of both the Virginia and San Diego examples above. While the scopes of the three-taxi

shuttle projects that were eventually implemented over time varied according to unique local interests and characteristics, each appeared to enhance commute choices, service efficiency and above all, operated by a private contractor.

Table 2.1: Key Project Objective and Scope

	Project	Target Population & Performance	Key Project Objectives and Scope
1	1998 Cedar Mill Shuttle	Affluent Residential Excellent \$4.20/BR \$3.00/BR (peak)	-Local circulation between home and service centers. -Contract of two vehicles initially (two vans in 2 nd contract) with Sassy’s cab company to service the neighborhood. -Access to transit center to connect with bus and rail. -Same fare instrument transferable to bus and rail. -Mutual agreement between union and management on key conditions. -1 year pilot project, renewed for 18 months to a maximum of 36 months.
2	1999 Columbia Corridor	Industrial Employment Corridor Average \$6.80/BR	-Access to jobs from bus and rail transit center. -Contract of one van with Sassy’s cab company to serve an employment corridor. -Same fare instrument transferable to bus and rail. -Mutual agreement between union and management on key conditions. -Pilot project until the opening of airport LRT in the corridor.
3	2000 St. Johns Connector	Low Income Residential Promising \$5.68/BR	-Access to transit center to connect with bus. -Contract of one vehicle with Green cab for 8 hours of peak period service from a low-income apartment complex. -Same fare instrument transferable to bus and rail. -Mutual agreement between union and management on key conditions. -6 month pilot project, renewable for another six months depending on ridership performance.

The contracted taxi shuttle service accomplished a number of objectives, both intended and unintended.

1. First, the local small taxi company that received the contract was bolstered to be competitive with the other two major taxi operators in the city.

2. In terms of improved service, the taxi shuttle made it possible for people in the Cedar Mill area to try transit. Because of the street network and their negative attitude towards a large bus in their neighbourhood, the taxi service provided a competitive option to SOVs.

3. The taxi shuttle also proved to be financially competitive with a cost per ride lower than several of the existing routes (the goal was to be at par with express routes) . Also, because of the low numbers of potential riders, using a taxi shuttle in all the three locations saved a bus that could be deployed somewhere else. It is also possible that new riders on the taxi shuttle became new transit riders contributing towards ridership on existing service.

4. The greatest impact was on mobility and accessibility especially for the St. John's and Columbia corridor taxi shuttles. Both did not have close by transit service and since the majority were from low-income households (St. John's Shuttle) or worked in low paying jobs (Columbia Corridor Shuttle), they did not have other alternatives.

5. Other unintended effects included customer satisfaction with the service and insights on operational design. Cedar Mill residents overwhelmingly gave high marks for the service, especially for the drivers, and indicated the shuttle was building strong relationships of "a community" among users. It was also found that use of a cell phone by the vehicle operator to allow a direct request by passengers was much more practical (up to a certain threshold) than relying on dispatch service. As a result of the pilot project, several other communities in the area welcomed consideration of other options besides a regular bus service.

2.3.2.3 The Integrated Shuttle Service Concept

The other project focused on the potential for partnering with hotel shuttle providers, especially at the airports to consolidate services while avoiding duplication with the public sector and hotels. While the economies of scale from an integrated shuttle service made common sense, fundamental barriers lurked in the hotel shuttle service industry ranging from underestimation of costs to trust issues. Similar to the taxi shuttle service discussed above, this concept offered the potential for choices, efficiency and private partnership. This was especially true in a corridor with several competing shuttles.

1. Service consolidation made increased frequency possible and enhanced convenience, making it as competitive and attractive as an SOV. By combining the fleet, vehicles and labor were to be utilized to their optimal levels.

2. While it was easier to understand the efficiency arising from savings on fixed costs, often times, inherent variable costs were never well understood and therefore never included in the hotel's actual cost which would have revealed some of the inefficiencies in their systems. For example, most hotel shuttle providers did not accurately reflect their operating costs for shuttles because some costs were lumped with other hotel operating costs e.g., security personnel driving the vehicle, janitors washing the vehicle, the gas bill lumped with gas bills for other non shuttle vehicles, an umbrella liability insurance and several other unaccounted shuttle costs.

3. Similarly, the indirect impact of integrated shuttle service on the transportation system in a corridor was to be very significant especially by reducing congestion and other indirect costs. The public generally pays for indirect costs arising from pollution and congestion at the airports including limits on spaces for taxi service and at worst, limited space for public transit.

2.3.2.3.1 Previous Experiences

Heathrow's Airlinks Hotel Hoppa shuttle service in London is a good example of a large conglomerate that had consolidated a majority of transportation services at the airport under one roof. The Hotel Hoppa served three airport terminals connecting them with 11 hotels (as of April 2000). The Hoppa provided transportation between Heathrow airport and the hotels in London making it unnecessary for most hotels to operate a fleet of shuttles to the airport.

Edmonton Airports Sky Shuttle was another example. The service grew out of a partnership between the airport, hotels and Laidlaw transit to offer service between the airport and participating hotels. Interested hotel managers who wanted to cut down their operating cost got together to start the shuttle service. With 6 participating hotels as of July 2001, the partnership shuttle offered free rides to hotel guests to and from the airports. Ridership grew from 38,049 in 1995 to 150,000 in 1999.

2.3.2.3.2 Tri-Met Integrated Shuttle Project

While this project was still in progress, it was still instructive in terms of potential opportunities and challenges. This project attempted to develop a partnership that included the transit agency, a local TMA, and local shuttle providers (mostly hotels at the airport). The reasons underlying the projects were twofold: first, the corridor had several hotels running several shuttles almost empty (average of one ride per trip according to one study by the Port of Portland). The Port too was running its own employee and customer shuttle program from their parking lots. Together with Tri-Met buses, taxis, and several other private and public vehicles, the growing airport would have eventually been choked by heavy traffic, each with just a few passengers per vehicle.

Second, Tri-Met and the Port of Portland were partnering with the City and a private developer to build Airport Max light rail. This was, on one hand, to serve as the main spine from which to provide more flexible services. On the other hand, its existence would have made it inefficient to run a duplicate large bus service within the same corridor. To optimize the resources, smaller flexible vehicles were to serve as feeders while existing Tri-Met service resources were to be reallocated. Some of the savings were to be contributed towards the shuttle partnership with the remaining applied towards other transit needs. The anchor for such a partnership was the Columbia Corridor Association TMA. A summary of the major activities/findings and steps towards a consolidated shuttle service are listed below.

1. Tri-Met worked with the TMA to fund a study on the potential for service consolidation.
2. The consulting firm collected an inventory of shuttle services provided by hotels, the Port of Portland, rental car companies and park & fly companies.
3. The surveys also included gathering information such as operating cost, ridership, routing patterns, and factors important to their decision to, or not to, participate in a consolidated shuttle program.
4. Operational scenarios were developed based on the information gathered.
5. Discussions of scenarios, issues, and data gathered throughout the survey were held with target participants.

While the study was completed in early 2001, the following developments were evident:

1. There was potential for the success of a consolidated shuttle service to work and such a service concept was more effective than the existing multiple service providers in the airport corridor.

2. It was clear that there were inherent major hurdles and the program needed to be implemented in piece meal steps to allow for a smooth transition and for a few champions to provide a model for others to follow.

3. The study revealed that because hotel shuttles were an insignificant piece of hotel services, their costs were not closely scrutinized and therefore hotel shuttles did not reflect their full cost of operation.

4. Some of the hurdles in evidence included hotel identity, a limited threshold for the number of stops, and potential for most customers snatched at the first stop.

5. The study also suggested some remedies to be:

- a. A larger initial public funding to help ensure the success of the private partnership

- b. A unique name for the shuttle that would promote the whole hotel system

- c. A promotional strategy that would position corridor hotels as more preferable than downtown hotels with convenience to amenities (Cascade Station Development) and light rail to anywhere in the region

- d. A central information center at the luggage area, possibly integrated with MAX light rail customer service, prime pick up/drop off location at the airport, and limited number of stops for each trip

2.4.0 METHODOLOGY AND SCOPE OF THE STUDY

While the scope of this study was to cover a sample of partnership projects within the city of Nairobi, specifically those between the private sector (profit and non-profit) and the Nairobi City Council (NCC), in some cases, other partnerships with the national government ministries were also included. The study was divided into three phases: 1) identifying and documenting increased and sustained alliances between different public and private interest groups and local authorities for service delivery and project implementation; 2) documenting different effective communication strategies that will promote dialogue between the city and its citizenry and

businesses, and; 3) recommending and disseminating information on the framework for the restoration of Nairobi's image into a world class city through increased dialogue and public-private partnership.

2.4.1 Research Design

The research design for this study was to use a documentary case study method. This primarily relied on a descriptive approach but with some exploratory aspects in terms of identifying factors for content analysis. Thus, while this study used a qualitative method, content analysis was used on the interview scripts to develop a matrix table showing some quantitative assessments. Qualitative research was the best method for investigating complex and sensitive issues related to feelings and opinion that required descriptive detail. This research used both primary and secondary sources of data and information. The primary source of data included direct structured interviews, structured questionnaires and unstructured interviews (including a snowballing method) and focus group discussions. Since the nature of the questions were both exploratory and descriptive (what, when, how), the use of qualitative research methodology in the form of a documentary case study design was employed.

A documentary case study methodology is useful in capturing "the actors' viewpoint", societal contexts and dynamics in regard to the political and socio-economic environment. The strength of the documentary case study method is valuable in the possibility of combining different evidence resources including historical documents, interviews, and observations to conduct in-depth inquiry into public private partnerships involving a large number of variables and a limited number of cases in order to arrive at our research objectives.

2.4.2 Population Sample

Altogether 17 case relationships or partnership projects in Nairobi have been studied. While the majority were primarily involved with the Nairobi City Council, two of the partnership projects involved national government ministries (Ministry of Health, and Ministry of Public Works) on projects within the City of Nairobi. The participants included:

- i. Public/Private Enterprises (by Adopt A Light, City Clock, Nakumatt)

- ii. Public/Private Projects (by NCBDA, Ministry of Transport, Athi River Mining/Rd, Athi River Mining/Energy, NCC/Environmental, NCC/)
- iii. Public/Private Utility Services (by Amref Toilets, Amref Health)
- iv. Civic Associations (KARA),
- v. Environmental Efforts (Nation Media Group).

2.4.3 Data Collection Method & Process

The study used guided and open ended interviews with ‘key players’ (owners, CEO’s or top management of the target organizations) in private sector organizations and those in public sector organizations who were involved in policy making and regulation as well as focus group discussion workshops. The use of multiple methods for data collection was aimed at ensuring reliability and completeness of the study. The process involved the development of an interview instrument, scheduling for appointments, and travelling to participant sites for interviews. The interviews were held with the owners of the organizations or top management since the study wanted not only to discuss activities, but also strategic decisions. In some cases, follow ups were made either because new developments required it or certain information was not available at the first interview. Once the data had been collected, it was compiled in form of interview scripts. Further data was also collected through focus groups. Thus, once the draft report had been produced, respondents were invited to a session where findings were shared, and discussions held. Their ideas were recorded for inclusion into the final report.

All notes, documents and interview scripts were maintained for review and reference by those interested in tracing the chain of evidence.

Upon completion of the preliminary analysis and development of a draft report, two follow up focus group discussion workshops were held with private sector stakeholders and two others with city council officials for each to respectively validate findings, substantiate outstanding issues or provide further insights. These workshops also formed the foundation on which to discuss and entrench the concept of public participation process.

2.4.4 Data Analysis Methods

A detailed analysis of developments in several alliances was carried out to sort out what factors have fostered and sustained public private relationships and factors where the relationship had not been sustained. What strategies had worked against formation of multi sector alliances and continued strained relationships. A content analysis was used to allow for quantification of feedback from interviews. This was done at three different levels, i.e., general analysis of responses, analysis of success factors, and analysis of failure factors as follows.

2.4.4.1 General analysis of responses: This involved identification of key factors of interest that were imbedded in the interview questions, e.g., initiator of partnership, activity goal, why partnership, stakeholders, the agreement, challenges and mitigation. A matrix table was therefore created with columns representing participating partnership projects labeled at the top while the key factors from the questions were represented on the left side by the rows. Subsequently, from each of the interview responses to the questions, frequent descriptors or phrases were identified and listed within respective categories. For example, under the initiator of the partnership question or category, the descriptors were private, government or other. Once this was completed, each interview script was read with the goal of identifying the presence of the descriptor and entering a one (1) in the respective column on the matrix table whenever it was found. When this was completed, one tally was made in the last right side column for each descriptor, while another was made for each respective partnership project at the bottom of the matrix table. These tallies were then compared for presentation of key findings.

2.4.4.2 Analysis of Success Factors: The study also wanted to do an analysis of the distribution of factors cited in the interview script as contributing to the success of each partnership project. Almost a similar approach as described in the previous section was used except that in this case, the review did not attempt to categorize descriptors by interview questions. It simply involved identification of descriptors of success from the interview scripts. Once this had been done, a table matrix was again created with the descriptors in rows on the left side while partnership projects were again in columns at the top. Interview scripts were read again with the purpose of recording the frequencies of each descriptor appearing

under respective partnership activity. When this process was completed, one tally was made in the last right side column for each descriptor, while another was made for each respective partnership activity at the bottom of the matrix table. These tallies were then compared for presentation of key findings.

2.4.4.3 Analysis of Failure Factors: The final set of analysis reversed the focus of the previous analysis and instead attempted to examine the distribution of factors contributing to the failure of each partnership project. In this case, the analysis involved identification of descriptors that had been mentioned as contributing to failure of the partnership project from the interview scripts. Once again, a table matrix was created with the descriptors in rows on the left side while partnership projects were in columns at the top. Interview scripts were read with the purpose of recording the frequencies of each descriptor appearing under respective partnership activity. When this process was completed, one tally was made in the last right side column for each descriptor, while another was made for each respective partnership project at the bottom of the matrix table. These tallies were then compared for presentation of key findings.

2.4.5 Public Participation Framework

Phase two of the project focused on the development of operating guidelines for forming and managing partnerships and a framework for a participative process. Therefore, as part of the research design for the phase two, this study also; 1) developed partnership operating guidelines, and 2) developed a framework for public participation process.

2.4.5.1 Partnership Operating Guidelines

AQ focus group discussion forum was held at City Hall with stakeholders where draft findings of the study shared and discussed. Ultimately, a feedback loop was initiated to review the findings and develop partnership operating guidelines.

2.4.5.2 Framework for Public Participation Process

The study also developed a framework for public participation process based on projects which the Principal Investigator (PI) worked on as a planner in Portland, Oregon, and his research in the area as shown by

excerpts below from a paper he presented at an international conference in Cleveland, Ohio in 2001.

Public involvement is a two-way communication process between citizens and the government. Transportation agencies and other officials give notice and information to the public and use public input as a factor in decision-making. In their handbook for Median Projects, Williams and Marshall put it more precisely: Public involvement implies a role for the public in agency decision-making. It goes beyond informing the public or allowing an opportunity to comment...it also requires a mechanism for responding to public concerns or ideas”.

A casual review of recent trends indicates a growing sophistication of research statements. Some of the obvious topics include but are not limited to:

- i. The measurement of effectiveness; Dilley and Gallagher (1999), Keever and Lynott (1999), Bell (1998).
- ii. Innovativeness of the process; Ingram and Lorenz (1999), Yoshioka (1999), and Ziegler (1997).
- iii. Significance of the process; Haruo (1999), Molenkamp (1999).
- iv. Useful tools; O’Dowd (1998), Gallagher (1997), and Dulic (1997).
- v. Applicational techniques; Shoemaker (1998), Bates and Wahl (1997), O’Connor (1996), Schwartz (1996), O’Dowd (1996) and Boyd and Gronlund (1995).

Most of these principles can be subdivided into two major strategies, i.e., process oriented and personal relation oriented strategies (Williams, 1999)

2.4.5.3 Process oriented strategies

These include: 1) satisfying process values, 2) involving stakeholders, 3) starting early to allow enough involvement, 4) clarifying parameters of project decisions, 5) maintaining continuity of involvement, 6) not letting a controversial decision slip by the public, 7) proving to the public that their concerns will be addressed, and 8) achieving a clear resolution and providing prompt feedback.

2.4.5.4 Personal relation oriented strategies

These include: 1) striving for consent, not consensus, 2) building trust and enhancing relationships, 3) seeking to clearly understand public concerns,

4) presenting your position from a listener's frame of reference, 5) clearly establishing need for project, 6) affirming or acknowledging the other side, and 7) avoiding hasty commitments.

2.4.6 Dissemination of Results

The final phase of the study involved the dissemination of results to various stakeholders. The project schedule and dissemination plan includes; 1) holding focus group workshops with City Hall and Stakeholders to discuss findings and techniques in public participation, 2) presentations at public forums, locally and regional (E. Africa) and international conferences, 3) use in university courses and libraries, and 4) contributing a chapter in a book on "Urban Development Strategies in the Context of Developing Countries".

2.5.0 RESEARCH FINDINGS AND ANALYSIS

This section sheds light on the nature of PPP's within the capital city of Nairobi, Kenya. It uses a case study research to analyze factors that have led to the inclusion of PPP's within the development agenda of local authorities within the city. Thus, the research aimed at doing a documentary case study of the partnership and developing a framework for enhancing partnership strategies in the city of Nairobi. It outlines the success factors required for successful implementation and sustainability of PPP's within the Kenyan socio-economic and political context and also identifies the failure factors within the same context. The case study initially focused on gathering information and data about successful partnership projects in Nairobi, and analyzing and documenting the factors that lead to successful and sustainable partnerships. The research also sought to gather data on unsuccessful partnerships showing what variables work against the formation of partnerships. This was expected to bring together social and economic local context factors for specific public private partnerships.

While the study initially targeted to collect data on 15 projects, it collected on 13 projects including 12 from primary sources and one from secondary data (Adopt A Light was unavailable for primary data collection). The 13 projects fell into the following groups: 1) Public/Private Enterprises (by Adopt A Light, City Clock, Nakumatt); 2) Public/Private Projects (by NCBDA, Ministry of Transport, Athi River Mining/Rd, Athi

River Mining/Energy, NCC/Environmental, NCC); 3) Public/Private Utility Services (by Amref Toilets, Amref Health); 4) Civic Associations (KARA); and 5) Environmental Efforts (Nation Media Group). After a review of results with stakeholders, more organizations were recommended for interviews including Ecotact, Emirates Neon Group (ENG), Ministry of Local Government, and the Ministry of Nairobi Metropolitan Development for a total of 17 organizations. The details of each interview script have been archived for future comparative study.

While this study used a qualitative method, content analysis was used on the interview scripts to develop a matrix table showing some quantitative assessments. Content analysis was necessary to allow for quantification of feedback from interviews. This was done at three different levels; 1) general analysis of responses, 2) analysis of success factors, and 3) analysis of failure factors.

2.5.1 General Analysis of Responses

2.5.1.1 Design of the Analysis

To be able to develop a quantitative analysis, a content analysis was used. This involved identification of key factors of interest that were imbedded in the interview questions, e.g., initiator of partnership, activity goal, why partnership, stakeholders, the agreement, challenges and mitigation (see appendix table 1). A matrix table was therefore created with columns representing the names of participating partnership projects labeled at the top while the key factors from the questions were represented on the left side by the rows. Subsequently, from each of the interview responses to the questions, frequent descriptors or phrases were identified and listed within respective categories. For example, under the initiator question or category, the descriptors were private, government or other. Once this was completed, each interview script was read with the goal of identifying the presence of the descriptor and entering a one (1) in the respective column on the matrix table whenever it was found. When this was completed, one tally was made in the last right side column for each descriptor, while another was made for each respective partnership activity at the bottom of the matrix table. These tallies were then compared for presentation of key findings.

2.5.1.2 Presentation of Key Findings

In the analysis of responses from participating organizations, certain patterns seem to emerge. First, in terms of who initiated the partnership, most of them were by the private sector (8 out of 13), as compared to 4 out of 13 which were initiated by a governmental entity (national or local). As for the goal of forming a partnership, there was no clear factor except that provision of public service was mentioned 4 times compared to support for community which was mentioned 3 times. In terms of why the organizations entered into partnership with government, 5 of them indicated that the activity demanded government participation and was closely followed by cost saving and strategic reasons both of which were mentioned 4 times. However, much clearer distinction was evident in the constitution of stakeholders in the partnerships. The two key stakeholders were governmental entities and local private organizations. These two were mentioned 12 times as compared to international agencies that were mentioned 6 times and foreign NGOs mentioned only 2 times. Most of the agreements were through a formal contract (mentioned 8 times) and collaborative (mentioned 7 times). MOU was mentioned only 3 times. While the spread of challenges facing the partnerships was fairly distributed, bureaucracy and unilateral decisions by a governmental entity were both mentioned 4 times each, while contract disputes and lack of legal structures were mentioned 3 times each. When asked how they mitigated such challenges, of the 8 organizations which responded, 4 of them indicated that the problems still continue, while 2 arrived at a mutual agreement and one used a court settlement.

2.5.1.3 Analysis and Implications of Findings

In general therefore, an average public-private partnership among the participating organizations was initiated by the private sector with the goal of providing public service and typically the partnership required participation of a governmental entity. Most of the participating stakeholders were local private sector organizations and the agreement of partnership was either by formal contract or simply on going collaboration. Their major challenge was unilateral decisions by the governmental entity and the problems seemed to continue without much effort made to mitigate the challenges faced. Some of the least likely situations included initiation

of partnership by simply joining an existing partnership, partnering for the purpose of generating more revenue, involvement of foreign NGOs, provision of public service for profit and the least of challenges being law suits which as would be expected results in the least mitigation option being court settlement.

It therefore appears that there is need for governmental entities to be proactive in initiating PPPs especially given that most PPP are initiated for the purpose of providing public service. There is also need for governmental entities to avoid making unilateral decisions and to embrace a participative approach, to encourage foreign organizations, especially foreign NGOs to participate in local PPPs, and to develop mechanisms for mitigating challenges to put closure to problem areas.

2.5.2 Analysis of Success Factors

2.5.2.1 Design of the Analysis

The study also wanted to do an analysis of the distribution of factors cited in the interview script as contributing to the success of each partnership activity (see appendix table 2). An approach similar to that described in the previous section was used except that in this case, the review did not attempt to categorize descriptors by interview questions. It simply involved identification of descriptors of success from the interview scripts. Once this had been done, a table matrix was again created with the descriptors in rows on the left side while partnership activities were again in columns at the top. Interview scripts were read again with the purpose of recording the frequencies of each descriptor appearing under respective partnership activity. When this process was completed, one tally was made in the last right side column for each descriptor, while another was made for each respective partnership activity at the bottom of the matrix table. These tallies were then compared for presentation of key findings.

2.5.2.2 Presentation of Key Findings

When factors that enhance success were isolated for analysis, several patterns emerged. Of the 25 predetermined success factors for initiating or enhancing partnerships emerging from the responses to the interview the most frequently mentioned were high (risk) cost of the project and the private sector initiative both mentioned 11 times, and shared interests in the

projects were mentioned 10 times. Other success factors that were frequently mentioned were formal contract agreement and local context strategies which were mentioned 9 times each, while honoring the contract, consultative process, good organizational reputation and history of project success were each mentioned 8 times. Ironically, the least mentioned factors for success seemed to be legal related including supportive legal structures and government procurement laws both of which were only mentioned twice, while contract transparency was mentioned 3 times.

2.5.2.3 Analysis and Implications of Findings

In general therefore, the factors that were more likely to be associated with success of the partnership were the presence of high cost for the project, private sector initiative, and shared interest in the project. Similarly, the factors that were least likely to be associated with success were legal in nature, including supportive legal structure, government procurement laws and contract transparency.

One of the implications therefore is that a typical project that is most likely to succeed would be one where the costs are too high (relative to benefits) for an individual organization to go at it alone; it is initiated by the private sector, and participants have shared or vested interest in the project. Those that are susceptible to fail would be in situations where the legal structure is wanting, such as lack of supportive legal structure, poor procurement laws and no contract transparency.

Similarly, while it is important for governmental entities to support partnerships where there is an established framework or effort to alleviate the problem, there is even more need to strengthen partnerships where there was less governmental structure or effort, and especially where the private participants in the partnership may have appeared antagonistic to the situation.

2.5.3. Analysis of Failure Factors

2.5.3.1 Design of the Analysis

The final set of analysis reversed the focus of the previous analysis and instead attempted to examine the distribution of factors contributing to the failure of each partnership activity (see appendix table 3). In this case, the analysis involved identification of descriptors that had been mentioned as

contributing to failure of the partnership activity from the interview scripts. Once again, a table matrix was created with the descriptors in rows on the left side while partnership activities were in columns at the top. Interview scripts were read with the purpose of recording the frequencies of each descriptor appearing under respective partnership activity. When this process was completed, one tally was made in the last right side column for each descriptor, while another was made for each respective partnership activity at the bottom of the matrix table. These tallies were then compared for presentation of key findings.

2.5.3.2 Presentation of Key Findings

In the analysis of the inhibiting factors or factors contributing to the failure or weakening of the partnerships, the spread seemed less divergent as was with success factors. Among the top factors were lack of supportive legal structure, distrust of the governmental entity, corruption, and vested interest, each appearing 5 times. These were closely followed by opposing goals and political interference, each of which appeared 4 times.

2.5.3.3 Analysis and Implications of Key Findings

It therefore appears that lack of supportive legal structure, distrust, corruption, entrenched vested interests, opposing goals within the partnerships, and political interference were the key factors contributing to the weakening of partnerships. Some of the key implications of these findings include divergent interests as represented by factors such as opposing goals, distrust, corruption and vested interests and organizational mechanisms as represented by factors such as lack of legal structures and political interference. Therefore this presents a need for a framework through which partnership projects draw common objectives among participants. It also calls for openness and tolerance of critical views.

2.6.0 PUBLIC PARTICIPATION PROCESS FRAMEWORK

The importance of public participation, as reflected in requirements for public input and subsequent growth in literature is very indicative of the changing nature in the way we implement public projects. While this section is based on a public transit study in 2001 by this project's Principal Investigator (PI), the inherent governing principles should be applicable in

the context of this project as well. The section reviews literature on public input to highlight design principles, supportive conditions for a public based participative approach and theoretical, practical and policy implications. The section will also use the Portland Transit Choices for Livability (TCL) project in which this PI was involved as a case study.

2.6.1 Conceptual Definition

Public involvement is a two-way communication process between citizens and the government. Public agencies and other officials give notice and information to the public and use public input as a factor in decision-making. In their handbook for Median Projects, Williams and Marshall put it more precisely:

Public involvement implies a role for the public in agency decision-making. It goes beyond informing the public or allowing an opportunity to comment...it also requires a mechanism for responding to public concerns or ideas”.

In most cases, the public involvement process must be legislated in order to have some teeth. A good example of such a legislated process is in the transportation planning process in the United States where the concept of public involvement can be traced as far back as the 1962 Federal Aid Highway Act, which made reference to a “comprehensive transportation planning process carried out cooperatively by states and local communities.” However, while the concept of citizen participation became popular in the 1970s, it was not until the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) that public participation was formally made an integral part of the transportation planning process. According to O’Connor and others:

Since the passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), there has been a federally mandated emphasis on early, proactive, and sustained citizen input into transportation decision-making—with special outreach efforts targeted at traditionally underserved populations. ISTEA’s directive was reinforced by the passage of the Transportation Equity Act for the 21st Century (TEA-21) near the end of the decade. States and localities have developed protocols and guidelines to interpret these mandates. In widely varying ways, they have transformed their transportation agencies and blended these mandates with local customs and expectations.

The study of public involvement in the United States has gained momentum since the 1991 ISTEA legislation. The breadth of literature has varied from the development of basic design principles to applied case studies. A quick review of research statements of Transportation Research Board (TRB's) subcommittee on public involvement in transportation is very revealing. In the June 2001 research statements, there were 13 research statements especially in areas such as: 1) promoting effective public involvement in challenging situations, 2) public involvement and customer interaction analysis, 3) measuring effectiveness of internet tools for soliciting public involvement, 4) tools for assessing the effectiveness of public involvement processes, and 5) institutional barriers to integrating public involvement. Similarly, the TRB committee sponsored 19 sessions related to public participation at the 2001 TRB 80th annual meeting and also lists 19 other papers and presentations at previous TRB conferences.

A casual review of these recent trends indicates a growing sophistication of research statements on using Internet tools, to research papers on the use of multi-attribute utility analysis. Some of the obvious topics include but are not limited to:

- The measurement of effectiveness; Dilley and Gallagher (1999), Keever and Lynott (1999), Bell (1998).
 - Innovativeness of the process; Ingram and Lorenz (1999), Yoshioka (1999), and Ziegler (1997).
 - Significance of the process; Haruo (1999), Molenkamp (1999).
 - Useful tools; O'Dowd (1998), Gallagher (1997), and Dulic (1997).
 - Applicational techniques; Shoemaker (1998), Bates and Wahl (1997), O'Connor (1996), Schwartz (1996), O'Dowd (1996) and Boyd and Gronlund (1995).

2.6.2.1 Basic Principles of the Public Involvement Process

While several studies and reports have pointed out several underlying principles conducive to the public involvement process, some of the most common ones include the TRB's white paper by O'Connor that provides six guiding principles:

- The need to distinguish public involvement from public relations (whose goal is to promote a particular policy or solution) and public information (a one way campaign to inform the public about on-going issues or developments).

- The process should be inclusive, involving decision makers and all interested stakeholders by proactively seeking out groups and individuals who will be affected.
- Communication with participants should be respectful by perfecting the art of listening to constituents with each opinion given serious consideration with prompt response.
- Activities should allow enough time, be proactive and on-going throughout the project development, and public notices given for all decisions.
- The decision process should be defined, structured, and transparent.
- Provide appropriate leadership to public outreach efforts, with an agency spokesperson articulating agency policy, perspectives, and operating procedures as well as ensuring adequate resources for public involvement including staff and budget for information materials.

Several others have extensively outlined key guiding principles for designing, implementing and managing the public involvement process. These principles include:

- Acting in accord with basic democratic principles for interested parties to debate issues, frame alternatives and affect final decisions
- Continuous contact between agency and non-agency people throughout the decision making process.
- Use of a variety of public involvement techniques that target different groups in different ways.
- Active outreach to the public by searching out the public and working hard to elicit their response.
- Focusing participation on decisions rather than merely satisfying a requirement.

Most of these principles can be subdivided into two major strategies, i.e., process oriented and personal relation oriented strategies:

2.6.2.2 Practical and Policy Implications

Apart from fulfilling the required government mandates, the key policy implication of this process is the development of trust between the agency and the community, which in turn facilitates the long-term success of the project. Feedback on some benefits of this mutual partnership are highlighted in previous a sample of TRB papers:

- Woodrow Wilson Bridge Project, TRB 1999: The approach stimulated people to be more thoughtful, about the issues and concerns, confront their own prejudices and resistance, and to express long-term community goals as opposed to impulses of the moment.

- Alaska Highway Project, TRB 1999: Without public involvement, the department at best appears paternalistic, and at worst appears “out of control”. In either case, in a world of limited funds, failure to provide real public involvement may well mean loss of public support.

- Eugene-Springfield Long Range Transportation Plan Project, TRB 1998: The benefits of the process have far outweighed the costs of possible frustrations. It has proven to be a very useful means for sustaining a connection between the planning process and a diverse cross section of the community. Their participation in the details throughout the update allowed the group to become well informed and invaluable part of the development of the plan. In addition, their participation at this level has allowed staff to learn how to more effectively present materials, focus on a more refined set of issues and gauge more accurately the receptiveness of the community to a variety of strategies.

- Michigan Ambassador Bridge/Gateway Project, TRB 1997: As a result of close relationship between the steering committee and the community, the governor included the project in his state of the state address as one of the only two projects for new construction. This allowed everyone to realize that after 20 years of frustration, the project had support of all levels of government because the willingness of the community to trust and contribute.

- Arvada, Colorado, Transportation Plan Project, TRB 1996: At the end of the Arvada Futures project, a citizen-led process, the City Council had a technically sound, economically viable and publicly supported land use and transportation plan. Former activists, who joined the Committee to oppose a project, now spoke in support of that project or similar projects. They had learned about the larger community needs and participated in the decision-making on how to address those needs.

- Ithaca Comprehensive Transportation Plan Project, TRB 1995: As a result of the high level of meaningful public involvement accomplished through the community-based planning process, the final ITCTC planning document accurately captures the spirit and vision of the broader community. However, this is not to say that no resistance to the final

product remains. One of the clear lessons is that it is not possible, nor advisable to attempt, to satisfy the desires of all of the members of "the public". Those who undertake community-based activities must understand that irreconcilable conflicts may emerge, but that the knowledge of those conflicts is in itself valuable.

2.7.0 CONCLUDING OBSERVATIONS AND RECOMMENDATIONS

This research project has extensively covered the nature of PPP project development and implementation in urban areas. Thus, section 1.0 provided the need for this study including identification of the problem, purpose of the study and the fundamental research questions. Section 2.0 covered the literature review with respect to the historical background leading towards PPP practices in Africa in terms of the context of underdevelopment, public resource management issues of concern, attempts towards PPPs and prerequisites for PPP concept. Section 3.0 specifically focused on PPP literature including the definition and review of the basic principles of PPPs, a survey of PPP case studies in Eastern and Southern Africa as well as an urban transportation related case study from Portland Oregon in which this principal investigator was the lead project manager. Section 4.0 developed the research methodology process. Subsequently, field work was done involving interview of stakeholders who provided key insights on the nature of PPP projects in the City of Nairobi. Section 5.0 presented the findings, the analysis of findings and their implications. This was followed by section 5.0 which covered the framework for PPP and section 7.0 which covered the framework for public participation process. Section 8.0 reviewed other pertinent issues with respect to the PPP framework including technical support, consideration of risk issues, policy implications and the significance of delivering value for money in PPP projects. This section presents several considerations including general findings, recommendations and general guidelines for successful PPP projects and public participation.

The general objective of this case study was to assess the status of public private partnerships in Nairobi with City Hall and identify factors affecting their development and sustainability. Specifically, the key objectives of this case study were to; 1) document partnership practices by; a) identifying existing private partnerships with the city council, b) collecting information

on factors affecting the success of the partnership, and c) analyzing and documenting the nature of these partnerships; 2). develop a partnership strategy by; a) identifying and describing the socio - economic relationships that had taken place in the city of Nairobi between the public and private sector, b) identifying and documenting the best practices elsewhere, c) and developing a framework within which the external best practices could be infused and blended within the local context; 3). develop a participative strategy by; a) identifying strategies to increase collaborations between different public and private interest groups and local authorities for service delivery and project implementation, and b) identifying and designing communication strategies to initiate and promote dialogue between the public and private sector in a developing country context and; 4). develop a framework for a multi-objective approach by combining PPP strategies and public participation process.

To be able to develop a quantitative analysis of these issues, a content analysis was used by identifying key factors of interest that were imbedded in the interview questions, e.g., initiator of partnership, activity goal, why partnership, stakeholders, the agreement, challenges and mitigation. Using a matrix table with frequent descriptors or phrases, each interview script was read with the goal of identifying the presence of the descriptor and entering the respective column on the matrix table whenever it was found.

In the analysis of responses from participating organizations, certain patterns seemed to emerge. In general, some of the specific findings showed that an average public-private partnership among the participating organizations was initiated by the private sector with the goal of providing public service and typically the partnership required participation of a governmental entity. Most of the participating stakeholders were local private sector organizations and the agreement of partnership was either by formal contract or simply ongoing collaboration. Their major challenge was unilateral decisions by the governmental entity and the problems seemed to continue without much effort made to mitigate the challenges faced. Some of the least likely situations included initiation of partnership by simply joining an existing partnership, partnering for the purpose of generating more revenue, involvement of foreign NGOs, provision of public service for profit and the least of challenges being law suits.

The study also did an analysis of the distribution of factors cited in the interview script as contributing to the success of each partnership activity.

Several patterns emerged. Of the 25 success factors for initiating or enhancing partnerships, the most frequently mentioned were high risk (cost) of the project and the private sector initiative, shared interests in the project, a formal contract agreement and local context strategies, consultative process, good organizational reputation and history of the project's success.

The final set of analysis reversed the focus of the previous analysis and instead attempted to examine the distribution of factors contributing to the failure of each partnership activity. In this analysis, the spread seemed less divergent as was with success factors. Among the top factors were lack of supportive legal structure, distrust of the governmental entity, corruption, and vested interest, having opposing goals within the partnerships and political interference.

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Chapter Three

Regulatory and Competition-Related Reforms in Kenya's Power and Petroleum Sectors

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3.1.0 Introductory Overview

Kenya embarked on fundamental structural and regulatory reforms in the energy sector in earnest after mid-1990's following the enactment of the Electric Power Act, 1997 and later the Energy Act 2006. These legislations laid the foundation for the separation of generation from transmission and distribution in the electricity sector and the liberalization of the procurement, distribution and pricing of petroleum products in the country. The petroleum sub-sector was regulated by the Petroleum (Exploration & production) Act 1994 and the Petroleum Development Fund Act No. 4 of 1991. The Energy Act 2006 consolidated all laws relating to energy and provided for the establishment of the Energy Regulatory Commission (ERC) as a single sector regulatory agency with responsibility for economic and technical regulation of electric power, renewable energy and petroleum sub-sectors. These reforms were preceded by the enactment of the Restrictive Trade Practices, Monopolies and Price Control Act of 1989 which aimed at promoting competition and reducing direct control of prices in the entire economy and more recently the Competition Act 2009, which seeks to promote and safeguard competition in the economy; protect consumers from unfair and misleading market

conduct; to provide for the establishment, powers and functions of the competition tribunal and connected purposes.

This study looked into the regulatory framework and the application of regulatory and competition-related practices in the electricity and petroleum sub-sectors. It specifically focused on the existing regulatory mechanisms and investment incentives and how they affect commercial provision of energy services involving private investment. Our assessment benchmarked the regulatory framework on identified regulatory designs and institutional endowments having in mind the provision of efficient and affordable energy services as envisioned in the Kenya Vision 2030 blue print. Both primary and secondary data were used. Primary data was obtained through interviews with regulators, regulated firms and other key stakeholders, including private sector players. The data was analysed using a combination of statistical and qualitative methods based on key study parameters.

In a nutshell, reforms in the energy sector in Kenya essentially involved vertical separation and gradual deregulation of competitive segments, from those that were deemed to have natural monopolistic characteristics and subject to price, network access, service quality and entry regulations. The expectation was that the regulatory mechanisms would provide more powerful incentives for regulated firms to reduce energy generation costs, improve service quality in a cost effective manner, stimulate the introduction of new products and services and stimulate efficient investment in pricing of access to regulated infrastructure services.

However, the attainment of the above expectations faces several constraints and challenges. For instance, electric power tariffs have remained high amidst continued market domination in regulated and unregulated segments. It is difficult to compare state-owned utilities with private sector players or even measure the resulting impacts of regulations since the former are often not exposed to market costs of capital. Similarly, the reforms in the petroleum sub-sector have not yielded desired results despite measures which allowed greater participation of private sector, particularly in the importation, distribution and supply services.

The study established that limited achievements of the expected regulatory outcomes were largely attributed to weaknesses in institutional and legal frameworks, limited and uncoordinated enforcements, inadequate technical capacities and external economic conditions among other

constraints and challenges. In summary, findings are as follows: - first, state-owned public utilities continue to play a dominant role in generation, transmission and distribution of electric power despite increased participation of private sector following the regulatory reforms. Second, structural weaknesses in coordination and implementation of competition-related regulations hinder competitive pricing in provision of electricity and petroleum product services. Third, shortages of technical expertise within the regulatory authorities hinder effective implementation and enforcement of existing laws and regulations. Fourth, there is poor coordination amongst statutory bodies during enforcement of desired regulations, especially those related to quality and standards. Fifth, the poor physical infrastructures for transportation, refining and storage of petroleum products hinder efficiency in service provision.

The study has identified a number of shortcomings that prevent energy users and consumers in Kenya from reaping the full benefit of the energy sector reforms. The findings support the conclusion that there is further need to strengthen the regulatory system in the energy sector both for increasing investor confidence and enhancing consumer protection. In this regard, the study suggests, among others, greater political and financial autonomy of regulators as a means of supporting the intentions of the reforms and ensuring that the domestic market for energy contributes sustainability, competitiveness and security of supply. Secondly, monitoring & evaluation as well as accurate collection of data on the activities and capability of all services providers in regulated sectors should be given priority and form the basis for designing regulatory and liberalization policies.

Finally, the study also draws conclusions with regard to enforcement actions under both the national competition laws as well as regional approaches to competition. With respect to the latter, the study strongly recommends a multi-national regulatory collaboration and development of shared information and possible pooling of resources between regulators in neighbouring countries e.g. partner states of the EAC. This is similar to the EU approach and more recently the Southern Africa region and has a particular advantage both responding to and helping encourage trade, integration of markets and networks and increasing the scope for competition.

3.1.1 Context of the Study

The shift towards private sector participation in infrastructure financing and development began in the last few decades (Epictatus *et al.*, 2005). This has mainly been driven by the need to address shortcomings in the performance of public utilities many of which became highly inefficient and caused huge drains on government resources. However, initial conditions for competition can be unfavourable, especially if prices for liberalised utilities are determined under duopolistic market conditions. Hence, regulatory arrangements that can manage and regulate the restructured industries and competition across services suppliers are important for liberalised utilities.

Removal of state involvement in the day to day operation of sector utilities creates unfavourable conditions which justify efficient regulations necessary to restore efficiency and quality of service provision (Stern, 2000). Further, effectively regulated private or public monopolies prepare grounds for introduction of competition which would in turn improve efficiency, reduce the costs of infrastructure services and lower prices for consumers. New forms of regulation have become necessary to support the utility reforms being undertaken in many countries, especially in instances where an economy may remain susceptible to market failures. The welfare of consumers and taxpayers is likely to be increased by combining utility unbundling and privatisation with effective economic regulatory arrangements. The challenge for many countries is the establishment of effective regulatory infrastructures capable of playing complementary roles in fostering success in competitive markets and safeguarding consumer welfare (Newbery, 2004).

In Kenya, privatization of infrastructure provision as a major approach to the development of infrastructure started in earnest in the 1980's (Republic of Kenya, 2004). Structural reforms were targeted in energy, water, transport and telecommunication sectors. In these sectors, the government gradually withdrew from activities of commercial nature to pave way for increased private sector participation. In the energy sector, the structural reforms were aimed at introducing competition in commercial segments of electricity and petroleum sub-sectors in order to attract private sector investments. In tandem with the structural reforms, the Kenya government enacted the Restrictive Trade Practices, Monopolies and Price

Control Act of 1989 in order to support the reforms by encouraging competition and reducing direct control of prices in the entire economy. The latter has recently been replaced by the Competition Act 2009, which has since elevated the status of the Monopolies and Price Commission into a Competition Authority beginning July 2011. In addition, the Energy Act, 2006 established the Energy Regulatory Commission (ERC) as a single sector regulatory agency to specifically be responsible for economic and technical regulation of electric power, renewable energy and petroleum sub-sectors.

The expectations of these reforms was that the newly introduced regulatory mechanisms would provide more powerful incentives for regulated firms to reduce costs and improve service quality in a cost effective manner, stimulate the introduction of new products and services and efficient investment in pricing of access to regulated infrastructure services. However, the attainment of the above has been mixed. For instance, electric power tariffs have remained high amidst continued market domination of both liberalised and non-liberalised segments. Further, it remains difficult to compare state-owned utilities with private sector players or even measure the resulting impacts of regulations since the former are often not exposed to market costs of capital. Similarly, reforms in the petroleum sub-sector¹ allowed greater participation of private sector, particularly in the importation, distribution and supply of services. Since October 1994, the procurement, distribution, and pricing of petroleum products were liberalized with a view to enhancing operational efficiency of the industry and also attracting private capital. The 1994 reforms also included the liberalization of transportation modes and attendant tariffs. Since liberalization, the oil industry has attracted a number of operators (Indetie, 2003 and ERC, 2008). However, the reforms have yielded mixed results, particularly with regard to competitive pricing and improvements in quality of products. This is largely reflected by growing public discontent about unrealistic fuel prices and escalating electricity tariffs and how these directly affect consumers.

¹99.4% of petroleum distribution market share is done by the private sector.

²previously the Monopolies and Price Control Act, Cap 504

This study looked into the regulatory framework and the application of regulatory and competition-related practices in the energy sector in Kenya. It specifically focused on the competition and regulatory systems and how they affect commercial provision of energy services involving private investment. Our assessment does not consider the outputs and outcomes of agencies' regulation or the effectiveness of regulatory instruments. Rather the final goal is to benchmark the competition and regulatory framework based on identified regulatory designs and institutional endowments having in mind the provision of efficient and affordable energy services as envisioned in the Kenya Vision 2030 blue print.

3.1.2 Overview of Electricity and Petroleum Sub-Sectors in Kenya

The energy sector in Kenya comprises four sub-sectors namely: Biomass, fossil fuels, electricity and other renewable energy sources. The commercial energy sector is dominated by three main sources namely wood fuel (68%), petroleum (22%), electricity (9%) and others including coal and solar (1%) (Economic Survey, 2009).

3.1.2.1 Electricity

According to KPLC Annual Report, 2010, the major sources of electric power generation are hydro (32.4%), thermal oil (28.9%), geothermal (20.0%), Emergency Power Producers (16.4%), cogeneration (1.5%), imports (0.6%) and wind (0.2%), as indicated in Table 3.1. Domestic supply of electricity increased by 3.1% from 6,488.9 GWh to 6,691.8 GWh during 2008/9 and 2009/10, respectively. This was much lower than the 8.3% growth realized during the period 2005/6 and 2006/07.

Table 3.1: Electricity Generation by Source

SOURCE	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Hydro	2,869.3	3,025.3	3,276.9	3,488.0	2,849.1	2,170.2
Thermal oil	1,346.6	1,614.8	1,301.0	1,285.1	1,512.5	1,933.1
Geothermal	1,034.3	1,003.4	1,012.7	1,020.4	1,179.0	1,339.0
Cogeneration	0.0	8.9	3.8	8.7	4.2	98.7
Wind	0.4	0.4	0.2	0.3	0.3	16.3
Imports	99.0	15.0	13.1	25.7	29.8	38.2
Emergency Power Production	0.0	29.6	561.2	556.4	914.0	1,096.3
System Total	5,349.7	5,679.4	6,168.9	6,384.5	6,488.9	6,691.8

Source: KPLC Annual Report, 2010

The major consumers of electricity are commercial and domestic household users (see table 2). Consumption of electricity is extremely low in Kenya amounting to only 121 kilowatt-hours (KWH) per capita and national access rate of about 15% which is far below the average 32% in developing countries. For instance, as at end of June 2008 the national electric power system had an installed capacity of 1,310 MW with a maximum output of 1,267 MW under normal operating conditions (KPLC Annual Report 2009). Total system peak demand during the period was 1,044 MW and is projected to rise by 14% per annum to 2,100 MW in 2016/17, implying a near zero reserve margin without the Emergency Power Producers (EPPs). The reserve margin excluding the emergency power plant stands at 6% against an international benchmark of 15% for systems of similar size to guarantee security of supply during periodic maintenance or break-downs.

Table 3.2: Electricity Consumption in Kenya 2004-2008

TYPES OF CUSTOMERS	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Domestic	956	1,028	1,113	1,255	1,254	1,290
Small Commercial	522	522	558	590	823	823
Commercial and Industry	2,661	2,778	3,039	3,104	3,020	3,153
Off-peak	53	54	50	74	43	36
Street Lighting	8	9	11	13	15	16
TOTAL	4,200	4,391	4,771	5,036	5,155	5,318
% INCREASE P.A.	6.6%	4.5%	8.7%	5.6%	2.4%	3.2%

Source: Economic Survey, 2011

* Provisional figures

Total domestic consumption of electricity grew by 3.8% between 2007 and 2008 compared to 8.5% and 5.6% growth rates during the previous two years, respectively. The number of customers connected under the Rural Electrification Programme rose by 20% to stand at 133,044 customers as at June 2007 up from 110,724 in June 2006.

3.1.2.2 Petroleum

Petroleum is the most important source of commercial energy. Petroleum fuels are imported in form of crude oil for domestic processing and also as refined products, and mainly used in the transport, commercial and

industrial sectors. Fluctuations in international prices directly affect domestic prices. For instance, the international price of Murban crude oil rose by 46% from US\$ 62.05 per barrel in December 2006 to US\$ 90.60 per barrel in December 2007 and about US\$140 per barrel in August 2008, before plummeting to less than US\$ 50 by March 2009. Total quantities of petroleum imports registered a growth of 16.4% to stand at 3,691.8 thousand tonnes in 2007. The total import bill of petroleum products rose by 7.1% in 2007 compared to 8.9% in 2006. Total domestic demand for petroleum products also rose by 2.8% from 3,131.5 thousand tonnes in 2006 to 3,218.3 thousand tonnes in 2007.

Trends in the sale or consumption of petroleum fuels indicate that retail pump outlets and road transport constitute the single largest consumer of petroleum fuels followed by aviation and power generation (see Table 3.3).

Table 3.3: Domestic Sale of Petroleum Fuels by Consumer Category

Consumer category	2004	2005	2006	2007	2008	2009	2010*
Agriculture	58.1	35.7	34.8	56.5	37.1	26.3	34.5
Retail pump outlets and road transport	1,269.0	1,344.5	1,542.5	1,570.4	1,609.3	2,054.5	2,386.9
Rail transport	20.8	17.9	20.5	16.4	13.5	8.5	0.8
Tourism	8.5	8.7	8.9	11.6	8.1	8.3	7.4
Aviation	520.9	549.4	594.5	635.7	567.0	592.4	625.1
Power generation	204.2	319.3	386.6	399.9	360.4	372.2	301.6
Industrial, commercial and other	291.2	362.4	405.9	408.8	482.0	570.0	492.2
Government	39.9	57.8	31.2	8.3	12.5	18.9	16.0
Others	-37.9	11.7	13.4	13.3	42.5	-41.0	-41.7
Total	2,374.6	2,707.5	3,038.2	3,121.1	3,133.1	3,617.3	3,765.7

Source: Economic Survey, 2011

* Provisional figures

Kerosene as a cooking and lighting fuel is equally important especially for the rural and urban poor households and sometimes used as a substitute to wood fuel. Tax policy measures on kerosene have far reaching implications on its consumption and household welfare. Kerosene has other implications on air pollution, health impacts on the poor and security concerns particularly when used to adulterate other fuels.

Table 3.4: Petroleum consumption by category

Type 000 tonnes	2004	2005	2006	2007	2008	2009	2010*
Liquefied petroleum gas	41.7	49.4	64.6	77.4	84.4	74.6	87.8
Motor spirit (Super & Regular)	326.4	333.7	358.2	367.1	381.3	461.7	597.2
Aviation spirit	522.9	561.1	595.3	640.7	561.7	572.3	542.1
Illuminating kerosene	236.1	307.0	279.2	262.2	244.7	332.8	316.0
Light diesel oil	189.4	892.4	1,035.6	1,116.5	1,141.1	1,416.1	1,517.3
Heavy diesel oil	25.2	25.5	40.7	40.1	30.0	23.9	25.0
Fuel Oil	432.8	546.7	664.6	6014.8	690.0	729.4	680.3
Total	2,374.5	2,715.9	3,038.2	3,118.8	3,133.0	3,610.8	3,765.7

Source: Economic Survey, 2011

* Provisional figures

3.1.3 Issues and Options

A well-functioning institutional and regulatory framework is central to achievement of sustainable energy supplies and the objectives of the Vision 2030 in Kenya. In that regard, the Kenya Government introduced competition in commercial segments of electricity and petroleum sub-sectors in order to attract private sector investments. The structural reforms have significantly changed the functioning of the electricity and petroleum product markets and provided new opportunities, products and services. However, while much progress has been made in market opening, there persist shortages in generation capacity and poor incentives for massive investments into the sector. For instance, as at end of June 2008 the national power system had an installed capacity of 1,310 MW with a maximum output of 1,267 MW under normal operating conditions (KPLC Annual Report 2009). Total system peak demand during the period was 1,044 MW implying a near zero reserve margin without the EPPs. Besides, currently, hydro power accounts for about 32.4% while thermal and geothermal accounts for 48.9% with limited investments in wind power generation. Independent and Emergency Power Producers produce only thermal and geothermal power as opposed to hydro or cheaper alternative sources. Consumption of electricity is low in Kenya amounting to only 121 kilowatt-hours (KWH) per capita and national access rate of about 15% which is far below the average 32% in developing countries.

KenGen which is largely government-owned accounts for about 76.6% of effective production capacity, while EPPs and IPPs account for only about 11.5% and 11.3%, respectively. Besides, electric power tariffs have remained high amidst continued market domination of both liberalised and non-liberalised segments. On average, the unit cost of electricity has been increasing the years i.e. from ksh. 5.92 per Kwh in 2003 to Ksh 8.13 per Kwh in 2008 (KPLC Annual Report, 2008). Likewise, the petroleum market portray oligopolistic tendencies and oil marketing companies rarely pass on cost reductions to consumers when international oil prices are on a downward spiral. For instance, when the load port price of murban crude oil dropped from a record high of US\$ 137.35 per barrel in July 2008 to US\$ 42.10 per barrel (69.9% drop) in December 2008, the pump prices of super petrol dropped from ksh. 110.00 per litre to ksh. 78 per litre or by 29.1% over the same period (ERC Annual Report 2008). The introduction of a formula for regulation downstream petroleum prices Energy Regulatory Commission (ERC) in 2009 has not addressed the price escalation either as weakening of the Kenya Shilling against the US dollar has kept retail petroleum prices high.

A major issue in the energy sector in Kenya are gaps related to enforcement of infringements related to *pricing, fair trade practices* and *consumer protection* by various regulatory agencies. Presently, both the Energy Act 2006 and the Competition Act 2009² empower the ERC and the Competition Authority to implement and promote competition within the electricity. While the latter has the overall responsibility for all sectors, the ERC mandate is specific to the energy sector. However, there is no clear demarcation of responsibilities or modalities for coordination of their activities in both the energy Act of 2006 and the current competition Act of 2009. Similarly, Article 3 of the Competition Act, 2009 does not clearly spell out binding mechanisms for relating with other regulatory bodies beyond the identification and establishment of procedures for management of areas of concurrent jurisdictions.

With regard to enforcement of specific provisions of competition-related regulations, the Competition Act 2009 provides for four categories of enforcement procedures i.e. sections 21-40 of Part 3 *Restrictive Trade Practices*; sections 41-49 of part 4 on *mergers*; sections 50-54 on *Control of*

²previously the Monopolies and Price Control Act, Cap 504

unwarranted concentrations of economic power and sections 55-70 on consumer welfare. This notwithstanding, section 9(m) of the Act, which provides for liaison with regulatory agencies on matters relating to competition and consumer welfare, falls short of providing clear guidelines regarding the coordination of enforcement of these provisions between the Competition Authority and other regulatory agencies. Finally, there is limited literature for Kenya on competition and regulatory framework and this study seeks to provide useful insights into possible mechanisms of promoting synergy and cooperation between the Competition Authority and Sector-Specific regulators with a view fostering efficiency and competitiveness in delivery of energy services.

3.1.4 Objectives and Scope of the Study

The overall objective of this study is to review and assess Kenya's national competition policy vis-a-vis the energy sector regulations. Specific objectives include:-

- a) To assess the institutional framework and structure of the national competition policy;
- b) To review and evaluate the competition-related regulations and institutional framework in the energy sector;
- c) To undertake a comparative analysis of competition and regulatory framework in energy sector in other countries;

In order to achieve the above objectives, the study accomplished the following tasks:

- a) Evaluating the institutional framework and capacity for enforcement of competition-related laws and regulations in the electricity and petroleum sub-sectors;
- b) Establishing and assessing the existing administrative procedures for enforcement of competition laws in the electricity and petroleum sub-sectors;
- c) Evaluating the relevance of existing laws and enforcement powers;
- d) Evaluating the independence, transparency and clarity of existing regulations;
- e) Assessing the market structure and performance of the electricity and petroleum sub-sectors;
- f) Assessing the quality, service delivery and dispute settlement mechanisms;

- g) Evaluating the coordination and information exchange between the competition authority and the energy sector regulator;
- h) Assessing the level of awareness about competition-related regulations among stakeholders;
- i) Identifying implementation and enforcement challenges and constraints.

3.1.5 Significance of the Study

Kenya, like other developing economies requires large quantities of affordable and good quality energy supplies to sustain private investments and growth. Ensuring efficiency in service delivery and competitiveness in energy prices is central to attainment of the objectives of the vision 2030. The extent to which these objectives can be realised on a sustainable basis and in an environmentally sound manner is dependent on the degree and extent of efficiency with which critical factors of production are made available and combined with each other to produce desired results. Further, the realization of these objectives is only feasible if quality and affordable energy services are made available to all sectors of the economy ranging from manufacturing, services, mining and agriculture to house-holds on a sustainable and cost-effective manner.

Under the circumstances, the regulatory design and institutional framework in the sector is deemed to play a central role in so far as pricing of energy products, enforcement of laws and regulations and eventual attainment of tangible benefits are concerned. Hence, an assessment of the regulatory framework within the energy sector is necessary to inform on-going reforms in the sector that will make it possible for greater private sector participation in provision of energy-related services eventually leading to enhancement of consumer welfare.

3.2.0 SCOPE AND METHODOLOGY

The study covers the electricity and petroleum sub-sectors. The study looks at competition policy with respect to electricity and petroleum energy sub-sectors in Kenya. The latter present a classic case study of a concentrated sector that has simultaneously undergone processes of liberalisation and domestic consolidation. The methodology used by the study team was intended to achieve the set objectives as outlined in the terms of reference.

3.2.1 Research Design

A cross-sectional survey was conducted between January and February 2009 in four clustered regions namely, Nairobi region, Western region, coast region and Mount Kenya region, based on KPLC's administrative geographical boundaries.

3.2.2 Sampling Design

The field survey was undertaken at two levels: (i) key regulatory institutions and service providers and (ii) key informants and users of energy. These groups made up the study population of 110 eligible respondents i.e. 10 regulatory institutions and 100 key informants identified by a mix of purposive and random sampling techniques.

We aimed to interview key regulatory institutions. The survey covered 6 out of 10 identified institutions including the Ministry of Energy, the Energy Regulatory Commission (ERC), the Monopolies and Prices Commission (MPC), the Kenya Power and Lighting Company (KPLC), the Kenya Electricity Generating Company (Kengen) and the National Oil Corporation of Kenya (NOCK). On the other hand, the sample group of key informants constituted 100 respondents drawn from a list of key interest groups including Manufacturers, the Kenya Association of Manufacturers (KAM), consumer organizations, Professional Associations and selected Civil Society Organizations distributed across the four study regions.

The survey targeted respondents from each of the four regions the sample size of which was based on proportions of the KPLC's customers by region during the year 2008 i.e. 63 respondents for Nairobi region, 22 for Western Kenya region, 13 for coast region and 12 for Mount Kenya region.

3.3.3 Data collection

Structured questionnaires were prepared to capture relevant information based on the study objectives and type of respondents. Questionnaires were initially administered to similar respondents in non-participating institutions to for validation. The investigators made prior appointments with each of the relevant institutions/respondents and explained the objectives of the study. In total, 110 questionnaires were administered to all the selected eligible respondents out of which 64 were comprehensively

completed. The list of respondents and institutions are contained in Annex 2.

The study team also examined the relevant documentation, which included reports, and various policy documents and internet sources. The purpose of the documentary review was to collect published data and information on the subject as a basis for further verification. Major documents were obtained from the Ministries of Energy, Energy Regulatory Commission, Kenya Power and Lighting Company, Ministry of Trade, Ministry of Finance as well as other government agencies involved in production, distribution or sale of energy products. Other secondary sources of data used in this study included various economic surveys, statistical abstracts, annual reports of various market players and previous study reports and publications.

3.2.4 Data Management and Analysis

Data coding, testing and analysis were done using appropriate statistical and econometric packages. Descriptive statistics was obtained for different quantitative variables. Frequencies and percentages were used to present categorical variables. Furthermore, analysis of qualitative data was done according to identified key study parameters and content categorization in view of the research objectives.

3.2.5 Study Limitations

This study was carried out against a back-drop of some limitations. First, data collection and monitoring by regulatory authorities are still weak hence available data was of poor quality and in-sufficient for comprehensive analysis. The study team complemented available information with oral interviews and internet sources in order to draw relevant conclusions.

Secondly, there was an alleged oil procurement scandal at the time of the survey which put some key players into sharp focus thereby affecting information availability. This made it extremely difficult to gather all necessary information, from respondents particularly in the petroleum sub-sector for fear of investigations. The survey team however elaborated the background and purpose of the study and re-assured the respondents of the confidentiality of the information.

Finally, available financial resources were not sufficient to enable the team carry out a more national comprehensive survey targeting all consumers countrywide. The team therefore purposively sampled key informants to ensure that the views from all key stakeholders and interest groups were gathered during the survey.

On account of the above limitations a number of issues were not exhaustively addressed in the report. In spite of the above constraints, the study team put together all information gathered and developed this report in response to the study objectives. In particular the team made a number of important findings and recommendation, including those relating to areas for further study.

3.2.6 Organization of the Study

The rest of the study is organized as follows. Part 3 of the report covers the literature review including the theoretical literature and analytical framework used in the study. In part 4 of the report, an overview of the competition policy and the energy sector institutional and regulatory framework in Kenya is presented. A comparative analysis, country experiences and best practices in energy sector regulatory and competition-related issues are provided in part 5 of the report. In part 6, the study findings as well as the major constraints and challenges are presented and discussed. The final part contains the conclusion and recommendations.

3.3.0 LITERATURE REVIEW

This section reviews pertinent literature with respect to energy regulatory and competition related reform in Kenya's power and petroleum sectors. The key aspects of literature include the theory of regulation, basic principles of regulations, best practices of regulatory reform, empirical studies and analytical framework.

3.3.1 Theoretical Literature on Regulation

The design and institutional framework of competition authorities is linked to internal customary and administrative structures. Sustainability and success of regulatory models depends considerably on the establishment of effective and autonomous regulatory institutions. Overall, competition authorities should be delegated the power to implement competition

policies at the national level and also guaranteeing their close coordination with sector regulators. In ideal situations, where a regulator has full information, is benevolent and able to fulfil any promises made, competition cannot improve upon regulated monopolies. In such circumstances, the regulator will ensure the firm produces the ideal range of services at the lowest possible cost and will set welfare-maximizing prices for these services (Joskow, 2005).

Consequently, industry performance will not improve if an additional firm operated in this setting. However, market information is naturally scanty and regulators invariably lack important information about the markets they oversee. On the other hand, the regulated firm will be better informed about the demand for the regulated services, the minimum possible costs and potentials for less costly future provisions. This information asymmetry gives rise to an unavoidable trade-off between rent and efficiency: the firm can be motivated to operate efficiently but only if awarded substantial rent for doing so. In particular, the firm will operate at minimum cost and attempt to satisfy the needs and desires of customers only if it is awarded the full surplus that its activities generate. However, such an incentive to the regulated firm typically will provide it with significant rent, and thereby reduce the net benefits enjoyed by consumers, hence the need to limit it.

3.3.2 Key Regulatory Principles

3.3.2.1 Licensing

The prime requirement for regulation is to license all organizations that wish to be actively involved in the market. The license defines the parameters within which the licensees are empowered to operate and lays down rules on the provision of service to customers; the data that the regulator requires at specified intervals; and evidence that financial transactions between the licensed and non-licensed operations of the company conform to the prohibition of cross-subsidy and predatory principles rules. The license is also the link with other necessary legislation; relevant interest by other agencies and the necessary technical and safety requirements by which the energy industry functions.

3.3.2.2 Price control & Service Quality

Monopoly providers have no external commercial incentive to become more efficient. Thus left to themselves, they go for monopoly pricing, normally high, with declining quality of services because the customer is captive and has no choices. Price controls on regulated monopolies are an attempt to combat monopoly pricing and to try to stimulate the monopoly to act as if it were in open competition with others. This can be through revenue, profit or cost caps. The most effective method of price control is to cap the revenue generated since it is easily verifiable unlike profit and costs. Improvement in customer care in a monopoly is an offshoot of price control, in that the quality control of services to customers can be quantified in terms of the satisfaction that customers experience when they are compensated for a failure by the monopoly to undertake an action as set out in the rules and regulations.

3.3.2.3 Enforcement

Regulation is the imposing of conditions on monopolies that without sanctions, would be considered 'unnatural' and intrusive to a monopoly way of life. All the price controls, license conditions and codes of practice would be ignored if there were no obvious, robust and simple sanction that the regulator could impose. Every license requirements has enforcement or compliance rules which stipulate sanctions that are clear, obvious in intent and swift in application. Evidence of a breach of the basic duties by a licensee of the compliance invokes enforcement of such sanctions or penalties.

3.3.2.4 Quality

Theoretically, quality should be such that the cost of the last unit of quality improvement equals the aggregated marginal willingness to pay for the additional quality (Hirschhausen *et al*, 2004). State-owned utilities are likely to over-invest if they face no hard budget constraints. On the other hand, un-regulated monopolies will supply too much (or too little) depending on whether the marginal willingness to pay for quality by the marginal consumer is higher (lower) than the average willingness to pay in the group of consumers. Regulatory processes affect maintenance and expenditures and capital allocations. In the electricity sub-sector, quality measurements

arising from regulatory processes are interpreted as reductions of power outages.

3.3.3 Best Practice in Regulatory Reforms

Three aspects of best practice have been identified in regulatory reforms namely: the *form of regulation*, which relates to the powers and responsibilities of the regulatory agency; *the process of regulation*, which relates to the way that the agency carries out its responsibilities and the *outcome of regulation* i.e. the measurement of success of the regulatory agency (Green *et al.*, 2006).

3.3.3.1 Form of Regulation:

This involves an examination of the competencies and strengths of the regulatory agencies based on their powers and responsibilities. These include whether regulatory rules are set *ex ante* or *ex post*, the former being better for investment decisions and efficiency in decision making. In addition, the extent of ministerial involvement is important and the less such involvement the better so as to minimize arbitrary political interventions. Again, the strength of information acquisition powers i.e. the stronger being better for the monitoring of market power and the setting of regulated tariffs. Strong and effective regulators have control over tariff setting, network access term, issuing of licences, setting of delivery terms and in settling of disputes and enforcing punishments. The other elements are the extent of independence and tenure and terms of appointment of heads of regulatory agencies or commissioners whereby longer terms less subject to arbitrary dismissals are better. Besides, the financing of the agencies is important with freedom from general government expenditures and better remuneration of employees.

3.3.3.2 Process of Regulation

The measures of process might include whether all stipulated are posted on the website i.e. if there is a work plan, whether work plan targets have been delivered; if there is use of external advice; if there is ex post assessment of decision making etc.

3.3.3.3 Outcome of regulation

Though difficult to clearly establish, outcome indicators include adequacy of amount of investments, level of capacities shortages and outages, the size of system losses (technical and non-technical) and the percentage of non-payments. Others include price trends, switching rates in retail competition and the cost of regulation per unit of energy delivered. These measures can be looked at country by country over time. For instance, In the UK's regulatory agency, there were large price reductions in regulated transmission and distribution charges of about 30% and 50% respectively, between 1993 and 2005 (Green *et al.*, 2006).

3.3.4 Empirical Studies

Different studies that have assessed regulatory agencies in the infrastructure sector have considered the United States Model of the independent commission as their benchmark of comparison and analysis. The US model emphasises agencies that make decisions independently from the Executive Branch, are subject to the accountability of parliament and have budgeting autonomy (Andreas *et al.*, 2007). A third approach considers mechanisms for achieving high quality regulation regardless of the sector and the agency's design (OECD, 1999). According to UNCTAD (2005), some of the best practice features of a competition authority are as follows:-

- Independent, insulated from political interference;
- Transparent, well-designed administrative mechanisms, regulations and procedures;
- Separate investigation, prosecution and adjudication functions;
- Checks and balances with rights of appeal, reviews of decisions and access to information on legal and economic interpretations;
- Expeditious and transparent proceedings with safeguard sensitive business information;
- Provisions for imposing significant penalties.

Johannsen (2003) measured the formal independence of energy regulators in eight European countries namely, Austria, Ireland, Italy, Luxembourg, Northern Ireland and Spain. The study assesses the independence of energy regulatory agencies through four main variables: a) independence from government, b) independence from stakeholders, c)

independence in decision-making process and d) organizational autonomy. According to the survey, the energy regulator in Italy proves to be the organization with the largest degree of independence followed by Ireland, while Spain and Luxembourg had the lowest scores. The study draws conclusions reflecting on the fact that the main emphasis has been on creating independent bodies rather than independent regulation and that greater emphasis should be on the actual activities of regulators rather than theoretical designs.

Gilardi (2002) develops an independence index, covering regulators from five sectors in seven European countries i.e. Belgium, France, Germany, Italy, Netherlands, Sweden and the United Kingdom. The author attempts to prove that governments delegate their regulatory powers and competencies to independent regulatory agencies to enhance the credibility of their policies. The independence index focuses on formal independence and is divided into five components: a) the status of the head of the agency; b) the management board members'; c) the general nature of the relationships with the government and the parliament; d) the degree of financial and organizational autonomy; and e) the extent of delegated regulatory competencies. The study concludes by confirming the "credibility theory" and stressing the positive impact of the economic nature of regulation.

Stern and Holder (1999) developed a framework to assess the governance of economic regulators in several sectors (electricity, natural gas, telecommunication, transport and water) in six developing Asian economies (Bangladesh, India, Indonesia, Malaysia, Pakistan and the Philippines). Their appraisal scheme is composed of two variables related to the formal (institutional design) and informal (regulatory processes and practices) aspects of regulation. The first variable contains the following components: clarity of roles and objectives, autonomy and accountability. The second variable includes participation, transparency and predictability. Results indicate middle-low levels of regulatory governance for all sectors and countries included in the research.

Two comprehensive approaches to assessing the governance of regulatory agencies have been those developed by Correa *et al.* (2006) and Brown *et al.* (2006). Correa *et al.* provide a detailed analysis of Brazilian regulatory agencies. These studies approach the assessment of independent regulatory agencies through the indices of autonomy, transparency,

accountability and an number of indicators which define the content of regulations i.e. tariff levels, network access conditions and existing customers.

Several factors affect the optimal choice between regulation³ and unregulated competition (Armstrong *et al.*, 2005). These include among others: (i) the resource constraints the regulator faces; (ii) the potential role of regulation in pursuing distributional objectives; (iii) the instruments available to the regulator; (iv) the prevailing degree of regulatory independence and accountability; (v) the ownership structure of incumbent industry producers; and (vi) the importance of industry investment and innovation.

3.3.5 Analytical Framework

The research framework described in this paper is adopted from the literature on institutions and transaction costs in which institutions play critical roles in determining efficient solutions to problems of organization in competitive environments (North, 1991). In this framework, Williamson (2000) argues that a private-enterprise system cannot work properly unless property rights are created in resources and this is done when someone wishing to use a resource has to pay the owner to obtain it. Once property rights have been defined and their enforcement assured, some order occurs, the government steps aside and the legal system is necessary to arbitrate disputes (Coase, 1959). Levy and Spiller (1994) further elaborated this framework when evaluating the performance of utilities whereby market competition and enforcement of property rights are critical in ensuring smooth functioning of markets.

According to Levy & Spillar (1994) utility services are characterised by: 1) Economies of Scale and scope; 2) highly specific and non-deployable and 3) have broad range of domestic users. Under the New Institutional Economics (NIE), these characteristics create problems that undermine ordinary market mechanisms. Economies of scale and scope and highly

³Regulation is the mechanism whereby the providers of a service or facility are directed to provide the highest stand of service and customer care in the most cost effective manner possible. This is achieved by providing incentives to operators to bring their corporate desires and needs into line with the desires and needs of their customers. Benefits are passed to customers by encouraging open competition which will provide enhanced services to customers and creating a series of controls where competition is weak or non-existent.

specific assets imply that the number of providers of basic utility services may be relatively small, while widespread domestic consumption implies that pricing of utilities by and large becomes a political issue. In addition, these characteristics make utilities highly vulnerable to administrative controls e.g. price settings, specific investment requirements, labour contract conditions, which affect private investments in utilities.

Literature on the design of regulatory agencies generally focus on three main aspects namely, a) the Regulatory Governance, 2) Regulatory incentives and 3) institutional endowments as presented in figure 1 below (Levy and Spillar, 1994; North, 1990; Williamson, 1985).

The governance structures of a regulatory system: These are mechanisms that societies use to constrain regulatory discretion and to resolve conflicts that arise in relation to these constraints or ‘contractual obligations’. On the other hand, *incentive structure* comprises rules governing utility pricing, subsidies, entry, interconnections etc. The performance of regulatory incentives depends on how governance structures have been put in place. Both regulatory governance and incentives are choice variables in hands of policy-makers, constrained though by *institutional endowments* of countries. A country’s institutional endowment comprises 5 elements as follows: 1) the legislative and executive institutions- for appointing legislators and decision-makers and for making laws and regulations; 2) the judicial institutions – formal mechanisms for appointing judges and determining the internal structure of the judiciary and resolving disputes among private parties, or between private parties and the state; 3) customs and norms that constrain the action of individuals and institutions; 4) social interests, ideologies and their balance within a society and lastly, the administrative capabilities of a nation (North, 1990).

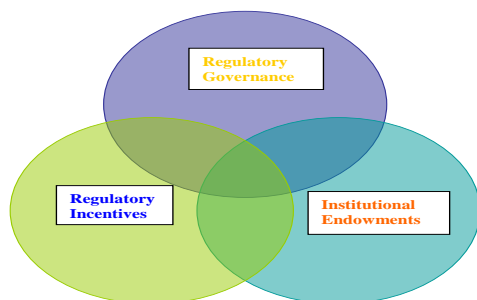


Figure 3.1: Framework for Regulatory Design

Source: Adapted from Levy & Spillar (1994)

In addition, Brown *et al.*, (2005) developed a best practice independent regulator model whereby ten key principles were identified as being necessary for effective regulation. The ten principles include; (i) independence, (ii) accountability, (iii) transparency and public participation, (iv) predictability, (v) clarity of roles (vi) completeness and clarity of rules, (vii) proportionality, (viii) requisite powers, (ix) appropriate institutional characteristics, and (x) integrity.

Presently, the economics of regulation literature includes three broad propositions as follows (see Kirkpatrick and Parker, 2004 for further discussions):

(i) *The institutional context is critical to the process and outcomes of a regulatory regime.* Regulation in economies involves the setting of particular rules regarding market structure and business conduct and these rules both arise out of and influence the future of economic institutions. Levy and Spillar (1994) focus on regulatory arrangements to sustain private investment and how these vary with institutional authority, though there usually will be a right of appeal to the courts to ensure fairness and rationality in the decision-making processes.

(ii) *A regulatory framework should be both effective and efficient.* Effective regulation achieves the social welfare goals set down by the government for the regulator at the time the regulatory office was established and as subsequently amended after appropriate consultations. This can be achieved by regulation affecting (a) the structure of markets and (b) conduct in markets through appropriate incentives and penalties. Efficient regulation achieves the social welfare goals at minimum economic costs. Economic costs of regulation take two broad forms: (1) the costs of directly administering the regulatory body or bodies; and (2) the compliance costs of regulation, which are external to the regulatory agency and fall on consumers and producers in terms of economic the economic costs of conforming with the regulations and of avoiding and evading them.

(iii) *Competition is superior to state regulation and should be preferred.* Economic regulation attempts to 'mimic' the social welfare results of competition, but it can do so only in a 'second-best' way because competitive markets generate superior knowledge of consumer demands and producer supply costs (Sidak and Spulber, 1998). Thus, there is a strong preference for competition over state regulation only until competition arrives.

Following Levy & Spillar (1994), Brown et. al (2005); Kirkpatrick et. al (2004) and UNCTAD (2006), we adopt six (6) broad indicators/principles to evaluate the institutional and regulatory framework of the electricity and petroleum sub-sectors namely: (1) Institutional capacities, (2) Regulatory Independence and Transparency, (3) Market structure and sector performance, (4) Quality of service delivery and dispute settlement, (5) Coordination and Information Exchange and (8) Advocacy and Awareness creation. The evaluation of the relationship between competition policy and the regulatory framework was guided by five key approaches identified by UNCTAD (2006). These parameters formed the basis for evaluating the economic and competition-related regulations in Kenya's electricity and petroleum sub-sectors.

3.4.0 OVERVIEW OF COMPETITION AND REGULATORY FRAMEWORK

As has been evident, the concept of regulatory design is multiple faceted, including aspects of Regulatory Governance, Regulatory incentives and institutional endowments. This section moves the concept further by examining issues of competition policy and laws as well as issues of institutional and regulatory arrangements in the energy sector.

3.4.1 Competition Policy and Laws

3.4.1.1 The Legal Framework

Kenya's competition law is enshrined in the Competition Act, 2009 which came into force from July 2011. The Act comprises 10 parts namely:- Part 2: Establishment of the Powers and functions of the Competition Authority; Part 3: Restrictive Trade practices; Part 4: Mergers; Part 5: Control of Unwarranted concentration of economic power; Part 6: Consumer welfare; Part 7: Establishment and Powers of the Competition Tribunal; Part 8 Financial Provisions; Part 9 Miscellaneous and Part 10: Repeal, Savings and Transitional Provisions. The Act replaced the Restrictive Trade Practices, Monopolies and Price Control Act, 1989. The new Act seeks to promote and safeguard competition in the national conduct; to protect consumers from unfair and misleading market conduct; to provide for the establishment, powers and functions of the Competition Tribunal and for connected

purposes. A summary of the provisions of the other sections are described below:-

- **Restrictive trade practices**

Part 2 of the Act, defines restrictive trade practices as agreements between undertakings, decisions by associations of undertakings, decisions by undertakings or concerted practices by undertakings which have as their object or effect the prevention, distortion or lessening of competition in trade in any goods or services in Kenya or a part of Kenya. Reduction or elimination of opportunities is to be measured with reference to the situation that would have been obtained in the absence of the practice in question. These include:-fixing purchase or selling prices, allocation of markets, collusive tendering, minimum resale price maintenance and limitation or control of production, market outlets, technical development or investment. Under Section (D) of Part 3 of the Act, exemptions may only be granted for certain restrictive practices upon approval following applications made by undertakings or associations. This is a clear departure from the previous law which gave a wide range of exemptions as stipulated in section 5 (a) including exemptions of trade practices that are directly and necessarily associated with the exercise of exclusive or preferential trading privileges conferred by an Act of parliament or by an agency of the government acting under an Act of parliament.

- **Control of mergers and takeovers**

Part IV of the Act prohibits horizontal mergers and takeovers between two or more independent enterprises unless they are approved by the Authority. Application for an order authorizing a merger or takeover is made to the Authority who then investigates the application before making a recommendation within sixty days after the date on which the Authority receives notification. In evaluating the application the Authority must have due regard to the set out criteria; 1) extent to which the proposed merger would be likely to prevent or lessen competition or to restrict trade 2) extent to which the involved parties would acquire market dominance 3) likely benefits and/or costs to the public, and 4) the likely effects on particular sectors etc.

- **Control of Unwarranted Concentration of economic power**

Under Part 5 of the Act, the Authority shall under section 50 keep the structure of production and distribution of goods and services under review to determine where unwarranted concentrations of power exist,

whose detrimental impact on the economy out-weighs the efficiency advantages if any, of integration in production and distribution. It requires special attention to be paid to the following:- 1) unreasonable increase of the cost relating to the production, supply, or distribution of goods or the provision of any services; 2) unreasonable increase in the price of goods; 3) limitation of competition in the production, supply or distribution of any goods and services the markets; 4) deterioration in the quality of any goods or in the performance of any goods and service and 5) inadequacy in the production, supply or distribution of any goods or services.

- **Consumer Welfare**

Part 6 section 55 of the Act provides protection of consumers by making false or misleading representations an offence. Such false representations may be in the forms of prices, safety standards, quality, value, grades, origin, conditions, warranties and place of origin of goods and services to consumers. Besides, sections 67 and 68 provides for the Authority to consult the Kenya Bureau of Standards in all matters involving definition of goods and the grading of goods by quality as well refer consumer complaints to specialized agencies of the Government. Further, in sections 70, a person who contravenes provisions of this part commits an offence and shall be liable on conviction to imprisonment for a term not exceeding five years, or to a fine not exceeding ten million Kenya Shillings. Finally, *Article 46 and Fourth Schedule (Part 2) of the Kenya Constitution* has express provisions on consumer rights and fair trading practices.

3.4.1.2 The Institutional Framework

The Competition Act 2009 provides for four enforcement institutions namely; the office of the Minister of Finance; the Competition Authority; the Competition Tribunal; the Magistrates Court.

- **The Office of the Minister of Finance**

Presently, the office of the Minister of Finance has the overall powers to administer and enforce competition law. The Minister has powers to appoint a non-executive Chairman of the Authority, five other members of the Authority who have experience in competition and consumer welfare and members of the Competition Tribunal.

- **The Competition Authority**

Under section 10 of the Act, the Authority shall consist of the following members:-

- i. A non-executive Chairman, appointed by the Minister;

- ii. The Permanent Secretary in the Ministry for the time being responsible for finance or his representative;
- iii. The Permanent Secretary in the Ministry for the time being responsible for trade or his representative;
- iv. The Director General appointed under section 12; and
- v. Five other members appointed by the Minister from among persons experienced in competition and consumer welfare matters, one of whom must be experienced in consumer welfare matters.

Section 12 of the Act provides for appointment of a Director General of the Authority who shall be appointed by the Authority with the approval of parliament from members of the Authority.

- **The Competition Tribunal**

Section 71 of the Act provides for establishment a Competition Tribunal comprising a e Chairman who shall be an advocate of not less than seven years standing and between two and four other members, all appointed by the Minister. The tribunal handles appeals on decisions made by the minister on the recommendation of the commissioner. A party that is dissatisfied with the decision of the tribunal can appeal to the high court against that decision within thirty days after the date on which notice of that decision has been served. The decision of the final court is final.

- **The Magistrates courts⁴**

Section 92 of the Act provides that notwithstanding any other law, a magistrate’s court has jurisdiction to impose any penalty provided for in this Act.

3.4.2 Institutional and Regulatory Arrangements in the Energy Sector

3.4.2.1 The Electricity Sub-Sector

- **The Legal and Institutional Framework**

The legal framework related to the regulatory governance of the Energy sector comprises of two Act of parliament; the Energy Act of 2006 and the State corporations Act of 1986. The Energy Act 2006 consolidated all laws relating to energy and provided for the establishment of the Energy Regulatory Commission (ERC) as a single sector regulatory agency with

⁴ The Tribunal and the magistrate are independent institutions and not part of the Authority per se.

responsibility for economic and technical regulation of power, renewable energy and petroleum sub-sectors. The state corporations Act is a law that gives the president powers to govern all state corporations, and therefore also governs ERC and other state corporations in the sector(KenGen, KPLC, KPC, KPRL and NOCK).

The current institutional arrangement in the power sector, which closely fits the purchasing Agency Model, came about following reforms that resulted in the separation of policy setting, regulatory and commercial functions in the energy sector. While, the Ministry of Energy is responsible for overall policy formulation, the ERC is responsible for regulating generation, transmission and distribution of electricity as well as the importation and transportation of petroleum products. On the other hand, the commercial functions are performed by both public and private sector entities as guided by existing rules and regulations as discussed herein below.

- **The Ministry of Energy**

The Ministry of Energy has the overall mandate and formulates overall policy in the energy sector. In addition, it is also responsible for administering the Rural Electrification Scheme. Overall, the functions of the ministry include:-

- Energy policy and development
- Hydropower Development
- Geothermal exploration and development
- Thermal power development
- Petroleum products, import/export/marketing policy
- Renewable energy development
- Energy regulation, security and conservation
- Fossil fuel exploration and development
- Expanding and upgrading of Energy infrastructure
- Promoting energy efficiency and conservation
- Protecting the environment
- Mobilizing requisite financial resources for operation and expansion of energy services consistent with rising demand
- Ensuring security of supply through diversification of sources and mixes in a cost effective manner
- Increasing accessibility to all segments of the population

- Enhance legal, regulatory and institutional frameworks to create both consumer and investor confidence
- Enhancing and achieving economic competitiveness and efficiency in energy production, supply and delivery
- **Energy Regulatory Commission (ERC)**

ERC was established under the Energy Act 2006 as a single sector regulatory agency, with the responsibility for economic and technical regulation of electric power, renewable energy and petroleum sub-sectors. It is also responsible for setting and reviewing tariffs, licensing, enforcement, dispute settlement and approval of power purchase agreements.

The objects and functions of the ERC are set out in section 5 of the Energy Act 2006. These are to:

1. Regulate:-
 - a. the importation, exportation, generation, transmission, distribution, supply and use of electric energy;
 - b. the importation, exportation, transportation, refining, storage and sale of petroleum and petroleum products;
 - c. the production, distribution, supply and use of renewable and other forms of energy;
2. Protect the interests of consumer, investor and other stakeholder interests;
3. Maintain a list of accredited energy auditors as may be prescribed;
4. Monitor, ensure implementation of, and the observance of the principles of fair competition in the energy sector, in coordination with other statutory authorities;
5. Provide such information and statistics to the Minister as he may from time to time require;
6. Collect and maintain energy data;
7. Prepare indicative national energy plan;
8. Perform any other functions that are incidental or consequential to its functions under the Act or written law.

In addition, section 6 of the Energy Act 2006 details ERC's powers to:-

1. Issue, renew, modify or revoke licences and permits for all undertakings and activities in the energy sector;

2. Make proposals to the Minister, of regulations which may be necessary or expedient for the regulation of the energy sector or for carrying out the objects and purposes of the Act;
3. Formulate, enforce and review environmental, health, safety and quality standards for the energy sector, in coordination with other statutory authorities;
4. Enforce and review regulations, codes and standards for the energy sector etc.

Finally, the Act also defines boundaries of regulatory actions including: powers and duties of the regulator, rights and obligations of firms, consumers and other stakeholders, relationships between the regulator and other branches of government, investigation of complaints made by parties or consumers with grievances over matters to be regulated, approval of power purchase agreements etc.

- **Regulated Firms in the Power Sector**

Under the present institutional arrangements, the companies engaged in the business of power generation include:- the Kenya Electricity Generating Company (KenGen) the Tana River Development Company Ltd, Tana and Athi River Development Authority (TARDA), the Kerio River Development Authority (KVDA) and a number of Independent Power Producers (IPPs). On the other hand, the transmission and distribution of electricity has been the responsibility of the Kenya Power and Lighting Company⁵ (KPLC). These entities are all under the broad framework created by the Electric Power Act 1997 and the Energy Act 2006, with the boundaries of permissible conduct and the consequences for non-compliance defined by specific licence conditions. Further, the Commission approves Power Purchase Agreements (PPA) between generation companies and the KPLC. For instance, KenGen and KPLC began trading on an interim PPA approved by the then Electricity Regulatory Board (ERB) in 1999. In early 2008 the two companies prepared and submitted to ERC a proposed power purchase agreement for consideration and approval as required by the Act⁶.

- **The Kenya Power and Lighting Company**

KPLC is a limited liability company responsible for the transmission, distribution and retail of electricity throughout Kenya. KPLC owns and

⁵ A new publicly owned power transmission company is to be formed.

⁶ KPLC and KenGen have signed a 20-year PPA effective 1st July 2009.

operates the national transmission and distribution grid, and retails electricity to more than 1,200,000 customers throughout Kenya. KPLC is responsible for ensuring that there is adequate line capacity to maintain supply and quality of electricity across the country. The interconnected network of transmission and distribution lines covers about 30,404 kilometers. The national grid is operated as an integral network, linked by a 220 kV and 132 kV transmission network. There is a limited length of 66 kV transmission lines. The national grid impacts on the future growth of the energy sector because any new generation capacity must take into consideration the existing network and its capacity to handle new loads. KPLC has more than 980,000 customers who consumed about 6,000 Gigawatt hours of electricity during the year 2008.

- **The Kenya Electricity Generating Company Ltd.**

KenGen came into force following the enactment of the Electric Power Act 1997, which separated the generation from transmission and distribution. Kenya Electricity Generating Company Limited (KenGen) is the leading electric power generation company in Kenya, producing about 80 percent of electricity consumed in the country. The company utilizes various sources to generate electricity ranging from hydro, geothermal, thermal and wind. Hydro was the leading source in 2008, with an installed capacity of 737MW, which was 73 per cent of the company's installed capacity. Thermal and wind accounted for 22.8% and 0.03% respectively. KenGen has a workforce of 1,500 staff located at different power plants in the country. With its wealth of experience, established corporate base and a clear vision, the company intends to maintain leadership in the liberalised electric energy sub-sector in Kenya and the Eastern Africa Region.

- **Independent Power Producers**

A key outcome of the restructuring process was the facilitation of private sector participation in power generation through the Build Own and Operate system. The Acts provide the broad framework for regulating IPPs, the bidding and awarding processes for projects earmarked for development and ensuring compliance with licensing conditions. There are private sector players in commercial power generation. During 2008, there were five independent power producers namely, Iberafrica, Westmont⁷,

⁷Westmont was retired in August 2004 upon expiry of supply contract with KPLC.

Tsavo, Mumias-cogeneration and Orpower 4. These had a combined installed capacity of up to 200MW.

- **Emergency Power Producer (EPP)**

The government commissioned an EPP (Aggreko ltd) was commissioned in June 2006 to address the electric power shortfall in meeting the country's demand. Aggreko ltd has an installed capacity of 145 MW and sold 556 GWh during 2008.

3.4.2.2 The Petroleum sub-sector

- **The Existing Legal Framework**

Although the ERC is empowered by the Energy Act 2006 to regulate the importation, exportation, transportation, refining, storage and sale of petroleum and petroleum products, regulatory functions in the petroleum sector is basically shared among various players including the Ministry of Energy, the Kenya Bureau of Standards, the Petroleum Institute of East Africa, the Provincial Administration and Local Authorities. For instance, the Ministry of Energy has since 2004 been coordinating importation of crude oil through an Open Tender System, whereby all licensed importers are required to participate through legal notice No. 197 of 2nd December 2003. Through this arrangement, the Kenya Petroleum Refineries Ltd (KPRL) is given protection to process 1.6 million tonnes of crude oil which meets about 50% of the local demand. The other 50% is met through importation of refined petroleum products. The Ministry of Energy coordinates another OTS for importation of 35% of refined products in which all licensed companies are entitled to participate. The companies are allowed to import the balance of 15% on their own outside the tender system. The licensing requirements for importers, exporters, wholesalers and distributors include the nature and value of businesses, areas of operations, estimated volume of throughput and proof of product sources.

However, the licensing requirements for retailers are more complicated partly due to the fact that they deal with the public. Consequently, matters relating to Environment, Health and Safety standards are keenly addressed. For instance, there are requirements for approval of construction sites, plans as well 'change of user' certificates. In addition, retailers also require to apply for 'a kerbside' licence which permits for storage of petroleum products in underground tanks as well as trade licenses from the local authorities.

- **Institutional Arrangements of the Petroleum Industry**

The petroleum industry can be broadly categorised into two i.e. the upstream and downstream segments. The upstream segment involves exploration and production of oil. It ends at the point where the crude product is delivered to an export terminal in the country of production. The downstream segment begins at the loading port and ends at the point where the consumer purchases petroleum products at the retail outlet. This study concentrates on the downstream segment of the sub-sector which comprises public and private sector players. Reforms in the petroleum sector have led to realignment of its market structure as well as changing roles of different institutions in the petroleum industry. For instance, there exists government intervention on importation of crude oil through the Ministry of Energy as well as processing through the KPRL. The refinery is co-owned by the government and three private companies (BP, Shell and Chevron) on a 50-50 equity basis. The government also owns the KIPeVU Oil Storage Facility through the Kenya Pipeline Company. The roles and functions of government owned and quasi-owned institutions are as follows:-

- **The Kenya Petroleum Refineries Ltd**

The Kenya Petroleum Refineries Limited was originally set up by Shell and the British Petroleum Company BP to serve the East African region in the supply of a wide variety of oil products. The Company was incorporated in 1960, under the name East African Oil Refineries Limited. The first refinery complex which has distillation, hydro treating, catalytic reforming and bitumen production units was commissioned in 1963. The second refinery train was commissioned in 1974 and also has distillation, hydro treating and reforming units. KPRL is privately owned limited liability company. The Government of Kenya (GOK) is the majority shareholder in the company owning 50% of the equity. The Shell Petroleum Company Ltd and BP each hold 17.1% while Chevron holds 15.8% of the equity.

The refinery processes Crude oil mainly imported from the gulf region for marketing companies on the basis of processing agreements which set out the precise terms on which the Refinery takes custody of specific quantities and types of crude oil, and how they should be processed and delivered. For this service the user pays a processing fee which varies according to the type of crude oil processed.

- **The Kenya Pipeline Company**

The Kenya Pipeline Company was incorporated on 6th September 1973 under the Companies Act (Cap 486) and started commercial operations in 1978. The Company is a State Corporation under the Ministry of Energy with 100% government shareholding. The company operations are also governed by relevant legislations and regulations such as; the Finance Act, The Public Procurement Regulations, amongst others. Kenya Pipeline Company operates a pipeline system for transportation of refined petroleum products from Mombasa to Nairobi and western Kenya towns of Nakuru, Kisumu and Eldoret. The company offers 3 main services namely, transportation, Storage and Loading. The mandates of KPC include the following:-

- To build a pipeline for the conveyance of petroleum or petroleum products from Mombasa to Nairobi, for the account of the Company or for the account of others, and any other pipelines in East Africa as the Company may determine.
- To own, manage or operate such pipelines and any other pipelines (whether or not built by the Company) and all ancillary pumping, storage and other facilities and such other plant, equipment and installations, movable and immovable, as the Company may consider desirable and to manufacture, construct, maintain or modify any of the same.
- To market, process, treat and deal in petroleum products and other products and goods that may conveniently be dealt in by the Company and to provide transport and other distributive facilities, outlets and services in connection therewith.

- **The National Oil Corporation of Kenya**

The National Oil Corporation of Kenya was incorporated in April 1981 under the Companies Act, Cap 486 and charged with participation in all aspects of the petroleum industry. The company has a 100% Kenya Government shareholding. The formation of National Oil was precipitated by the oil crisis of the 1970's(1973/74 and 1979/80) and the correspondent supply disruptions and price hikes which resulted in the country's oil bill comprising of almost one third of the total value of imports and therefore making petroleum the largest single drain of Kenya's foreign exchange earnings. NOCK was initially intended to act as an instrument of government policy in matters related to oil.

National Oil became operational in 1984. Initial activities mainly consisted of exploration activities delegated from the Ministry of Energy. It was not until 1988 that National Oil went downstream and started importing crude oil, into the country. The role of National Oil in petroleum exploration includes:-

- Overseeing the fulfillment of petroleum exploration companies' obligations in accordance with contracts signed with the Kenya Government.
- Providing and disseminating exploration data from various exploration activities in form of reports and promoting the same to oil companies in order to attract them to do exploration in Kenya.
- Undertaking various exploration works in various basins in accordance with available capital outlay, technical expertise and equipment available. Due to limitations of risk capital from government, to date some exploration activities such as exploration drilling have been left mostly to international oil companies.
- To manage on behalf of the government storage and disposal of government's share of oil after discovery.

National Oil started downstream activities in March 1988 and was mandated to supply 30% of the country's petroleum requirements. These supplies were sold to major oil marketers at a small margin in bulk prior to processing with the purpose of stabilizing retail prices. This however changed following the deregulation of the petroleum industry in 1994 and the company started marketing petroleum products to final consumers. The company currently owns 67 service stations spread across the country with a 5% domestic market share. National Oil has also entered into the petroleum market segments which include LPG, and fuel oil.

- **Independent Petroleum Dealers**

Liberalization of the petroleum sector in 1994 paved way for the registration of independent dealers in importation, exportation, wholesale, distribution and retail activities. While some target the export Great Lakes region, majority are involved in delivery of petroleum products from depots to service stations as well as operating dispensing sites.

There are four types of retail outlets:

- Company Owned/Company Operated. These are few but the oil companies sometimes run their stations when they fail to find independent dealers;

- Company Owned/Dealer Operated. Whereby Oil companies owns the stations and signs a dealership agreement with an independent business person;
- Dealer Owned/Dealer Operated: These include independent stations developed after liberalization in 1994.
- Dealer owned/company leased: Stations leased to oil companies by dealers of individual business persons.

In 2000, independent dealers formed the Independent Petroleum Dealers Association in a bid to consolidate their operations and take advantage of economies of scale. The objectives of the association include: coordinating joint procurement, training in product handling, safety and environmental protection, representation at industry forums, lobbying with policy makers, creating awareness about their legal rights and enhancing their knowledge about the industry operations.

3.5.0 COMPARATIVE ANALYSES, EXPERIENCES AND BEST-PRACTICES

3.5.1 Country Approaches to Sector Regulation and Competition

Competition authorities and sector regulators co-exist under various conditions and different countries have chosen different approaches to ensure coordination and policy coherence between sector regulators and competition authority. Most countries have generally recognized the need to foster close cooperation and policy coherence between competition authorities and sector regulators for effective implementation of their mandates. According to UNCTAD (2006), these approaches can be generally classified into five types:-

- I. Combine technical and economic regulation in a sector regulator and leave competition enforcement exclusively in the hands of the competition authority;
- II. Combine technical and economic regulation in a sector regulator and give it some or all competition law enforcement functions;
- III. Combine technical and economic regulation in a sector regulator and give it competition law enforcement functions which are to be performed in coordination with the competition authority;
- IV. Organize technical regulation as a stand-alone function for the sector regulator and include economic regulation within the competition authority; and

V. Rely solely on competition law enforced by the competition authority.

A summary of country approaches to sector regulation and competition is presented in the Table 3.5 below.

Table 3.5: Country Approaches to Sector Regulations and Competition

COUNTRY	TYPE	COMMENTS
Brazil	I	The competition law is fully applicable to regulated sectors and the competition authorities are in charge of its enforcement in cooperation with sector regulators.
France	II,III	Sector regulator mandates in some sectors extend beyond enhancing competition and lead to an overlap with no formal separation of jurisdiction. Decisions on mergers and acquisitions are made by the Minister of Economic Affairs and competition law generally defers to other laws and regulations if they are inconsistent.
Kenya	II	The competition authority has neither jurisdiction over regulated sectors nor advocacy power. However, sector regulators increasingly coordinate with competition authority, although they are not obliged to do so.
Mauritius	II	Some sector regulators have competition competencies.
South Korea	I, III, IV	Combines I, III and IV although moving towards III following recent reforms.
South Africa	III	Sector regulators have concurrent jurisdiction. However, the competition act neither explicitly claims precedence over it. The competition authority is required to negotiate agreements with sector regulators to coordinate the exercise of jurisdiction over competition matters in regulated sectors. The competition authority has agreements with regulators in the broadcasting and electricity sectors, and under those agreements, the authority is the lead investigator in concurrent jurisdiction matters. The authority also has an advocacy function.
UK	III	Sector regulators have concurrent jurisdiction. The concurrency regulations 2000 spell out the procedure by which it is decided which authority is better placed to deal with a case and settlement of cases in court in case of a dispute.
Tanzania	I	Article 96 of the Fair Competition Act, 2003 excludes conduct that is provided for in sector legislation.
USA	I, II	The division of labour for competition matters within an industry differs by sector; in limited instances, conduct is exempt from antitrust laws.. Sector regulators were created with objectives beyond protecting competition, although industry regulators and competition agencies are increasingly working together to protect and promote competition. Antitrust agencies also play a strong competition advocacy role with respect to sector regulation.
Zambia	II	Sector regulators have concurrent jurisdiction. The competition authority also exercises an advocacy role while there is no formal system of resolving disputes.
Zimbabwe	I,II	The competition act gives primacy to the competition authority on competition issues in regulated sectors. Section 3 of the Act requires all sector regulators to apply for clearance from the competition authority for all mergers in regulated sectors.

Source: UNCTAD, 2006

Besides, competition and other regulations have also become central at the levels of regional and international economic groupings and incorporate the implications for trade between members as an additional dimension. The regional provisions tend to prioritize the goal of promoting economic efficiency and favourable terms for foreign investments. For instance, the EU competition policy is first and foremost a tool to break down national boundaries between member states and complete unification of the common market and the need to control anti-competitive conduct of public and private sectors. The system accommodates the competition policies of member states.

The North Atlantic Free Trade Area (NAFTA) provisions require that members take measures to proscribe anti-competitive business practices; they do not however establish any standards to be incorporated into domestic laws but rather, emphasize the importance of cooperation on competition enforcement. NAFTA provisions also recognize the right of governments to establish monopolies or state enterprises, but seek to ensure that they do not unduly hamper the free flow of trade by setting out disciplines on the activities of these entities based on the principle of non-discrimination. On the other hand, the COMESA competition regulations apply to all economic activity whether conducted by private or public entities and have primary jurisdiction over industries or sectors, which are the subject of a separate regulatory entity. Thus, most regional agreements on competition appear to be modelled on the EU approach, which accommodates the discrete competition policies of member states under which competition law represents a principal tool of economic integration.

3.5.2 Experiences from Energy Sector Regulators

3.5.2.1 Independent System Operators (ISOs)

Many developed countries have increasingly unbundled their electricity industries, separating generation from transmission, or at least separating generation from dispatch via the introduction of Independent System Operators (ISOs) (Stern, 2000). Such models have been implemented successfully in some middle income countries and are now developing more widely for instance in Latin America – Chile 1978-1988; Argentina - 1992; In Africa – Senegal, Uganda and Nigeria. In some cases, (particularly Central and Eastern Europe, China and Africa) transmission has been

separated from generation but supply competition is restricted to monopsony purchase by a single buyer who on-sells via a bulk supply tariff to distribution companies. This model has many advantages as a transitional model in countries (a) where distribution companies are not commercialised and/or financially weak; and (b) where some consumers (typically households are/or small farmers) pay prices for electricity that are substantially below operating costs. However, the model also has disadvantages, not least regarding: (a) the payment risks imposed on the transmission company and (b) the stringent regulatory requirements necessary for efficient operation and investment. Regulatory difficulties with a single buyer model can be acute especially in imperfect markets and governance issues.

3.5.2.2 The Asian Model

In developing countries, the Asian IPP model was a major competitor to the unbundled model outlined above. This model covers the situation where the incumbent power company, which owned and managed transmission and dispatch, purchases power contracts from a small number of Independent Power Producers (IPPs). But the IPPs compete with the generating plant owned by the incumbent power company, which comprises the bulk of the generating capacity available in the country. This was the pattern in Indonesia, Thailand, Philippines, Malaysia and Pakistan etc. In this model, economic regulation of prices was supposedly handled in the power purchase agreements (PPAs) between the IPP and the incumbent. But this failed when the contracts became unsustainable following the onset of the Asian financial crisis in 1998. This was because there was no explicit regulation of anything other than generation prices; and secondly, there were no procedures in place for handling major shocks. *A properly designed and managed regulatory system with an independent regulatory agency would have provided for both of these problems.* Several countries in the region are now pursuing power sector reforms, which will un-bundle the generation owned by the incumbent and privatise it. They are also developing new and independent regulatory agencies to support the restructuring. In general PPAs have been singularly unsuccessful at providing an effective and sustainable contractual basis for private investment in generation, particularly outside the Americas. Up to 60% of concession contracts are re-negotiated within 3 years.

3.5.2.3 The European Electricity Reform Model

Electricity reform in the EU is basically an application of the theory of competitive markets in the context of an industry that has a number of vertically related stages of production, some of which have natural monopolies (Pollit, 2009). The reforms were primarily driven by two electricity directives in 1996 and 2003 grounded on the theories of regulation which suggest independent incentive-based regulation, increasing the number of firms, reducing entry barriers and increased market size (Joskow, 2006). The 2003 directive specifically set a number of key objectives to be achieved by 1 July 2007 in each member states. These include the creation of an independent sector regulator, the legal unbundling of transmission and distribution businesses from competitive generation and supply, free entry into generation markets and regular monitoring of the progress of supply competition and 100% market opening to competition for all customers including households (Pollit, 2009). At the same time the EU Commission has been making use of competition law to investigate market abuse allegations against electricity and gas utilities as part of the EU Energy sector Inquiry (European Union, 2007).

A notable feature of the EU electricity reform model is that it does not include a number of elements present in a number of leading reform countries. For instance, there is no requirement for privatization of any of the country state-owned assets. There is de facto requirement to increase private involvement because competition in generation and supply must mean that privately owned entities can enter the market. Second, ownership of unbundling of transmission system operation or transmission assets has not been required by EU directives. The key body charged with overseeing electricity reform in EU countries is the designated National Regulatory Agency for Electricity (NRAE). There is a strong correlation between the strength of this regulatory agency and the progress with electricity reform in a given country (Green *et al.*, 2006).

3.5.2.4 The South East Europe

The form and situation indicators for regulatory agencies in SEE are summarized in annex Table 18. From the table only Slovenia meets the criteria of the best form and situation that exists encompassing wholesale competition, legal unbundling of networks, a fully independent regulator, price or revenue cap with a 3-5 year incentive period. In addition only

Bulgaria had privatised more than 50% of its state owned electricity enterprises by the end of 2006, with several countries showing no significant privatisation. The evidence suggests that privatisation, wholesale market competition and independent regulation are key elements of a reform in a developing country. However the leading countries sometimes exhibit features not seen in the EU e.g. cost based bidding into the power pool in Chile. Where all three of these are present there is evidence of improved efficiency though prices may have to rise from un-economic levels. The presence of initially un-economic prices presents a key political problem for developing countries. While developed countries may find prices falling due to reform or have the capacity to absorb or adjust to rising prices for low income groups via the tax and benefit system this may be more difficult for a developing country.

3.5.3 Major Lessons from Country Experiences and Best Practices

From the review of the above country experiences the following lessons have been drawn:

1. Effective utility regulatory framework requires (a) effective legal backing in statutory law; (b) Good leadership and (c) adequate technical capacities both in numbers staff and diverse range of skills. It also requires a clear budgetary framework, an effective law enforcement regime and they also need to participate effectively in international forums e.g. the WTO.
2. Secondly, regulation by contract has been quite unpromising in the energy sector as opposed to road and telecoms infrastructure as experienced in Indonesia, Thailand and Pakistan etc as demonstrated during the Asian financial crisis. This is due to the substantial needs in terms of legal and other staff needs in negotiating, writing, monitoring and enforcing the contracts. Recruitment and retention of specialised staff is necessary. Thus, the institutional strengths of Kenya's regulatory bodies should form the basis for adoption of contract regulations if the Asian experience is anything to go by. For instance, a review of the staff deployed in many regulatory bodies world-wide showed that in Western Europe professional staff compositions were in the range of 50% (see annex table 23).
3. There is need for regulators to direct effort at communicating with civil society and the public in general and regularly enforcing the main

strategic messages of sustainable development, rather than simply a plethora of detail. They should recognize the importance of communicating messages about sustainable consumption to consumers and the public and engaging more with the latter, particularly by working with public and private organizations (e.g. consume bodies, local government and NGOs) who are better placed to interact with consumers.

3.6.0 STUDY FINDINGS

3.6.1 Implementation of Competition-Related Regulations

3.6.1.1 Capacity of Regulatory Institutions

Effective regulation require substantial numbers of staff as well as diverse specialist skills e.g. economists, lawyers, accountants, financial analysts, engineers etc. These services are also needed in the regulated companies. The regulatory staffs provide the critical institutional continuity, development and responsiveness of the regulatory system. Currently, the MPC had a staff compliment of 32 employees out of which 21 are economists while 11 are support staff. On the other hand, ERC has 36 professional and non-professional staff against an establishment 56, implying a shortage of about 21 positions. Although the existing staffs are highly qualified, the expert knowledge is locked up in a few key personnel. According to the ERC Strategic Plan 2008-2013, staff shortages are apparently attributed to competition in professional staff recruitment from other existing public utilities, consultancy firms and other-related bodies who may be able to offer more attractive compensation packages and opportunities. The study established that MPC presently has no specialized energy sector experts while ERC equally has no specialized competition-related experts. The technical capacities of the two regulatory institutions compares poorly with similar institutions elsewhere. For instance, Brazil's National Agency of Electrical Energy has no less than 325 employees, the Public Utilities Board of Singapore has 101 employees while the United Kingdom's OFGEM has 252 employees.

3.6.1.2 Regulatory Independence and Enforcement of Competition

As mentioned, the Competition Act 2009 to four enforcement institutions namely the Office of the Minister of Finance, The Director General of the Competition Authority, the Competition Tribunal and the Courts. As it is, the independence or autonomy of the MPC is not assured as it falls under the authority of the central government. The actual appointment of the Director General is not provided for under the Act hence assumed to be done within the general civil service conditions like the other staff. The Competition Act, 2009, provides for establishment of an Authority which shall be independent and shall perform its functions and exercise its powers independently and impartially without fear or favor. Under sections 12 of the Act, the Authority shall be headed by a Director General to be appointed by the Authority from persons having knowledge and experience in competition matters. Thus, the Act falls short of stipulating specific qualifications and experience e.g. economics, law, law, industry etc as well as specific time-frames for appointment to the position of the Director General. In addition, the new laws do not contain explicit provisions for execution and enforcement of orders by the Competition Commission/Authority. For instance, section 64 of the Competition Act 2001 of South Africa stipulates that any decision, judgment or order of the Competition Commission or Competition Tribunal may be served, executed and enforced as if it were an order of the High Court.

Likewise, although Section 4(3) of the Energy Act 2006 stipulates that the ERC shall be independent in the performance of its functions and duties and exercise of its powers and shall not be subject to the direction or control of any person or authority. However, section 3 of the State Corporations Act makes provision for the control and regulation of state corporations and in this case under the general guidance of the Minister for Energy, thereby undermining the independence of the ERC in decision making. Thus the extent of ministerial involvement in decision making and appointment of commissioners grossly undermine the independence of the energy sector regulator. In addition, direct involvement of the Ministry in decision making, as recently reported in respect to setting of power generation and supply tariffs in a bid to influence retail prices, interferes with the independence of the regulator. This position was reflected by the views of majority of respondents as shown in the figure below.

With regard to enforcement of specific provisions of competition-related regulations, the Act provides for three categories of enforcement procedures i.e. the *Restrictive Trade Practices*, the *Control of unwarranted concentrations of economic power* and the *control of mergers and takeovers*. The study established that MPC has not been implementing part IV of the Restrictive Trade Practices and Price Control Act, which deals with pricing since 1995 following the decontrol of prices. So far, no proven cases of anti-competitive practices have been reported in these operations and there is every indication that major players in the oil industry have a tendency to influence retail prices. For instance, when international crude oil prices were rising during 2007 and 2008, oil marketing companies quickly passed on the increased costs to consumers, but took long to pass on costs reductions to consumers when international oil prices were on a downward spiral during the last quarter of 2008. According to ERC, the load port price of murban crude oil dropped from a record high of US\$ 137.35 per barrel in July 2008 to US\$ 42.10 per barrel (69.9% drop) in December 2008 while pump prices of super petrol dropped from ksh. 110.00 per litre to ksh. 78 per litre or 29.1% over the same period. ERC and the Ministry of Energy rather relied on “*Moral Suasion*” rather than overt regulatory measures to align down-ward prices to international oil prices⁸. Likewise, no cases for unwarranted concentration of economic power have been dealt with by MPC. However, the Commission evaluated 8 cases of mergers and take-overs, within the energy sector during the period 2005-2009⁹.

During the survey, only 9.6% of the respondents felt ERC was independent in making decisions without political interference while 73.1% felt the sector regulator was not politically independent. The remaining 17.3% respondents were either not sure or did not know whether ERC would be judged as independent as indicated in figure 3.

⁸ ERC has since introduced a formula for capping monthly retail prices for petroleum products in the bid to check against rising prices.

⁹ Cases of mergers and take-overs included: (1) Petro and Somken petroleum; (2) Shell and BP Africa; (3) Petro oil and Triton petroleum; (4) Tamiol Africa Holdings and Mobil (k) Holdings; (5) Reliance Industries Middle East and Gapco Kenya Transenergy Kenya; (6) Somken and NOCK; (7) Total and Chevron; (8) Kobil petroleum and Kenol

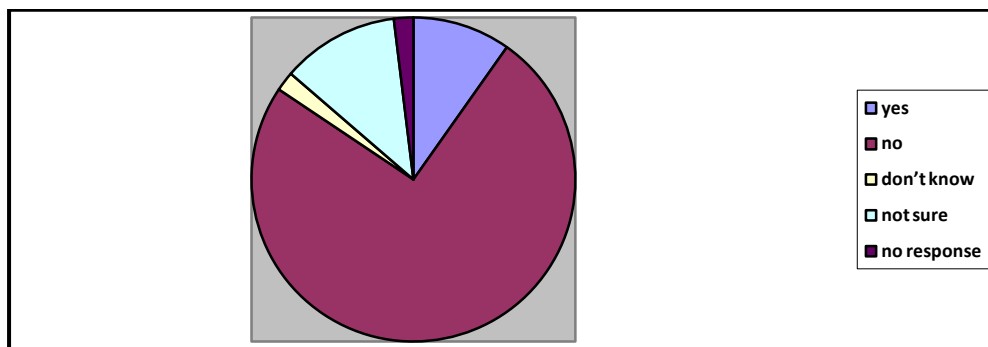


Figure 3.2: Perceptions about Regulatory Independence

Source: Study survey, 2009

With regard to financial independence, the study established that MPC fully relies on the exchequer to finance its activities unlike other autonomous Competition Authorities in the region. It has no powers to raise alternative funds e.g. through borrowing or charging fees for the services it renders. Section 78 of the Competition Bill 2009 however expands the financial sources of the proposed Authority. On the contrary, the study established a very strong degree of fiscal independence of ERC to the extent that there currently are no financial transfers to the Commission from government. Thus, about 99% of incomes are collected from electricity (52.7%) and petroleum (46.3%) levies while the remaining are generated from interests and penalties in line with recommended best practices.

Although ERC has a balanced 5-year budget, there is an apparent over-reliance on levy funds, which may be volatile given they are based on prices charged and volumes of electricity and petroleum sold. Consideration should be given to broadening the income base through hybrid mechanisms and/or pegged on costs of service delivery to various industries. In addition, although ERC does not rely on the exchequer, the resource envelop determined by collected levies may constrain the expansion programmes in terms of additional staff and facilities given the increasing roles and mandate it is expected to implement.

3.6.1.3 Performance¹⁰ and Market structure

3.6.1.3.1 The Electricity Sub-Sector

a. Power Generation Systems

According to KPLC Annual Report 2010, the national power system had an installed capacity of 1,412.7 MW with a maximum output of 1,356.2 MW under normal operating conditions as at end of June 2010. KenGen accounts for about 54% of effective production capacity, while IPPs and EPP account for about 29% and 16%, respectively as indicated in annex table 20. Total system peak demand during the period was 1,107 MW implying a near zero reserve margin without the EPPs.

Table 3.6: Electric Power Generation in Kenya during 2009/10

Producer	Total energy purchased (Ggwh)	Hydro (Ggwh)	Thermal, & Geothermal, Cogen (Ggwh)	Wind (Ggwh)
1. KenGen	3,606	2,170 (60%)	1,420 (30%)	16.3 (0.5%)
2. Iber Africa Power Ltd	621	- (0%)	621 (100%)	- (0%)
3. OrPower4 Inc	400	- (0%)	400 (100%)	- (0%)
4. Tsavo Power Co.	495	- (0%)	495 (100%)	- (0%)
5. Rabai power	318	- (0%)	318 (100%)	- (0%)
6. Mumias sugar	99	- (0%)	99 (100%)	- (0%)
7. Rural Electrification	19	- (0%)	19 (100%)	- (0%)
7. Imenti tea factory	0.3	0.3 (100%)		- (0%)
5. Emergency power	1096	- (0%)	1096 (100%)	- (0%)
Total	6,655	2170 (33%)	4468 (67%)	16 (0.2%)

Source: KPLC, 2009; Brackets: % share of type of source of power by generators

The hydro power accounts for about 33% while thermal, geothermal and Cogen accounted for 67% of power during the same period as indicated in the Table 3.6 above. It is also noticeable from the table that, IPPs and EPPs direct their investments towards thermal and geothermal power sources, unlike KenGen, which has invested in all the three sources of power i.e. hydro, thermal & geothermal and wind. The distribution of power produced by KenGen comprises 60% hydro, 30% thermal/geothermal and a minimal 0.5% of wind power. On the other hand, the IPPs and EPPs are engaged in 100% thermal power generation. By and

¹⁰ The performance indicator used here is aimed at capturing the generation capacity and customers served and do not reflect effectiveness of regulation or efficiency of regulators and services providers.

large, there are huge potentials for exploiting wind power generation by both KenGen and the private power producers.

b. Power Purchase Costs

Power purchase can broadly be categorized into two i.e. the purchase costs based on tariffs between KPLC and generating companies as well as fuel costs. As expected, electricity purchases from KenGen constituted the bulk of the costs i.e. 94.8% of total power purchase costs. On the other hand, the IPPs constituted the bulk of the fuel costs i.e. 76.6% of total fuel costs compared to 23.4% attributed to KenGen. The total fuel costs exceeded the purchase costs during the year 2008 as indicated in Table 3.7 below. The highest fuel cost during the year was incurred by Aggreko, which accounted for 36.5% of total fuel costs despite accounting for a paltry 499 GWh or 7.9% of electricity purchases.

Table 3.7: KPLC Power Purchase Costs (Ksh. millions)

Company	2003	2007	2008	2009	2010
a. Power Purchase Costs					
KenGen	8,943.6	11,055.1	11,453.5	12,489.3	11,721.8
Aggreko	-	834.8	878.9	1,555.6	2,250.5
Uganda Electricity Transmission Company	967.1	59.9	90.1	134.5	183.8
Tsavo Power Company Ltd	1,786.6	1,701.4	1,619.8	1,944.3	1,884.9
Iberafrica power (E.A) Company Ltd	1,360.4	944.9	836.7	984.5	2,265.9
OrPower 4 Inc	722.0	733.4	630.8	1,779.4	2,736.9
Mumias Sugar Company Ltd	-	7.5	18.2	8.9	331.6
Tanzania Electric Power Supply Company Ltd	-	2.8	5.4		6.7
Rabai Power Limited					1,279.594
Imenti Tea Factory					1.7
Deferred power purchase costs				2,607	1,664
		15,339.9	15,533.3	21,511.8	24,327.5
GoK subsidy on Power purchases from KenGen		2,759.2	2,891.1	1,830	2,742
Less recharged to REP		478.8	561.1	910.8	1,069.7
Total Costs	14,512.8	12,101.9	12,081.1	18,770.2	20,515.7
b. Fuel Costs					
KenGen	1,206.5	3,269.9	3,987.5	8,072.2	6,283.7
Aggreko	-	5,460.5	6,296.5	12,091.5	14,522.2
Uganda Electricity Transmission Company	-	161.1	390.2	482.9	489.6
Tsavo Power Company Ltd	1,583.3	2,933.1	3,928.1	4,855.7	4,441.8
Iberafrica power (E.A) Company Ltd	1,257.9	2,615.0	2,617.1	3,992.8	6,250.9
Mumias Sugar Company Ltd	-	3.5	6.2	2.5	3.3
Emergency Power Plant	222.4				
Rabai Power Ltd					3,067.4
Off grid power stations				225.5	452.2
		14,443.1	17,225.7	29,723.1	35,521.2
Less recharged to REP		432.7	559.4	1,375.6	2,190.1
Total Costs	4,270.1	14,010.4	6,666.2	28,347.6	33,331.1

Source of table 3.7: KPLC Annual Report, 2009 and 2010.

The study further established that generation and supply of electricity is subject to *rate-of-return* regulations. Generation supply prices are determined through negotiated power purchase agreements between the generation companies (KenGen, IPPs and EPPs) and the KPLC which are

subject to approval by ERC¹¹. The latter also approves the schedule of tariffs for electricity supply by KPLC to its customers. Recently, the Ministry of Energy introduced a feed-in-tariffs system as means of promoting generation of electricity from renewable energy sources. It allows producers to sell to distributors on a priority basis at a 15 year pre-determined fixed tariff. Thus, there is virtually no competitive pricing in the electricity sub-sector essentially rendering existing competition laws and regulations irrelevant or unenforceable.

c. Financial Performance

The regulated firms have generally had positive financial performance in the recent past. For instance, KPLC realized a 75% growth of net after-tax profit between 2007 and 2008 with net profits rising from ksh. 1.5 million to ksh. 2.5 millions as indicated in Table 3.8. The average yields per units sold have also been increasing over time.

Table 3.8: KPLC Financial Indicators

ITEM/YEAR	2003	2004	2005	2006	2007	2008
Units sold (millions)	3,654	3,940	4,215	4,444	4,818	5,082
Revenue from sale of electricity (Ksh, millions)	23,130.8	23,323.1	28,341.4	33,966.7	37,944.3	40,919.2
Average yield of units sold (ksh)	6.33	5.91	6.72	7.64	7.88	8.05
Net profit/loss after tax ('000)	(3,049,425)	459,737	1,272,203	1,646,161	1,454,050	2,550,531

Source: KPLC Annual report, 2009

According to KPLC annual report for 2008, Nairobi region contribute the highest electricity revenues i.e. 55% of total revenues followed by Coast (18.1%), West Kenya (18.0%) and Mt Kenya (8.7%) in terms of geographical information. This is mainly attributed to greater levels of economic activities in Nairobi compared to other parts of the country. KPLC realized profits in Nairobi and Coast provinces but incurred losses in West Kenya and Mount Kenya regions over the last two years. Likewise, KenGen has

¹¹ KPLC and KenGen recently signed a 20-year PPA whereby KenGen shall receive Ksh. 2.40 per unit up from the previous Ksh. 2.36.

been realizing stable growth in profits over the years with profits after tax doubling between 2007 and 2008 financial years (See Table 3.9).

Table 3.9: KenGen Financial Indicators

Statements (Kshs m)	2008	2007	2006	2005	2004
Sales	16,092	14,552	14,300	11,012	8,963
Operating Expenses	(12,557)	(11,410)	(11,565)	(8,517)	(5,878)
Operating Profits	3,534	3,142	2,735	2,495	3,086
Other Income	334	711	1,041	385	288
Finance Income/(Costs)	(1,441)	1,420	(56)	(261)	(949)
PBT & EI	1,629	4,719	3,721	2,619	2,426
Profit Before Tax (PBT)	1,629	4,719	3,721	2,619	2,426
Taxation	3,181	(2,274)	48	(866)	(805)
Profit After Tax	4,809	2,445	3,769	1,753	1,621

Source: KenGen Annual Report, 2009

d. Consumption Trends

Energy consumption still remains low at about 121kw per capital with a national access rate of 15% and only about 4% in the rural areas (Vision 2030). However these is changing with increased reforms which has since raised the customer base for KPLC and rural electrification programme as indicated in the Figure 3.3 below by the increasing customer base from 2002/3 to 2006/7.

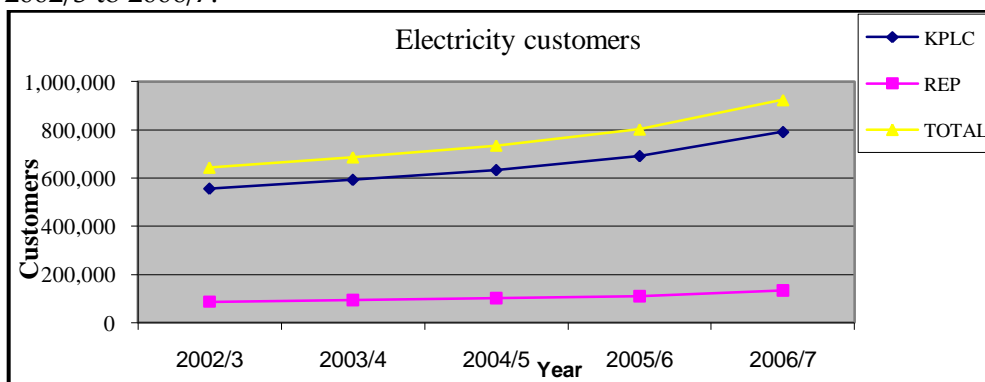


Figure 3.3: Electricity Customers

Source: Study Survey

So far, large commercial and industrial users constitute the biggest customer category for electricity sales. In 2008, they consumed 2,108 Gwh or 41.8% of total sales. This is followed by domestic users 1,255 Gwh (24.9%),

while the least category of consumption was street lighting 13 GWh (0.3%). During the same period, off-peak consumption realized the biggest growth of electricity sales i.e. 48% compared to 2.6% for the large commercial and industrial sales.

The large commercial and industrial users generate the highest amounts of revenues from electricity i.e. 36.5% followed by domestic users (26.8%) and medium commercial/industrial users (19.7%) as shown in table 10. Latest statistics indicate that the biggest growth rate in revenues arose from street lighting (50%), off-peak usage (48%) and domestic users (13%), while large commercial & industrial usage experienced the least growth rate in revenue sales. Thus, considerations should be given to increase incentives towards generation of cheaper electricity to meet the increasing demand for street lighting.

A further analysis shows an increasing trend in average costs in all categories of consumers. For instance, there was a 37.3% increase in unit cost between 2003/04 and 2007/08 i.e. from ksh. 5.92 per Kwh to Ksh 8.13 per Kwh. Another important observation is that off-peak consumption of electricity attracts the least unit costs over the years. During 2007/08, the unit cost stood at was i.e. at ksh 5.97 per Kwh compared to street lighting which was ksh. 15.23 per Kwh. On average, domestic, small commercial and industrial use costs ksh. 9.46 per Kwh compared to large commercial and industrial use which costs ksh. 7.03 per Kwh.

Table 3.10: Average Costs¹² of electricity per customers' category (Kshs/GWh)

Customer category	Description	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10
Domestic	Sales in GWh	900	956	1028	1113	1255	1254	1290
	Revenue (Kshs M)	5,233	6,481	8,092	9,718	10,867	16,493	21,109
	Average tariff	5.81	6.78	7.87	8.73	8.66	13.15	16.36
Small Commercial	Sales in GWh	476	522	522	558	590	823	823
	Revenue (kshs M)	3,622	3,905	4,650	5,858	6,481	12,381	14,778
	Average tariff	7.61	7.48	8.91	10.50	10.98	15.04	17.95
Commercial and industrial	Sales in GWh	2,502	2,661	2,778	3,039	3,104	3,020	3,153
	Revenue (Kshs M)	14,145	17,400	20,632	21,832	22,864	36,014	36,603
	Average tariff	5.65	6.54	7.43	7.18	7.37	11.93	11.61
Off peak	Sales in GWh	55	53	54	50	74	43	36
	Revenue (Kshs M)	272	472	320	298	442	314	263
	Average tariff	4.95	8.91	5.93	5.96	5.97	7.3	7.31
Street Lighting	Sales in GWh	7	8	9	11	13	15	16
	Revenue (Kshs M)	51	83	95	132	198	271	415
	Average tariff	7.29	10.38	10.56	12.00	15.23	18.1	25.9

Source: Calculated from Annual Report, 2009

Finally, the Kenya Power & Lighting Company has until recently been responsible for transmission, distribution and retail of electricity in Kenya. The national grid is operated as an integral network, linked by a 220 kV and 132 kV transmission network. There is a limited length of 66 kV transmission lines. The national grid impacts on the future growth of the energy sector because any new generation capacity must take into consideration the existing network and its capacity to handle new loads. However, plans are underway to transform power transmission into an open access system and allow large electricity customers to purchase power from generators.

¹² Average cost is equal to the ratio of total revenues to total sales (GWh)

Table 3.11: Problems in Power sub-sector

	Problem	% of response
Generation	Licensing procedure cumbersome	37.3
	Monopoly by KenGen/dominance behaviour	44.6
	Price paid for generation is too low	3.6
	Dependency on hydro power	9.1
	High price charges. High production costs	2.7
	Dependency on diesel	0.9
Transmission	Monopoly	35.5
	Inefficiencies/ not well networked	45.2
	Transmission losses	12.9
Distribution	High costs	36
	Monopoly – no competition	32
	Corruption	12
	Inefficiencies	10

Source: Study Survey

From the study survey, lack of competition within the transmission and distribution segments was cited by 35.5% and 32% of the respondents as contributing to challenges in service delivery and high tariffs.

3.6.1.3.2. Petroleum Sub-Sector

The petroleum market in Kenya is largely oligopolistic despite the incorporation of numerous small independent oil companies. Prior to liberalization, multinational firms accounted for over 90% of all petroleum products imported into the country and virtually all retail businesses. By the year 2005, activities by independent petroleum dealers were still limited to the extent that four of the major petroleum market players (Total, Shell BP, Caltex, Mobil & Kenol/Kobil) controlled about 85.3% of the market (GoK, 2006). During 2010, the market Concentration Ratio was 74.9% controlled by Kenol/kobil (18.3%), Shell (16.9%), Total (27.1) and oil Libya (12.6%). In addition, the Herfindahl-Hirschman Index was estimated at 1501, affirming the oligopolistic tendency of the industry as indicated in Table 3.12.

Table 3.12: Market Share of Petroleum Industry in Kenya

Petroleum Industry Market shares, 2008		Petroleum Industry Market shares, 2009		Petroleum Industry Market shares, 2010	
Company	Market share (%)	Company	Market share (%)	Company	Market share (%)
Total	19.65	Total	23.6	Total	27.1
Kobil	24.41	Kobil	21.9	Kobil	18.3
Shell/BP	20.57	Shell/BP	17.2	Shell/BP	16.9
Mobil/oil Libya	8.21	Mobil/oil Libya	9.9	Mobil/oil Libya	12.6
Gapco	2.48	Gapco	5.6	Gapco	5.8
Petro	0.54	Petro	0.3	Petro	0.3
NOCK	3.34	NOCK	8.4	NOCK	4.4
Oilcom	0.63	Oilcom	1.6	Oilcom	1.4
Dalbit	0.37	Dalbit	0.5	Dalbit	0.3
Global	0.02	Global	0.3	Global	
Engen	1.65	Engen	1.4	Engen	1
Galana	1.27	Galana	1.7	Galana	1.7
MGS Int	0.27	MGS Int	0.4	MGS Int	0.5
Bakri	2.01	Bakri	1	Bakri	0.5
Kamkis		Kamkis		Kamkis	0.3
Addax	0.18	Addax	0.1	Addax	0.2
Hass	1.32	Hass	2.3	Hass	2
Others		Others	0.1	Others	0.9
Fossil	0.18	Fossil	0.4	Fossil	0.7
Hashi Empex	0.2	Hashi Empex	0.7	Hashi Empex	1.5
GULF	0.16	GULF	0.9	GULF	1.4
RIVAPET	0.07	RIVAPET	0.7	RIVAPET	0.8
TROJAN		TROJAN	0.5	TROJAN	0.7
MULOIL	0.29	MULOIL	0.2	MULOIL	0.3
AL-LEYL	0.01	AL-LEYL	0.2	AL-LEYL	
INTOIL	0.25	INTOIL	0.2	INTOIL	
RIVA OIL	0.15	RIVA OIL	0.1	RIVA OIL	
Jade	0.06	Jade		Jade	
pentoil	0.05	pentoil		pentoil	
Banoda		Banoda			0.2
HHI = 1501 Concentration Ratio (4 firm) = 75.8		HHI = 1549 Concentration Ratio(4 firm) = 72.6		HHI = 1584 Concentration Ratio(4 firm) = 74.9	

Source: PIEA, 2010 and authors' calculations

Table 3.13 below shows the distribution of retail outlets by region. Independent/new entrants constituted about 48.6%, while major companies comprised 51.4% of oil retail outlets nationally. The former were mainly

found in Rift valley, Nyanza and western regions, while the latter dominated Nairobi, central and coast regions.

Table 3.13: Regional distribution of petroleum retail outlets, 2008

Region	New Entrants		Majors		Total	
	No	%	No	%	No	%
Central	59	41.5	83	58.5	142	100
Nairobi	123	39.9	185	60.1	308	100
Coast	63	49.2	65	50.8	128	100
Rift Valley	170	56.9	129	43.1	299	100
Eastern/N. Eastern	53	43.4	69	56.6	122	100
Western	30	57.7	22	42.3	52	100
Nyanza	62	60.8	40	39.2	102	100
Total	560	48.6	593	51.4	1153	100

Source: PIEA, 2009 and authors' calculations

Table 3.14 shows the number of retail outlets of 4 major oil companies in Kenya. The market dominance by a few firms is thought to be responsible for the widely reported observation of stickiness of the retail petroleum prices to adjust downwards when international oil prices are falling (ERC, 2009).¹³ The stickiness in prices has been recently experienced after the downward spiral of international oil prices in the last quarter of 2008.

Table 3.14: Retail outlets by major oil firms, 2009

Company	No of service stations
1. Total	94
2. Shell	131
3. Caltex	89
4. Kenol/kobil	145
5. Agip	90

Source: Company websites, April, 2009

Prices in the petroleum sub-sector may therefore not be market determined. The perception of a majority of the key informants was that the most common challenge facing the petroleum sub-sector was the existence of cartels or cartel like behaviour which accounted for 52% of the responses. The related challenge of lack of competition (and lack of proper regulation) accounted for 30% of the responses. These views are summarized in Table 3.15 below.

¹³ Total Kenya was granted approval to buy Chevron's Kenya unit (Caltex) in May, 2009.

Table 3.15: Competition related challenges in the petroleum sector

Challenge	Reponses (Percent)
Cartels	52
No competition/lack of proper regulation	31
Lack of alternative sources of energy	8
Unfair allocation of import tenders	3
Entry barriers	5
Others	2

Source: survey results.

The other survey finding was that the petroleum markets may be prone to high entry barriers mainly attributed to high capital investments. Apparently, this indirectly favours multinational companies against potential local investors.

3.6.1.4 Quality, Service delivery and Dispute settlements

Quality issues in the petroleum industry are closely related to infrastructure facilities, technological literacy and information technology and vary with amongst regulated and un-regulated firms. For instance, the poor quality services at the importation, refinery and storage are blamed on infrastructure limitations and old technologies which affect distribution and supplies. Further, despite ad hoc quality surveillance or inspection exercises concerns about the quality of petroleum products (including adulterations) were identified as a major problem of the petroleum sector by the key informants. The key informants also indicated that they faced problems in sourcing for products. The main constraints faced by key informants in sourcing and consumption of petroleum were identified as frequent shortages/inadequate supply (34%), and high prices or fluctuations in prices (30%). Poor quality of products (including adulterations) was mentioned in 20% of the responses.

According to the 2006/7 ERC annual report, the number of complaints from customers has been on the decline as indicated in the number of customer complaints (technical) per 100 customers. The complaints declined from 37.2 in 2001/02 to 26.1 in 2006/7. The most common complaints were black-outs, outages, accidents, low supply etc. The supply minutes lost per customer has also been on the decline from 2003/4 an indication of improving quality of service in the electricity sub-sector.

Table 3.16: Customer Complaints

Indicator	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
Number of customer complaints (technical) per 100 customers	37.2	38.1	35	33.6	30	26.1
Supply minutes lost per customer	83	90	108	90	*57	*49

Source: Study survey

In terms of dispute settlements, the report indicated that 45 consumer complaints received in 2006/7, about 51% were resolved, 38% were awaiting utility response and 11% were awaiting the complainant's responses.

From the survey, 88.5% of the respondents indicated not to be receiving quality services while only 7.7% of the respondents indicated consumers were receiving quality service. Out of those who were dissatisfied, 44.2% were of the opinion that the regulator had no capacity of ensuring customer satisfaction. Besides, it was difficult to establish the real causes of poor services delivery given the multiple numbers of players in the sub-sector and transmission and distribution.

3.6.1.5 Co-ordination and Information Exchange

The Energy Act of 2006 imposes an obligation on ERC to coordinate with other statutory authorities in the following areas:-

- setting enforcing and reviewing Environment Health and Safety standards,
- granting licences for sustainable charcoal development,
- competition regulation and
- coordination is also required between the ERC and the rural electrification authority.

According to the ERC Strategic Plan 2008-2012, there is need to provide more clarity as far as coordination of these activities with other implementing agencies are concerned. Both ERC and MPC have responsibilities for the regulation of competition in the electricity and petroleum industries. The ERC proposes maintenance of the capabilities to regulate competition matters in house in line with the UK model where the sector regulators hold concurrent powers for competition regulation with the competition regulators.

Various views were given by respondents as concerns the nexus between competition and sector-specific regulations. Overall, 58.8% of the respondents indicated there were options to integrate competition and regulatory framework with the majority (23.5%) holding the view the laws should be updated to accommodate new developments within the energy sector. However, 43.2% of the respondents did not respond or give their opinions on this matter. The options given for integration are as indicated in the Table 3.17 below.

Table 3.17: Competition and Regulatory Framework

Options	Percentage
Amend or enact laws to accommodate new players	13.7
Empower regulatory body to enforce competition	15.7
Clear distinction in roles of regulators	3.9
Update laws to accommodate new developments	23.5
No response / not applicable	43.2

Source: Study Survey

Thus majority of responds tend to favour the existing arrangement assumes a model where both institutions have concurrent powers to regulate competition. While this is practiced elsewhere¹⁴, the study established that there is lack of clear co-ordination and consultative framework for effective enforcement of competition-related regulations. They do not conduct joint investigations neither has MPC ever taken over a case from ERC or vice versa based on their competencies and capacities.

3.6.1.6 Transparency, Advocacy and Awareness Creation

Awareness of competition related regulation is central to enhancing competition in any industry. The commission has in the recent past been active on involving the members of public in decisions particularly in respect to the formulation of wholesale and retail prices. This is in tandem with the requirement of section 110 (3) of the Act which requires the Commission to publish the proposed regulations for purposes of inviting proposals from the public before submitting such recommendations to the Minister. However, the survey results indicated that most of the respondents were of the opinion that ERC is not transparent enough in

¹⁴For instance in the UK where sector regulators and the Office of Fair Trading (OFT) hold concurrent competition regulatory powers

terms of making information, documents and procedures for decision making open to the public. Only 17.3% were of the opinion that the regulator was transparent.

A similar response was expressed for accountability with only 28.8% of the respondents indicating that the regulator is accountable and 55.8% indicating that the regulator is not accountable to the public. Besides, the study established that the clarity of some regulations particularly in terms of implementation and coordination with other bodies in the areas of competition regulation, rural electrification as well as environment and health standards are not clearly spelt out.

From the survey, 46.2% of the respondents were not aware of the rules, principles and guidelines pursued by ERC. 38.5% were aware of the rules and principles pursued by ERC while the remaining 15.3% either didn't know or were not sure of existing rules and regulations.

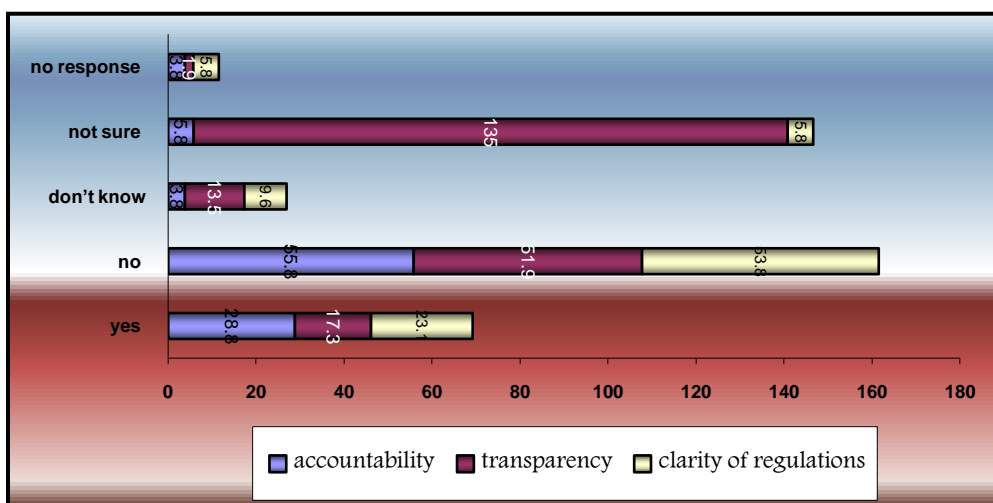


Figure 3.4: Accountability, transparency and clarity of regulations

However the respondents had various issues regarding competition in the electricity sub sector. The respondents gave monopoly/ lack of competition as the key competition related challenge facing the electricity sub sector with a 74.1% response rate, weak regulation/ lack of policy to ensure competition with 1.7%, restriction of individual production (6.9%), inefficiencies (6.9%) and high prices due to monopolies (6.9%).

However according to 63.5% of the respondents the existing competition policy is not adequate in addressing the competition-related challenges in

the energy sector; mainly because its manipulated or not observed, its outdated, has a lot of political interference and the industry generally has few players.

3.6.2 MAIN CONSTRAINTS AND CHALLENGES

The study identified constraints and challenges in the course of implementation of the economic and competition-related regulations in the electricity and petroleum sub-sectors. These are highlighted below as follows:-

3.6.2.1 Competition-Related Regulations

3.6.2.1.1 Limited independence or autonomy of the Competition

Authority

Although the Competition Act 2009 establishes an independent Competition Authority, the Act still gives the overall powers to administer and enforce competition law and policy to the Minister for Finance. The Act provides for establishment of an Authority which shall be independent and shall perform its functions and exercise its powers independently and impartially without fear or favor. Under sections 12 of the Act, the Authority shall be headed by a Director General to be appointed by the Authority from persons having knowledge and experience in competition matters. However, the Act falls short of stipulating specific qualifications and experience e.g. economics, law, law, industry etc as well as specific time-frames for appointment to the position of the Director General. In addition, the new laws do not contain explicit provisions for execution and enforcement of orders by the Authority. For instance, section 64 of the Competition Act 2001 of South Africa stipulates that any decision, judgment or order of the Competition Commission or Competition Tribunal may be served, executed and enforced as if it were an order of the High Court. Besides, although the Authority has provisions to draw funds from any grants, donations, bequests, fees and penalties collected, the major source of funds remains those allocated to the Authority by Parliament. Thus, like many other government departments, key programmes in the Authority would be affected by under-funding including professional staff recruitments, trainings, monitoring and evaluations as well as establishment of appropriate data banks. Further, the regulations for appointment of members of the Authority, though subject to approval by

parliament, should be conducted in a transparent manner involving credible systems devoid of political patronage.

3.6.2.1.2 Provisions for consumer protection and fair-trading

Although price controls were not repealed by parliament, the MPC for a long time did not invoke Part IV of the competition law. In this way, the Commission's activities and ability to protect consumers against cartels, monopoly abuses and anti-competitive practices were rather weak. However, sections 55-70 of Part 6 of the Competition Act, 2009 provides for protection of consumers from unfair and misleading market conduct. Besides, *Article 46 and Fourth Schedule (Part 2) of the Kenya Constitution* has express provisions on consumer rights and fair trading practices. That notwithstanding, the Ministry of Trade also has the mandate to execute fair trade practices and consumer protection vis-à-vis regulatory agencies in other sectors. Lack of clear guidelines regarding the coordination of these activities between the Authority and Ministry of Finance on one hand and the Ministry of Trade on the other hand weakens implementation of fair trading practices.

3.6.2.1.3 Exemptions of the Public Sector from the Scope of the Act

Section 5 of the Act provides wide-ranging exemptions from the scope of the Act including utility sectors and trade practices relating to licensing. Despite the reforms, the state agencies in the electricity and petroleum sub-sectors continue to dominate services provision thereby rendering the competition laws redundant. However, this situation is deemed to change if the proposal for subjecting all state corporations and local authorities to Article 5¹⁵ of the Competition Act, 2009 is effectively enforced.

3.6.2.2 Electricity sub-sector

3.6.2.2.1 Limited enforcement powers for competition-related regulations

Both ERC and the Competition Authority lack independence (both political and economic) to effectively enforce competition-related regulations in the electricity sub-sector. Besides, public utilities continue to play dominant roles in the generation, transmission and distribution of electric power under the existing reforms. Although these activities and operations are no

¹⁵Article 5 of the Competition Act, 2009 states that the Act shall apply to the Government, state corporations and local authorities in so far as they engage in trade.

longer exempt according to the Competition Act, 2009, it is unclear whether these agencies got approval for exemption as required under Section 28 of the Act. Besides, over-reliance on hydro generation and fuels grossly undermine anticipated incentives under the price-cap regulatory regime. Further, the electricity subsector is dominated by monopolies especially in the distribution of power where KPLC is the only distributing company despite the Act providing for other distributing companies. This has resulted in poor service delivery since the consumers are left with no option than to rely on KPLC for power. At the same time power costs are high due to inefficiencies resulting from the few players in generation and distribution of power. This has curtailed the business environment by increasing the cost of doing business resulting from low quality of power and high costs.

6.2.2.2 Uncoordinated enforcement of competition-related regulations

Both the Energy Act 2006 and the Competition Act, 2009 empower the ERC and Competition Authority to implement and promote competition within the electricity. While the latter has the overall responsibility for all sectors, the ERC mandate is specific to electricity and other energy-related aspects. However, there is no clear demarcation of responsibilities or modalities for coordination of their activities. Similarly, Section 9(m) stipulates that the Authority shall liaise with other regulatory bodies and other public bodies in all matters relating to competition and consumer welfare. But it does not clearly spell out binding mechanisms for relating with other regulatory bodies beyond the identification and establishment of procedures for management of areas of concurrent jurisdictions. This has resulted into a situation where the consumers do not know who to run to in case of competition related issue in the sector. It's also not clear whose responsibility it is to promote competition and this has generally seen limited effort towards these. Few players in the subsector imply that the business people are left with no options but to rely on the services of the few providers.

6.2.2.3 Inadequate technical and professional staffs

Both the Competition Authority and ERC do not have adequate technical staff to effectively enforce economic and competition related regulations in the power sector. The Authority relied on and trained Ministry of Finance staff and could not on its own independently conduct recruitment drives when it a Commission. On the other hand, although ERC is independent,

the staffing capacities are limited by its budgetary provisions and balancing between recurrent and development activities. There are challenges particularly relating capacities for setting and monitoring standards for factories, buildings and electrical appliances, collecting, collating and maintaining energy data, recruitment of energy auditors which are largely constrained. In addition, it faces the challenge of competing to attract and retain technical expertise with other industries that may be better placed to offer better terms. This has resulted into a weak enforcement and monitoring system of the existing regulations by both ERC and MPC affecting the quality of services. The quality of power and the high rate of outages are some of the key issues attributable to low enforcement and a weak monitoring system.

3.6.2.2.4 Climate change and security of supply issues

Despite efforts to widen the source of energy in Kenya and the region, it is unclear whether these might change over-reliance on hydro electric and petroleum energy sources as well as if climatic change issues can be dealt with effectively to ensure no major changes in hydro supply. The energy act 2006 mandates ERC to prepare indicative energy plans. ERC has so far developed two electricity plans, the least cost power development plan (LCPDP) 2010-2030 and 2011-2031. In both plans the role of hydro is reduced to a minimal with geothermal taking the lead at 26% of the generation mix by the year 2030. The challenge is to ensure the identified projects are implemented as planned and on schedule to ensure security of supply and over reliance in hydro.

3.6.2.2.5 Infrastructure development

Effective regulation requires appropriate infrastructure physical and telecommunication networks for both regulators and the regulated firms in order to facilitate information exchange and monitoring. While ERC may have good communication infrastructure, the quality of physical infrastructures to facilitate its monitoring activities especially in rural areas is wanting. The sub sector is also faced with an old distribution system that requires upgrading. Though plans are underway to upgrade the power systems the process of implementing the upgrade has been slow due to inefficiency's on the part of KPLC this has greatly affected power supply to businesses. Without an upgrade of the system there is very little the regulator can do to ensure good power supply.

3.6.2.2.6 Transmission network governance and pricing structures

The separation of transmission from distribution in Kenya is a welcome move and should facilitate balancing demand and supply of generation services. However, the clarity on the functions of the operator, what information it needs to perform its functions well, network operator ownership structure and how it should be regulated are major challenges. The other challenge is getting transmission pricing right in order to facilitate decentralization of competitive generation supply decisions and management of network. Currently the electricity tariffs are bundled. This makes it challenging for businesses that have potential to generate power in one station and wheel it to another of their station difficult since there is no wheeling tariff in place. There is also no clear structure or framework for consumers to purchase electricity directly from electricity generators. The current tariff structure can be seen to be affecting the business environment by not giving the business people an option of where to source their power from.

3.6.2.3 Petroleum Sub-Sector

3.6.2.3.1 Inadequate capacities for regulatory efficiency and effectiveness

Presently, the ERC does not have adequate technical capacity for accrediting and monitoring agents within the petroleum industry as well as collecting and maintaining data in the sub-sector. In addition, ERC has to rely on other statutory bodies for enforcement of health and environmental standards. Currently ERC can only withdraw the licence of dealers and levy a fine which is paid to KRA but it cannot for instance close a pump station found with adulterated fuel. This greatly affects the regulators efficiency.

3.6.2.3.2 External factors

The performance of the domestic petroleum industry heavily relies on global events and trends in international oil markets. These include the international oil prices, security-related issues and other economic performance indicators. The strong links with external factors with multinationals playing leading roles in exportation, distribution and supply makes it even more difficult to effectively regulate the sector. The cartel like behaviour of the multinational firms in the petroleum sector affects supply and retail prices. In the recent past, instability in the oil producing countries has greatly affected the international prices of oil increasing the pump

prices and consequently increasing the prices of all the commodities. Oil forms a key input in the production process of most commodities and an increase in the prices of oil increases the cost of production affecting the business environment.

3.6.2.3.3 Enforcement of standards and quality

Regulation of health and environmental standards in the petroleum sub-sector is shared among various statutory bodies including the Kenya Bureau of Standards, the Ministries of Health and the National Management Environmental Authority. The challenge is for these bodies to effectively monitor quality aspects yet ERC itself also does not have petroleum technical expertise to monitor industry players. Thus, adulterations, quantity measurements and related activities remain a challenge in the domestic industry.

3.6.2.3.4 Weaknesses in existing laws and regulations

On 2nd December 2010, the Minister for Energy released the Energy (Petroleum Pricing) Regulations, 2010 which were issued as Legal Notice Number 196 and published in Kenya Gazette Supplement No. 98 dated 3rd December 2010. The objective of the regulations was to establish maximum pump prices for Super Petrol, Regular Petrol, Kerosene and Automotive Diesel and to put in place the frequency in which such maximum prices will be set. The regulations established a formula for calculating the maximum price caps after taking into account costs which are prudently incurred in the supply chain of petroleum products and incorporating marketing margins. The regulations were issued following public outcry on the increasing of fuel. However the timing could be seen to have been bad, since the increase in prices was occasioned by rising international prices and as such the regulation could not meet the public expectations of reduced prices. The advantage is that the prices of the products are now cost reflective and any reduction in international prices will be reflected in the pump prices.

6.2.3.5. Infrastructure Development

The country has only one refinery which has been operates with old machines that have not been upgraded for the last 40 years. This has greatly reduced the refineries efficiency resulting into high cost of fuel which is borne by the businesses. The pipeline is also not able to handle a lot of the cargos which land at the port this results into demurrage costs arising from the ships delay in discharging at the port, the demurrage costs are passed

on to the consumer of the petroleum products increasing the cost of doing business.

3.7.0 CONCLUSION AND POLICY RECOMMENDATIONS

3.7.1 Conclusions

Regulatory reforms in Kenya's energy sector involved vertical separation and gradual deregulation of competitive segments of the electricity and petroleum sub-sectors. The expectations was that the regulatory mechanisms would provide more powerful incentives for regulated firms to reduce costs, improve service quality, stimulate the introduction of new products and services and stimulate efficient investment in pricing of access to regulated infrastructure services. Thus, those activities that are assumed to have natural monopoly characteristics continue to be subject to price, network access, and entry regulations.

So far, state-owned public utilities continue to play a dominant role in the generation, transmission and distribution of electric power despite increased participation of private sector following the regulatory reforms in Kenya. It is therefore difficult to attribute the sector performance to the resulting privatization and regulatory measures. Secondly, despite the progress in reforms, general structure of energy sources has remained unchanged. For instance, the hydro power still accounts for about 54.6% while thermal and geothermal accounts for 45.4% of power. The vulnerability of the two sources to climatic/environmental and external shocks respectively renders them unsustainable in the long run. Besides, the incentive structures have been unable to attract investments towards alternative energy sources like wind and nuclear. By and large, there are huge potentials for exploiting wind power generation by both KenGen and the private power producers.

On the other hand, the petroleum market in Kenya is largely oligopolistic despite the incorporation of numerous small independent oil companies. Prior to liberalization, multinational firms accounted for over 90% of all petroleum products imported into the country and virtually all retail businesses. By the year 2005, activities by independent petroleum dealers were still limited to the extent that four of the major petroleum market players which controlled about 85.3% of the market.

The study has identified a number of shortcomings that hinder attainment of the benefits of energy sector reforms. The findings support the conclusion that there is need to strengthen the regulatory system in the energy sector for increasing investments and improving competition and service delivery to consumers. Strengthening the competition and regulatory-based framework will support the intentions of the reforms and ensure that the domestic market for energy contributes sustainability, competitiveness and security of supply of energy products to meet the country's increasing demand. In addition, priority should be given to monitoring & evaluation as well as accurate collection of data on the activities and capability of all services providers in regulated sectors as a basis for designing regulatory and liberalization policies.

Finally, there are a number of directions in which this paper could be extended. The present analysis carried are limited to the energy sector i.e. electricity and petroleum sub-sectors. However, this could be extended to all sectors regulated by public utilities in the bid to improve overall business environment and enhance efficiency in services provision and pricing.

3.7.2 Recommendations

In order to address the weaknesses identified and to significantly improve the scope of competition and the business environment, it is essential to apply both competition and regulatory-based remedies. In that regard, the following recommendations:-

1. Adoption of a regulatory model combining technical and economic regulations¹⁶.

Such a model gives sector regulators competition law enforcement functions to be performed in coordination with the competition authority. Such a model would allow for maximization of competition enforcement action and conclusion of binding agreements between the Competition Authority and the Energy Regulatory Commission as well as other sector-specific regulators for co-ordination and harmonization of competition matters. The ongoing revision of the Energy Act to accommodate the needs of the new constitution should provide ERC with enforcement powers

¹⁶This is the type III of the UNCTAD Model and adopted by South Africa. Currently, Kenya has a type II model.

while at the same time providing a framework for engaging with MPC in enforcing competition matters.

2. Effective coordination of implementation of competition-related regulations

Effective implementation of competition-related regulations in the electricity and petroleum sub-sectors requires close coordination of enforcement of infringements related to pricing, fair trade practices and consumer protection by various agencies. Thus, there should be clarity about the respective roles of the Ministries of Finance, Energy and Trade and other Government Agencies and regulatory bodies on the coordination, harmonization and the exercise of jurisdiction over competition matters within the energy sector or industry and to ensure the consistent application of the principles of competition and consumer protection. This can be done through clearly negotiated agreements between the Competition Authority and concerned agencies.

3. Ensuring administrative and financial regulatory independence

Under ideal situations, regulatory agencies should be free from any forms of influence either within government cycles or the private sector in exercising its authority. These includes among others, interferences in appointments especially in management positions, dispute settlement and/or major regulatory decisions. Thus, contrary to section 10 of the Competition Act 2009, in addition to the representatives from the Ministries of Finance, Trade and the Attorney General's Chambers the other Board members of the Authority should be appointed by Parliament and not the Minister. It is also necessary that the regulatory agency should have authority to make final decisions within its statutory domain without having to obtain approval from any other agency of government. Regulatory independence facilitates prudent decision-making, enhances integrity and bestows confidence on regulatory management and decisions by regulated firms, potential investors and consumers at large. Autonomy of regulatory institutions led to sustainability and success of regulatory models Latin America electricity reform movements as well those in the Asian utility industries. The latter's success was evident in their relative ability to respond effectively to the Asian financial crisis. In addition, regulatory authorities should diversify their revenue base and minimize or cease reliance on direct budgetary support from the Government as has

been the case with the Monopolies and Price Commission. There is also need to relook at the independence of ERC especially with regard to the powers given to the Minister. Although ERC is established as an independent regulator under the Act, the minister can still interfere in its operation through the appointment of the board members, the PS sitting as a board members at the section which 111 of Act which gives the Minister powers over almost everything in the sector. There is need to be reviewed in the ongoing revision of the Act.

4. Widening the scope for competitive power generation market

Currently, power generation in Kenya is dominated by KenGen, which is a public utility operator, with IPPS at the margin, often generating emergency supplies. There is need to deepen horizontal divestiture of generating facilities as a way of creating additional independent competitive suppliers in order stimulate competitive price incentives under the existing regulatory framework. Enhanced competition will also address the 'perception' that IPPs are basically high cost producers of electric power. Besides, there is need to provide greater incentives towards investments alternative energy sources like wind, nuclear etc in order diversify energy sources and avoid price build-ups due to fluctuations in primary fuels.

5. Effective governance of transmission network and pricing structures

Following the establishment of a publicly-owned transmission company, appropriate governance and pricing structures should be established, particularly if the incumbent intends to retain ownership of existing transmission infrastructure. This is particularly due to the complex nature involved in controlling and coordinating generation schedules, balancing demand and supply generation services flowing over the network as well as coordinating with neighbouring control areas. In addition, it is important to work out a suitable transmission pricing to facilitate efficient decentralization of competitive generation supply decisions over time. It is important that the tariffs are unbundled so that there is a transmission tariff, distribution tariff and generation tariff.

6. Strengthening monitoring and data reporting

Accurate information about the activities and capabilities of both incumbent suppliers and new operators is of great value and will facilitate the design of regulatory and liberalization policies. It will also enable identifying the services on which the incumbent can be afforded substantial flexibility in

terms of pricing. Information about installed capacities of competitors can also be of great value in assessing both the current and likely future intensity of market competition. Thus, legal requirements should be provided for in the respective competition and regulatory laws to compel services providers to report identified regulatory indicators on regular basis that can assist regulators monitor and evaluate market conditions and improve regulatory practices.

7. Infrastructure development and efficiency in provision of petroleum products.

Efficient provision of petroleum products heavily relies on the status physical infrastructures for transportation, refining and storage. In this regard, there is need to do the following:-

Upgrade the oil receiving jetties at the KPA to avoid delays and cost overruns.

Upgrade the facilities for oil refinery. The refinery is known to use old technology and is therefore not able to refine residue of its processing products. This cost is passed on to its users.

Invest in more storage capacity at the oil storage facility.

Upgrade the Kenya Pipeline. The oil companies point out that the pipeline does not avail adequate products in all locations.

8. Increasing awareness of competition-related regulations among stakeholders

There is need to enhance awareness about the competition-related issues and reporting and enforcement mechanisms amongst the general public. A wider knowledge amongst the public would make it easier for regulators to detect and take appropriate actions against anti-competitive trade practices thereby protect consumers and enhance efficiency in markets. Specific awareness programmes should be developed in tandem with the provisions of the proposed new competition laws. In this regard, concerted efforts should be directed towards enhancing transparency in access to market information by publishing such information on a rolling basis and in a timely manner. A stronger community oversight role will require enhancing capacity of consumer and civil society organizations while at the same time reinforcing coordination between them and the regulators.

9. Regulatory Staff management and service delivery

Effective regulation requires adequate technical staff in the regulatory bodies. This is due to the substantial needs in terms of legal and other staff needs in negotiating, writing, monitoring and enforcing the contracts. Recruitment and retention of specialised staff is necessary borrowing from the experiences of the Asian countries¹⁷. From the survey, it will be necessary to broaden the income bases of the regulatory authorities so as to recruit and retain appropriate levels of technical capacities.

10. Use of multi-national regional regulatory agency

This can be done by creation of teams of utility regulators covering several countries e.g. partner states of the EAC. This requires close cooperation and coordination and trust amongst regulatory authorities in neighbouring countries. Multi-national regulatory collaboration makes it easier for development, sharing of information and pooling of resources between regulators in neighbouring countries. The EU has taken this path where regulators meet and exchange views and information and where appropriate to help adopt common approaches. Southern Africa is also adopting a similar path. In addition and in parallel, this also facilitates informal exchanges of information and pooling of resources between national regulators. This seems to be developing very interesting and potentially productive way in Southern Africa. It is also the route being followed in the European Union. A particular advantage is that informal pooling of resources can be market-driven, both responding to and helping encourage trade, integration of markets and networks and increasing the scope for competition.

¹⁷So far, ERC and Competition Authority make use of consultants or contract out much of the regulatory work as happens in the UK to address the effects of staff shortages. Consultants can do one-off pieces of work for instance conduct specific studies in the course of regulatory review thereby complementing existing staff.

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Chapter Four

Policy and Strategic Options for Enhancing Performance of Youth-Run-Enterprises in Kenya

Patrick Muthama Kilonzo

4.1.0 INTRODUCTION AND OVERVIEW

Youth-Run-Enterprises (YREs) are defined as businesses owned and run by people aged below 35 years (Government of Kenya, 2005). Chigunta (2002) describes several benefits of YREs. First, YREs create employment particularly among alienated and marginalized youth. In this way, YREs help address some of the socio-psychological problems and delinquency that arises from joblessness. The YREs also promote resilience as they encourage young people to find new solutions, ideas and ways of doing things through experience-based learning. It is increasingly accepted that youth entrepreneurs present alternatives to the organization of work, the transfer of technology, and a new perspective to the market. They are also responsive to new economic opportunities and trends. Further, YREs provide valuable goods and services to society, especially the local community. This results in a revitalization of the local community. Therefore, enhancing the performance of YREs is of paramount importance.

Generally, firm performance refers to outcomes that come from undertaking entrepreneurial activities. Improving the performance of YREs is a complex and dynamic process covering numerous activities and decisions. These events can be described as person-environment interactions, which include among others the refinement of the business

idea. Thus the improvement of the performance of YREs requires the discovery and exploitation of opportunities. Entrepreneurial opportunities are those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production (Shane and Venkataraman, 2000). Discovery of opportunities occurs when an individual makes the conjecture that a set of resources is not put to its best use. In other words, the resources are priced too low, given a belief about the price at which the output from their combination could be sold in another location, at another time, or in another form. If the conjecture is acted upon, then the exploitation of an opportunity occurs. If the conjecture that is acted upon is correct, the individual earns entrepreneurial profit but if it proves to be incorrect, the individual incurs an entrepreneurial loss. In essence, this is firm performance. Understanding the key determinants of firm performance remains a daunting task for researchers in entrepreneurship. Specifically, Chigunta (2002) has called for systematic studies that investigate the determinants of performance of YREs.

A useful way to classify the main factors that can influence the performance of YREs is to adopt the configuration approach (Miller 1987; 1990; Korunka *et al.* 2003). When this approach is applied, the personality of youth entrepreneurs forms one configuration area, in addition to personal resources, environment, and organizing activities. While the importance of these configurations has been examined among large enterprises (Miller 1990) and small enterprises (Korunka *et al.*, 2003), its usefulness in understanding the performance of YREs is not clear. Bird (1989) advises that, due to differences in personality, ability and personal energy levels among old and young entrepreneurs, there is need to assess both groups differently. Further, the configuration approach has been devised within developed economies and likewise is its empirical justification. Its relevance and applicability in developing economies and especially among YREs is not yet well established and justified. Validation of the configuration approach among YREs particularly those in developing countries is needed since very little is known about them. Chigunta (2002) has decried on the paucity of data on the key determinants of the performance of YREs particularly in Sub Sahara Africa. Lack of data on the critical drivers of YREs performance limits the design of policies and strategies that can improve the performance of YREs. Consequently, the objective of this

chapter is to analyze the determinants of performance of YREs in Kenya using the configuration approach.

This chapter is organized as follows. The first section outlines the main tenets of the configuration approach. Next, the hypotheses that guide this study are developed. This is followed by a description of the methods applied in the present study before a presentation and discussion of the study results is given. A note on the implications and limitations of the study is then offered. This chapter ends by highlighting possible directions for future research in this area.

4.1.1 The Configuration Approach

This section describes the configuration approach (Miller, 1987; 1990; Korunka *et al.*, 2003). Configurations are inherently multidimensional entities in which key attributes are tightly interrelated and mutually reinforcing (Korunka *et al.*, 2003). This approach emphasizes patterns and interrelations within a broader set of configuration areas (Miller, 1987; 1990). Although originally developed for large organizations, the configuration approach has been adapted for smaller and entrepreneurial organizations (Korunka *et al.*, 2003). Application of this approach reveals four configuration areas namely; the personality of entrepreneurs, personal resources, environment, and organizing activities as important in entrepreneurship.

Personality can be defined as the consistent and persistent profile of beliefs, feelings and actions which make one person distinct from another (Wickham 2001). At least five important personality traits are commonly considered in entrepreneurship literature namely high need for achievement, internal locus of control, risk-taking propensity, self efficacy and intention (Shane *et al.*, 2003; Korunka *et al.*, 2003; Bird, 1989; Segal *et al.*, 2005). This stream of research was initially heavily criticized partly due to its mixed findings, lack of strong theoretical base and problems related to the measurement of variables. However there has been a re-emergence of research on personality in entrepreneurship which consists of refined theory development, the integration of research models, using broad measures of personality and analyzing the importance of previously less-observed dimensions such as pro-activity, action control, mental health and personal initiative (Shane *et al.*, 2003; Korunka *et al.* 2003; Segal *et al.*, 2005). The unit of analysis in these newer approaches is the entrepreneurial personality, including action, choice, and process dimensions (Shaver and Scott

1991; Korunka *et al.*, 2003). Consequently, there is emerging evidence that personality based factors are important predictors of entrepreneurial outcomes (Arenius and Minniti, 2005; Bosma *et al.*, 2008).

Personal resources include the human capital of entrepreneurs. Literature distinguishes between general and specific human capital (Becker, 1964). General human capital includes family background characteristics, education, age and gender. The entrepreneur's financial position (income, financial independence, and bank backing) is also seen as part of general human capital. On the other hand, specific human capital is defined as skills and knowledge particularly applicable to the development of firms. It is more or less exclusively applicable to given activities such as improving the performance of YREs. Knowledge, experience, technical and managerial competencies and industry specific know-how are important dimensions of specific human capital. In general, the human capital theory contends that individuals with more or higher quality human capital will achieve more desirable outcomes.

The environment of the entrepreneurial process includes both microsocial and macrosocial aspects (Bird, 1989; Korunka *et al.*, 2003). Family restrictions and/or support and social networks based on earlier occupational experiences are important microsocial and macrosocial aspects respectively, that are widely discussed in the literature (Bird 1989). Another important environmental influence is the existence (or nonexistence) of role models, both in the microsocial (parents as entrepreneurs) and the macrosocial contexts (Bird, 1989; Bosma *et al.*, 2008). Availability of entrepreneurial opportunities is also considered an important element of the environment (Venkataraman, 1997; Shane and Venkataraman, 2003; Bosma *et al.*, 2008).

The organizing activities in YREs include cognitive aspects such as planning, decision making or failure considerations and actions such as resource acquisition. Registration with relevant government agencies is a suitable measure of how firms are organized. Registration helps to distinguish formal and informal enterprises (Bigsten *et al.*, 1999). Registering a firm as a limited company, for instance, ensures that a firm has formal and centralized decision making structures. Registration also has positive impacts on access to external resources such as bank loans and government support.

The mutual effects of these four sets of variables form and modify the configuration of enterprises over time. The performance of a firm can thus be reconstructed as a chain of configurations. In principle, configurations are unique, but similarities may allow the creation of typologies or taxonomies of configurations (Korunka *et al.*, 2003). Experience with certain types of configurations can help to identify the strategic position of a new venture and to evaluate its prospects for further development. It can also help to find interventions to foster successful venture development. The configuration approach has been applied to large enterprises (Miller 1990) and small enterprises (Korunka *et al.*, 2003); however, literature on its use in YREs is not readily available. This is a critical omission in the understanding of the determinants of firm performance since there are marked differences in personality, ability and personal energy levels among old and young entrepreneurs (Bird, 1989).

The important lesson of the configuration approach for the entrepreneurial process is that it allows the identification of the configurations associated with successful and unsuccessful ventures. Thus, it allows for a comprehensive and integrated analysis that provides a basis for effective interventions.

4.1.2 Development of Hypotheses

Performance refers to outcomes that come from undertaking entrepreneurial activities. It has been noted that performance is a multidimensional concept (Ventakaraman, 1997). Therefore, single performance indicators are likely to produce biased results. Performance is measured in several ways, but a useful dividing line can be drawn between objective performance measures and perceptual ones. Objective measures consist mainly of sales growth or employment growth. Perceptual measures include non-financial goals and global success ratings made by business managers. There is evidence that perceptual performance measures are more highly related to business owner's personality characteristics than organizational outcomes (Rauch *et al.*, 2006). Therefore, independent and dependent variables should be at the same level of generality to produce high relationships.

Shane *et al.* (2003) argue that variance across people in motivations influence who pursues entrepreneurial opportunities, who assembles resources, and how people undertake the entrepreneurial process.

Important personality variables that are commonly examined in literature include need for achievement, internal locus of control, risk-taking propensity, and self-efficacy (Korunka *et al.*, 2003; Shane *et al.*, 2003; Bird, 1989). It is important to clarify that these personality variables have not been rigorously validated among YREs.

4.1.2.1 Personality Variables

The concept of need for achievement (*n Ach*) has received much literal attention. McClelland (1961) argued that individuals who are high in *n Ach* are more likely than those who are low in *n Ach* to engage in activities or tasks that have a high degree of individual responsibility for outcomes, require individual skill and effort, have a moderate degree of risk, and include clear feedback on performance. Further, McClelland argued that entrepreneurial roles are characterized as having a greater degree of this task attributes than other careers; thus, it is likely that people high in *n Ach* will be more likely to pursue entrepreneurial jobs than other types of roles. However, the empirical support for this argument is mixed. Some studies show that the achievement motivation scores of business owners predict organizational performance (Bird 1989). A meta-analysis study of the relationship between *n Ach* and performance (Collins *et al.*, 2000) concluded that *n Ach* is an effective tool for differentiating between firm founders and the general population but less so for differentiating between firm founders and managers. Further, this study concluded that *n Ach* might be particularly effective at differentiating between successful and unsuccessful groups of firm founders. Therefore entrepreneurs who score highly on need for achievement are expected to have better performance.

Locus of control refers to the extent to which individuals believe that their actions or personal characteristics affect outcomes. This trait is also called self-confidence, perception of venture feasibility, veridical perception, or personal efficacy. Individuals who have an external locus of control believe that the outcome of an event is out of their control, whereas individuals with an internal locus of control believe that their personal actions directly affect the outcome of an event. A review of previous studies on locus of control by Shane *et al.* (2003) indicates that successful entrepreneurs hold more internal control beliefs than those whose business have ended. However, Bird (1989) reports findings from studies that

demonstrate that entrepreneurs do not hold more or stronger beliefs about their ability to control events than managers. Therefore it is not clear whether entrepreneurs with internal locus of control are more likely to report better performance of their enterprises.

McClelland (1961) claimed that individuals with high achievement needs would have moderate propensities to take risk. This claim by McClelland is especially interesting for entrepreneurship research because the entrepreneurial process involves acting in the face of uncertainty. Moreover, several theories of entrepreneurship view the entrepreneur as bearing residual uncertainty (Venkataraman, 1997). This arises from the observation that entrepreneurs often must accept uncertainty with respect to financial well-being, psychic well-being, career security, and family relations. Empirical evidence demonstrates that moderate risk taking predicts performance (Rauch *et al.*, 2006). Thus, moderate risk taking is associated with better performance of YREs.

Self-efficacy is the belief in one's ability to muster and implement the necessary personal resources, skills, and competencies to attain a certain level of achievement on a given task (Segal *et al.*, 2005). In other words, self-efficacy can be seen as task-specific self-confidence. Shane and Ventakaraman (2003) summarize literature that demonstrates that self-efficacy is a robust predictor of performance. Therefore self-efficacy is expected to be associated with better performance of YREs.

Broadly, intention refers to the conscious state of mind that directs attention toward a specific object (goal) or pathway to achieve it (means). Entrepreneurial intention may aim towards either the creation of new venture or new values in existing ventures. Literature identifies two important dimensions of intention (Bird, 1989). The first one, namely location considers whose intentions are operative, those of the entrepreneur (internal locus of control) and/or those of other stakeholders and markets (external locus of control). The second dimension focuses on the relative rationality versus intuition of the entrepreneur. This dimension varies along a continuum from a rational, analytic, and cause and effect orientation found in formal business plans, opportunity analysis, resource acquisition, goal setting, and most observable goal-directed behaviour to intuitive, holistic, and contextual orientation found in networking, focus, persistence, and vision of the entrepreneurial act. Therefore, intention is either planned or caused by events such as displacements (Segal *et al.*, 2005). Overall,

intentions are considered to be crucial predictors of behaviour and business performance (Orser *et al.* 1998; Shane *et al.*, 2003). Therefore intention is expected to be positively related to the performance of YREs.

Hypothesis 1a: Need for achievement is positively related to the performance of YREs.

Hypothesis 1b: Internal locus of control is positively related to the performance of YREs.

Hypothesis 1c: Risk taking has a curvilinear relationship with the performance of YREs.

Hypothesis 1d: Self efficacy is positively related to the performance of YREs.

Hypothesis 1e: Intention is positively related to the performance of YREs.

4.1.2.2 Personal Resources

The entrepreneur's track record of thorough and proven operating knowledge of business is considered important (Delmar and Shane, 2007; Bird, 1989; Shane, 2000). Experience encompasses work experience and other practical learning that takes place on the job, as well as non-formal education such as training. Both depth of work experience and broad experience across markets are theorized to increase human capital (Becker, 1964).

Specialized knowledge of the industry particularly on technology and market is considered critical for venture performance (Shane, 2000; Shane and Delmar, 2006). Previous employment experience is considered useful in enhancing the performance of new firms (Shane, 2000). Knowledge gained from career experience provides the entrepreneur with certain key competencies and inside information needed to recognize and exploit opportunities. Through work experience, people develop information and skills that facilitate the formulation of entrepreneurial strategy, the acquisition of resources, and the process of organizing. Bird (1989) observes that those lacking industrial experience such as high school and college graduates compensate for the unproven and possibly undeveloped skills with technical training and extraordinary zeal. Thus, industry experience is expected to be associated with better performance.

Apart from the depth of experience, the breadth of experience is also considered important for the performance of enterprises (Orser *et al.*, 1998; Bird 1989). Breadth of experience may be defined as the sheer number and variety of jobs held. Career dissatisfaction is usually seen as an indicator of breadth of experience. In another perspective, the more diverse a person's experiences, the greater number of puzzle pieces they can draw upon. People often learn about entrepreneurial opportunities through participation in markets (Shane, 2000). Further, variation in market experience provides access to different types of information that may be useful in the discovery process. Therefore, participation in more markets should increase the likelihood that a person will gain access to the information that is needed for opportunity recognition, evaluation and exploitation. The breadth of experience may therefore be a key element of human capital among entrepreneurs. Having broad experience is thus a prerequisite for good performance.

Previous experience with entrepreneurship is considered an important factor in assessing firm performance (Delmar and Shane, 2006; Shane, 2000). Entrepreneurial experience can be obtained in two ways (Bird, 1989). In the first method, entrepreneurial experience may be obtained vicariously through working for or with entrepreneurs, growing up with entrepreneurial parents or watching a friend develop a business. In the second method this experience is gained hands-on from having started previous ventures. Prior entrepreneurial experience helps to develop key competencies, provide considerable motivation for venturing again, open new opportunities and link the entrepreneur to important resource providers. Therefore youth entrepreneurs with previous start-up experience are expected to report better performance of their enterprises.

Bird (1989) argues that education helps entrepreneurs to succeed. Education increases a person's stock of information and skills, including those needed to recognize and pursue an entrepreneurial opportunity successfully. Others argue that education is not useful for entrepreneurship (Bosma *et al.*, 2008). This is because it impedes entrepreneurship by reducing curiosity, vision and the willingness to take risks. Formal education is thought to foster conformity and low tolerance for ambiguity and thus is an impediment to entrepreneurship. However the technical requirements of certain types of enterprises for instance those in biotechnology and healthcare may require higher levels of education. A

possible explanation for these mixed results is that broad measures have insufficient sensitivity to capture the impact that human capital may have on differing entrepreneurial outcomes. Moreover, due to lack of other sources of information in developing countries such as Kenya, education remains the only useful source of new knowledge. Education has been found to help separate the more successful entrepreneurs from those who are less successful (Bird, 1989). Therefore, education may enhance the performance of YREs.

Empirical research suggests access to finance enhance the performance of firms in terms of income and employment generation (Odiege, 1996; Shane and Venkataraman, 2003; Bosma *et al.*, 2008). It has also been established that individuals with large stocks of financial capital are most likely to start and grow new enterprises. This set of research findings is usually connected to the theory of liquidity constraints. The general implication of this theory is that people with financial capital are able to acquire resources that better help them exploit entrepreneurial opportunities. Therefore, access to financial capital may be an important predictor of the performance of YREs.

The chronological age of an entrepreneur has been thought to relate to both education and work experience. The chronological age of starting an entrepreneurial career contributes to differences in long term success. Research also shows that younger entrepreneurs tend to be more successful than older ones (Bosma *et al.*, 2008). This is partly attributed to the personal energy levels (motivation) of the youth (Bird, 1989). Chigunta (2002) demonstrates that different age groups of the youth start different types of enterprises with different performance levels. Thus, the age of youth entrepreneurs is expected to have a curvilinear relationship with performance.

Available literature suggests that female owned enterprise tend to perform less favorably than male owned businesses. For example, female owners of small businesses in Kenya report 57 percent lower revenues than their male counterparts (International Centre for Economic Growth *et al.*, 1999). Research suggests that male and female entrepreneurs are more similar in many attributes such as abilities, backgrounds and motivations. However, gender differences are noted in leadership styles, sectoral distribution and accessing resources. Female entrepreneurs are more concentrated in retail and service industries and they work for fewer hours.

Moreover, female entrepreneurs are concentrated in small enterprises in terms of sales and employees. Female entrepreneurs also face added barriers such as lack of tangible collateral that is a prerequisite for obtaining external finance. There is some suggestion that women entrepreneurs tend to employ transformational leadership that is, they focus more on personal relationships with the employees. Such a leadership style has important and problematic business repercussions. Therefore, women owned YREs are expected to report lower performance levels than male owned YREs.

There is some expectation that information gained from training is important in enhancing firm performance (Korunka *et al.*, 2003; Bird, 1989). Thus, alternative classrooms such as attending seminars, trainings, workshops, symposiums and conferences are expected to improve the performance of enterprises. Such alternative classrooms help to develop key competencies, motivations and the ability to acquire important knowledge-based resources. Therefore, youth entrepreneurs who attend trainings are expected to report better performance of their enterprises.

Hypothesis 2a: Youth entrepreneurs' experience depth is positively related to performance.

Hypothesis 2b: Youth entrepreneurs' experience breadth is positively related to performance.

Hypothesis 2c: Entrepreneurial experience is positively related to the performance of YREs.

Hypothesis 2d: Youth entrepreneurs' formal education is positively related to performance.

Hypothesis 2e: Availability of finance is positively related to performance of YREs.

Hypothesis 2f: The age of youth entrepreneurs has a curvilinear relationship with the performance of YREs.

Hypothesis 2g: Male owned enterprises outperform female owned enterprises.

Hypothesis 2h: Attending training enhances the performance of YREs.

4.1.2.3 Environment

Social capital is commonly described as the goodwill available to individuals or groups (Adler and Kwon, 2002) that includes feelings of gratitude, reciprocity, respect, and friendship. It is an asset that resides in an individual's relationships and consists of the goodwill flowing from friends, colleagues, and other general contacts. Social capital assists in the explanation of individuals' success as they can utilize their contacts and connections and the resources that they bring for personal gain. Specifically, Shane (2003) argues that social capital is necessary for the recognition, evaluation and exploitation of opportunities. There are two forms of social capital namely bonding and bridging social capital (Adler and Kwon, 2002). The bonding social capital perspective explores the impact of a collective's internal ties and the substance of the network relationships within that. Alternatively, bridging social capital sometimes referred to as the private-goods model of social capital, focuses on individuals and their network relationships. Compared with the bonding social capital approach, the bridging social capital's focus is on an individual's external social ties and how the social capital, as a resource within this network, is used for the individual's private benefit. Bridging social capital has been shown to be useful in enhancing the performance of small businesses. Youth entrepreneurs who are members of business associations are expected to have better performing enterprises.

There is a general observation that those with parents in business are significantly more likely to become entrepreneurs (Bosma *et al.*, 2008). Entrepreneurial parents influence entrepreneurial outcomes of their children either through being role models or by linking them to important resource providers. This influence spans throughout the entrepreneurial career. As role models, entrepreneurial parents teach their children values and attitudes towards independence, tolerance for risk, and achievement (Bird 1989). Further, they are a source of motivation and drive for youth entrepreneurs. On the other hand, linkages with resource providers are important since necessary resources are usually not difficult to access from familiar sources. Consequently, youth entrepreneurs with entrepreneurial parents are expected to perform better in business.

Opportunities are central to entrepreneurship (Venkataraman, 1997). Opportunities refer to situations in which new goods, services, raw

materials, and organizing methods can be introduced and sold at greater than their cost of production (Shane and Venkataraman, 2000). Thus, opportunities are objective phenomena that occur in the environment and they are not known to all parties at all times. Literature suggests that individuals need to perceive opportunities for entrepreneurship to occur (Shane, 2003). Recognizing, evaluating and exploiting opportunities separates entrepreneurs from other market actors. Research shows that individuals who believe that entrepreneurial opportunities exist in their environment are more likely to pursue a successful entrepreneurial career (Bosma *et al.*, 2008). Consequently, perception of opportunities is expected to lead to better performance of YREs.

Hypothesis 3a: Membership to a business association is positively related to the performance of YREs.

Hypothesis 3b: Having a key parent in business is positively related to the performance of YREs.

Hypothesis 3c: Perception of entrepreneurial opportunities is expected to lead to better performance of YREs

Hypothesis 4: Registration of YREs is positively related to the performance.

4.1.2.4 Organizing Activities

There is growing evidence that the organization of firms leads to improved performance. Birney (1991) argues that having valuable, rare, inimitable resources and the organization of resources influence the performance of firms positively. Wiklund and Shepherd (2003) demonstrate that the way enterprises are organized is an important predictor of performance. Bigsten *et al.* (1999) demonstrates that there are performance differences between formal and informal enterprises in Kenya. Registered enterprises perform better since they are not harassed by local authorities. Moreover, they have access to external resources such as loans and government support. Thus, registered YREs are expected to outperform unregistered YREs.

4.2.0 RESEARCH DESIGN

This is a survey that aims at analyzing the critical factors that explain performance of YREs in Kenya. Surveys are considered useful in examining

the relationships between variables and in the derivation of policy options (Saunders *et al.*, 2003). This study was conducted in Machakos District in Kenya. This area was chosen primarily due to its high density of YREs in the country.

The target population of this study included all the YREs in the study site. A list of the YREs in the study site was prepared using cluster sampling procedures. In Machakos town estates were taken as the sampling clusters. In these estates all the housing blocks were taken as the sampling units. However in the rural areas of Machakos, landholding schemes were taken as the sampling clusters. Therefore smallholder farms were taken as the sampling units. From these sampling units, a list of youth who own businesses was compiled.

From the constructed sampling frame, simple random sampling procedures were used to select the study sample. The minimum sample size for this study was calculated following the formula offered in Saunders *et al.*,(2003) to be 384 YREs. However, to allow for non-response this study surveyed 465 YREs.

4.2.1 Measurement of Variables

The dependent variable for this study is performance. A review of literature identified six important performance dimensions namely: sales level, sales growth rate, cash flow, gross profit margin, return on investment and ability to fund business growth from profits. Respondents were first asked to rate the degree of importance they attach to these six dimensions of performance. A five point scale ranging from least important to very important was used. The respondents were then asked to indicate the extent to which they were satisfied with the performance of their business in the last one year on each of the above mentioned performance dimensions. A five point scale ranging from least satisfied to very satisfied was used. Performance was then measured as the product of, first, the importance of these dimensions of performance and second, the degree of satisfaction on these six different dimensions of performance. A performance index was calculated as the sum of these products.

Two sets of independent variables were measured. The first set included variables that measured the human capital of youth entrepreneurs namely: experience, education, age and gender. The second set of independent variables measured the perceptions of youth entrepreneurs which included

n Ach, risk taking, locus of control and self-efficacy. Two types of experience were considered: entrepreneurial and industry experience. Entrepreneurial experience was measured as the number of businesses previously started by the respondents while industry experience was measured as the number of years in the present industry. Vicarious entrepreneurial experience was measured by asking the respondents to state whether their parents were in business or not.

Two measures of education were used. The first measured the highest level of education attained while the second measured the number of trainings (workshops, seminars, conferences) attended by the youth in last three years. Network was measured as a binary variable with membership into a business association labeled one, otherwise zero. Age was measured as the number of years since birth. Gender was measured as a binary variable with males' assigned one and females two.

Two questions were used to assess *n Ach*. In the first, respondents were asked whether fear of failure would prevent them from improving the performance of their business. In the second the respondents were required to state the extent of agreement with the statement 'I have greater value for performance feedback'. These two questions were constructed following the suggestions offered in Bird (1989) on the sub dimensions of need for achievement. Factor analysis of *n Ach* isolated one factor which explained 61% of the variance and had a reliability coefficient of ($\alpha = 52.2\%$). Since the reliability coefficient of the aggregated measure of *n Ach* is low, the underlying sub dimensions of this concept were utilized for further analysis in this study.

One likert type question was used to assess risk taking. This question required the respondents to state their agreement with the statement, "I have a strong preference for low risk projects (with normal and certain rates of return)." Locus of control was asked by one question that required the respondents to indicate the extent to which they believed that their own actions can exercise control over the environment. This item was measured on a five point likert scale ranging from strongly agree to strongly disagree. Self efficacy was measured by one likert type question that required the respondents to state whether they believed to have the knowledge, skill and experience required to improve the performance of their enterprise.

Intention was measured using a single question. This question required the respondents to state their agreement with the statement: "I am

interested in improving the performance of my business.” This question was assessed on five point likert scale ranging from strongly agree to strongly disagree. Perception of opportunity was measured by one question which asked the respondents to state their agreement with the statement: “there are good opportunities to exploit in the area where I live.” This question was assessed on five point likert scale ranging from strongly agree to strongly disagree.

The organization of the YREs was assessed by asking the respondents to indicate whether their enterprises were formally registered by the government. A subsequent filter question asked the legal form of the YREs. Respondents who said that their enterprises were registered and were limited liability companies were assigned a value of one and considered duly registered.

4.2.2 Data Collection

A pre-tested questionnaire was used to collect data from the sampled YREs. This research tool was tested for both reliability and validity using a three step process. First variables for this study were extracted from previous literature. Experts in entrepreneurship were also used to help in the selection of variables for this study. Next correlations of the key variables were tested to help rule out any multicollinearity. This research tool was further pre-tested on 40 YREs. Responses from this exercise were only used to improve the quality and the process of administration of the questionnaire.

Three research assistants and the researcher administered the questionnaire. Data for this study was collected using interviews with the respondents at the study site. The research assistants were trained on the topic under study and on the handling of the research tool. In addition, the researcher closely supervised the research assistants during data collection.

4.2.3 Data Analysis

Several methods for data analysis were adopted for this study. Quantitative data was summarized and presented using percentages, means, standard deviation (SD), and correlation coefficients. The likert type questions were reduced to meaningful factors using factor analysis. To examine which factors influence the performance of youth run enterprises a multiple

regression model was used. All the analyses of data were done using the Statistical Package for Social Sciences (SPSS) Version 13.0.

4.3.0 RESULTS

4.3.1 Sample Characteristics

The mean age of the sampled enterprises was 3.35 (SD = 3.60). Ninety four percent of the samples YREs operated as sole traders, 4 percent were partnerships and 2 percent were limited companies. Eighty eight percent of the sampled YREs were in the consumer oriented enterprises where the primary customer is an individual. Three percent of the YREs were in the extractive sector, while 9 percent were in the transformation industry where the primary customer is another business.

The mean age of the respondents was 27 years (SD = 4.6). Sixty percent of the sampled YREs were owned by males while 40 percent were female owned enterprises. Half of the respondents had secondary level education, 25 percent had primary level education, 21 percent had college level education and 4 percent had university level education.

The sampled YREs had a mean of 96.90 on the performance index (SD = 32.70). When performance was measured in terms of growth in the number of employees, only ten percent of the sampled YREs had positive growth. The subjective measure of performance was positively and statistically associated with growth in the number of employees (Correlation coefficient = 0.17, $q < 0.01$). This gives confidence in the use of the subjective measure of performance in this study.

The means, standard deviation and correlation coefficients of continuous variables are presented in Table 4.1. From this table, the chances of successfully improving the performance of YREs, age of respondents, and moderate risk taking are positively correlated with the performance of YREs. Fear of failure is negatively and statistically associated with performance. None of the correlation coefficients are very strong, thus multicollinearity is ruled out as a problem in the estimation exercise.

Table 4.1: Correlations of Continuous Variables.

	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Number of Previous businesses	0.60	0.87	1									
2. Number of Previous jobs	1.01	1.23	.011	1								
3. Training Attended	1.48	1.82	.142**	.133**	1							
4. Interest	4.80	0.60	.024	.020	.060	1						
5. Self Efficacy	4.34	1.27	-.086	-.147**	-.003	.223**	1					
6. Success	3.57	0.87	.136**	.017	.076	.209**	.020	1				
7. Fear of Failure	1.77	1.03	-.060	-.032	.029	-.251**	-.102*	-.21**	1			
8. Age Squared	751.75	249.7	.198**	.234**	-.009	.070	-.128**	.116*	-.202**	1		
9. Risk squared	23.62	14.29	.019	-.040	-.003	.101*	.083	.353**	-.194**	.097*	1	
10. Performance	96.90	14.29	.043	-.004	.025	.055	-.041	.349**	-.255**	.162**	.270**	1
Adjusted R ² = 0.23												

Key * Significant at $\alpha < 0.10$; **Significant at $\alpha < 0.05$

Estimation results of the regression model are given in Table 4.2. The model is statistically significant ($F = 8.56$, $\alpha = 0.000$). Further the model explains 23% of the variance in performance. A closer examination of this table indicates that membership into business associations, fear of failure, self efficacy and perception of opportunities are negatively and statistically associated with the performance of YREs. In addition moderate risk taking and family income level are positively associated with the performance of YREs. Thus only hypotheses 1c and 2e are supported as stated. Hypotheses 1a, 1d, 3a and 3c are supported but the relationship is in directions different from the stated.

Table 4. 2: Regression Results

	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>T</i>	<i>Sig.</i>
	B	Std. Error	Beta		
Constant	115.927	23.401		4.954	0.000
Registration	-8.871	11.463	-0.034	-.774	0.439
Family Income	6.177**	2.826	0.105	2.186	0.029
Gender	-.252	3.007	-0.004	-0.084	0.933
Number of Previous businesses	-1.027	1.719	-0.027	-0.598	0.550
Previous Employment	-5.532	3.779	-0.083	-1.464	0.144
Number of previous jobs	-1.701	1.575	-0.062	-1.080	0.281
Parents in Business	2.408	2.955	0.036	0.815	0.416
Education Level	2.393	2.055	0.055	1.165	0.245
Trainings Attended	-0.200	0.861	-0.011	-0.233	0.816
Business Association	-16.85**	3.882	-0.205	-4.339	0.000
Interest	-1.095	2.653	-0.019	-0.413	0.680
Self Efficacy	-2.405**	1.203	-0.092	-2.000	0.046
Success	8.379**	1.847	0.222	4.536	0.000
Fear of Failure	-5.088**	1.463	-0.160	-3.477	0.001
Opportunity	-5.706*	3.211	-0.082	-1.777	0.076
Age Squared	0.006	0.006	0.043	0.895	0.371
Risk Squared	0.287**	0.116	0.124	2.475	0.014
Adjusted R ² = 0.231					

Key * Significant at $q < 0.10$; **Significant at $q < 0.05$

Personality based variables namely the chances of successfully improving firm performance, fear of failure and moderate risk taking appear to dominate as predictors of the performance of YREs. Risk taking is positively and statistically associated with the performance of YREs. The chance of successfully improving the performance of YREs is positively and statistically significantly. Fear of failure is negative and statistically significant. Chances of successfully improving the performance of YREs and fear of failure are two dimensions of need for achievement (Bird, 1989). Therefore, personality based factors (motivation) appear to be important predictors of the performance of YREs.

4.4.0 DISCUSSIONS

The performance of YREs has been attracting a lot of scholarly and policy attention in the world in general and in Kenya specifically. However the key drivers of the performance of YREs are not clearly understood. To address this gap in knowledge a survey of YREs in Machakos District in Kenya was undertaken. This study established that 88 percent of the YREs are in consumer oriented sectors where the primary customer is an individual. This finding offer support to previous studies that indicate that the youth operate in marginal business sectors (Chigunta, 2002). This is most likely due to the limited experience they have with other lucrative sectors such as in the transformation industry. Need therefore exists to introduce the youth to such sectors. Apprenticeships and employment in manufacturing companies would be a good starting point.

This study identified that generally YREs do not perform well as only one out of every ten surveyed enterprises indicated that they had positive growth. This finding is in agreement with the observation in Chigunta (2002) that a majority of YREs are marginal and only offer the youth a modest means of livelihood. A possible explanation for this limited performance emanates from the observation that the youth lack requisite experience, a situation that forces them to establish businesses in highly competitive sectors where the probability of failure is high. This finding underscores the need for concerted efforts to improve the performance of YREs if they are to be pillars of wealth and employment creation.

The study used Millers (1987; 1990) configuration approach to examine the critical factors that influence the performance of YREs. Both correlation and regression results demonstrated that personality based factors are statistically associated with performance of YREs. Specifically *n Ach* and moderate risk taking were found to be statistically associated with the performance of YREs. Factor analysis of the sub-dimensions of *n Ach* suggests that this concept is undimensional. Further the YREs that showed a high inclination for *n Ach* were found to perform better. This finding is in agreement to the studies that show that *n Ach* drives performance (McClelland, 1961) but differs with the reports that show that *n Ach* is not associated with superior performance (Bird, 1989). A unique contribution offered in this study is the extension of the concept of *n Ach* to a group of youth entrepreneurs. A possible reason for finding a positive and

statistically significant association between *n Ach* and performance among YREs may be the observation that a majority of the youth lack the necessary prior experience that drives entrepreneurial performance. In the absence of such experience the youth resort to sheer zeal (Bird, 1989). Further exploitation of opportunities requires the youth to act in the face of skepticism of others thus underscoring need for achievement.

The estimation results indicated that moderate risk taking is statistically associated with better performance of YREs. This finding is in agreement with previous reports that show that moderate risk taking is associated with performance (Kreissor *et al.*, 2000; McClelland, 1961). Thus some cumulative evidence is emerging across time, space and within age groups that moderate risk taking is associated with superior firm performance.

An unexpected finding of this study is that membership into business association was found to be negatively associated with the performance of YREs. This is in contrast to the literature that shows that business association help entrepreneurs to access necessary resources, identify emerging business opportunities and are a source of psychological release (Bird, 1989). Differences in these findings may probably be due to the nature of business associations in Kenya. Most of them are weak and occasionally they suffer from managerial problems (Government of Kenya, 2005). Therefore business associations may not be steering YREs towards better performance.

Family income was found to be positively associated with the performance of YREs. In other words youth entrepreneurs who come from better socio-economic classes had better performing enterprises. This finding is in agreement with the literature that shows that access to financial resources influences entrepreneurial outcomes favourably (Shane and Venkataraman, 2003; Aurenus and Minniti, 2005; Ondiege, 1996). Financial resources are important in the acquisition of other resources such as employees and machinery that are used in the exploitation of opportunities. Consequently, strategies that address poverty at the household level may benefit the performance of YREs.

Interestingly this study established that youth entrepreneurs who believe that opportunities to expand their enterprises exist in their location actually reported better performance. This finding is in agreement with literature that shows that perception of opportunities is a prerequisite of entrepreneurial outcomes (Bosma *et al.*, 2008). This offers evidence to the

literature that holds that the recognition of opportunities is a key defining characteristic of entrepreneurs (Venkataraman, 1997). Thus efforts that can increase the density of opportunities in different regions and the ability of youth entrepreneurs to recognize them should be initiated.

The research also established that youth entrepreneurs who believed that there are good chances of improving the performance of their enterprises actually reported better performance of their enterprises. This finding supports the literature that shows that optimism leads to better business outcomes (Shane and Venkataraman, 2003). This optimism motivates the exploitation of opportunity by limiting information, stimulating rosy forecasts of the future, triggering the search for relatively small amounts of information, and leads people to act first and analyze later.

Overall, the results of this study suggest that together *n Ach* and risk taking drive the performance of YREs. This finding offers support to the claim by McClelland (1961) that moderate risk taking brings out the most achievement motivation in people. Bird (1989) explains this interaction in this manner: “tasks where the chances of success is very certain (very easy tasks) or very uncertain (very difficult tasks) do not arouse expectations that skill is a great determiner of outcomes, and those who need to feel personal responsibility and control are not highly motivated.”

The key finding of this study is that personality based factors are the most important drivers of the performance of YREs. However the presence of resources such as financial capital and the presence of business networks are other configurations of factors that help explain the performance of YREs in Kenya. This finding has both theoretical and policy implications. To entrepreneurship theory this study has an important implication. Current research suggests that prior experience is a key driver of entrepreneurial outcomes (Shane, 2000; Shane and Delmar, 2007). Evidence provided in this study among the YREs does not support this observation. On the contrary, personality based factors (motivations), financial resources and membership into business association influence the performance of YREs. The finding is in agreement to a growing body of literature that shows that perceptual variables are important in explaining entrepreneurial outcomes (Arenius and Minniti, 2005; Bosma *et al.*, 2008). This finding also offers support for the call to examine the role of motivation in entrepreneurship (Shane 2004). It also supports the configuration approach

as a suitable framework for understanding the key determinants of performance in YREs. Moreover, the evidence provided in this study indicates that there may be different drivers of performance among older and younger entrepreneurs. Because of such differences, there is need to assess the performance of younger and older entrepreneurs differently. In the extreme, the results presented here suggest that researchers should develop different sets of explanations for the performance of older and younger entrepreneurs.

This study used measures of risk taking and *n Ach* that were developed without the youth in mind. Thus further effort should be directed towards developing appropriate measures for personality based factors that are friendly to younger entrepreneurs. The psychometric properties of such measures should also be assessed.

This study has some important policy implications. First, the evidence presented in this study offers support to the policy initiatives that distinguish younger and older entrepreneurs. Therefore, having policies specifically geared towards youth in business is a viable policy initiative. Second, the study indicates that policy makers interested in enhancing the performance of YREs should focus on offering achievement motivation training to potential and existing youth entrepreneurs. The study also points to the need to offer simulation trainings to owners of YREs in order to enhance their risk taking propensity. Finally, this study offers empirical evidence on the effects of personality based factors and financial resources on the performance of YREs. This evidence can be used to develop appropriate policies and strategies that can enhance the performance of YREs.

4.5.0 CONCLUDING OBSERVATIONS

4.5.1 Limitations of the study

This study is not without limitation. This is a cross sectional study and therefore the causal direction between *n Ach*, risk taking and performance can be called into question. While there are conceptual arguments in favor of personality based factors affecting firm performance, the other causal direction is also possible. Superior performance may enhance risk taking and *n Ach* of YREs. Moreover, the sampled YREs are all survivors and

therefore we can not rule out survivor bias. A suitable approach to correct the weaknesses of this study would be to conduct a panel study where data are repeatedly gathered from a cohort of YREs as this would allow cross-lagged regression analysis, which could help tease out the causal relationship between personality based factors and the performance of YREs.

In general, about 75 percent of the variance remains unexplained. Although this is not an unusual result in empirical research, it is worth further discussion. First, it is most likely that our study does not include all relevant variables. In particular, given the data available, our consideration of most of the ability variables is limited to the inclusion of dummy variables. This is far from satisfactory since we are not able to specify the nature of important differences in ability. Second, perhaps the use of nonparametric techniques or other research and statistical methods would complement the evidence provided in this study and add greater explanatory value to the study of the performance of YREs. This issue will be partly addressed, among others, by future rounds of this project. Clearly, the relatively low R^2 does not mean that the unexplained variance is necessarily due to variables capturing ability but simply that our models fails to accurately assess all important variables as suggested by the configuration approach. It should also be noted that, because of our failure to properly account for ability, our results do not fully capture the importance of perceptual variables in entrepreneurial decisions. In other words, it is likely that our results would be much stronger had we been able to more fully describe differences in ability.

Finally, it should be noted that we can only establish that perceptual variables are the most important drivers of the performance of YREs. The lack of longitudinal data, unfortunately, prevents us from establishing unequivocally the causal direction of the tested relationships. However, Koellinger *et al.*, (2005) found evidence that the importance of perceptual variables in entrepreneurial decisions is higher for nascent entrepreneurs than for experienced entrepreneurs. Further, Shane and Venkataraman (2000) argue that previous literature suggests that perceptual variables are important in explaining entrepreneurial outcomes. These observations provide support for the argument that a causal relationship indeed exists between perceptual variables and the performance of YREs.

4.5.2 Conclusion

In conclusion, this study contributed to one of the most important questions facing youth entrepreneurship research today, namely, what are the critical factors involved in the performance of YREs (Chagunta 2002). The study responded directly to this fundamental, yet unresolved, question. The findings underscore the importance of perceptions variables in driving the performance of YREs. This study contributes to our understanding of the reasons behind the behavior of the youth with respect to firm performance. At a time when governments all over the world are looking at entrepreneurship as a way to increase the wealth and well-being of their countries, we believe this issue to be a particularly important one. This study highlights a new frontier for government policy, namely, the possibility that programs aimed at improving perceptions of younger entrepreneurs may lead to higher performance rates of YREs. It also supports the current policy efforts that are aimed at reducing poverty at the household level.

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Part III:

Corporate Support and Capacity Development

Chapter 5:

Effect of Corporate Social Responsibility on Consumer Behavior.

Stella Nyongesa and Fredah Mwiti

Chapter 6:

Enterprise Based Training and Entrepreneurial Performance. *G.K.N*

Mbugua

Chapter 7:

The Role of Harambee Contributions in Corruption: Experimental

Evidence from Kenya. *Abraham K. Waithima*

Chapter Five

Effect of Corporate Social Responsibility on Consumer Behavior

Stella Nyongesa and Fredah Mwiti

5.1.0 INTRODUCTION AND OVERVIEW

Businesses have the responsibility of carrying out their operations in a manner that supports the welfare of the customers as well as the communities in which its operating. If government plays the critical role of providing an enabling environment in which businesses can thrive, then businesses too must supplement government's efforts through corporate social responsibility, especially in creating goodwill for the two primary stakeholders –customers and the general community. The case for corporate social responsibility thus presents an opportunity for positive association between businesses and consumers.

5.1.1 Background and Conceptual Context

The concept of corporate social responsibility has drawn various debates and various authors conceptualize it differently. Blowfield and Frynas (2006) define CSR, as

An umbrella term for a variety of theories and practices all of which recognize the following: (a) that companies have a responsibility for their impact on society and the natural environment, sometimes beyond legal compliance and the liability of individuals; (b) that companies have a responsibility for the behavior of others with whom they

do business (e.g. within supply chains); and that (c) business needs to manage its relationship with wider society, whether for reasons of commercial viability, or to add value to society.

Some organizations, such as the European Union (EU), believe that CSR only relates to the steps a company 'voluntarily' takes in social, environmental or ethical issues beyond the minimum standards required by the state (European Commission, 2002). World Bank (2004) brings in the issue of commitment and sustainability by defining it as "Commitment of business to contribute to sustainable economic development- working with employees, their families, the local community and society at large to improve the quality of life, in ways that are both good for business and good for development"

According to one of the most frequently cited definitions, CSR is 'a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis' (Brussels: European Commission, 2001). This definition seems to build on Carroll's definition (1998) which states that CSR refers to the role of business in society encompassing economic, legal, ethical and philanthropic responsibilities.

These definitions all emphasize the fact that CSR should have a positive impact on society and environment, should be a voluntary action beyond legal requirements, be sustainable, and at the same time take care of the business bottom-line.

Within the functions of businesses, Marketing is the most visible of all, and hence the increasing focus on societal marketing. The societal marketing concept calls on marketers to fulfill the needs of the target audience in ways that enhance the well-being of consumers and society as a whole, while fulfilling the objectives of the organization (Kotler, 2000, Bednall and Kanuk 1997).

Social responsibility in marketing therefore covers a diverse range of issues such as consumerism, environmentalism, social marketing (Kotler, 2000, Carrigan and Attalla, 2001)

One example of societal marketing programme is cause-related marketing, whereby a firm contributes to a designated cause thus linking the company's product or service to a relevant social cause for the mutual

benefit of the organization and its customers (Andreasen, 1996, Varadarajan and Menon, 1988, Adkins, 2004).

5.1.2 Corporate Social Responsibility in Kenya

The practice of Corporate Social Responsibility (CSR) initiatives by Kenyan companies seems to have increased over the past few years. Although majority of Kenyan companies express their social responsibility through support of communities, they are also expected to take responsibility of the impact of their activities on other stakeholders including customers, employees, shareholders, and the environment in all aspects of their operations. This obligation, which is often voluntary, should result in an improvement in the quality of life of these stakeholders. However, it is still argued that in most countries in Africa, CSR is still in its embryonic phase (Visser, 2006).

In Kenya, various organizations are increasingly getting involved in corporate social responsibility, with a few like Dettol, Coca Cola and Safaricom (in partnership with UNICEF) using CRM to encourage customers to purchase their products.

In order to further encourage the CSR practice in the region, the 'Bank M' East African CSR Awards were introduced for the first time at the inaugural East African CSR Awards May 2010 in a colorful function at which Burundi, Kenyan, Rwandan, Tanzanian and Ugandan businesses that exhibited excellent corporate social responsibility were celebrated. At this event, companies are rewarded for outstanding and innovative initiatives that create a high social and environmental benefit for the community and the business. The awards showcase an East African private sector that has succeeded economically, whilst safeguarding environmental and social values.

In the 2010 submissions companies that embraced good CSR practice and those with highly commendable practices were identified. These were as shown in the table below.

1	<p>Best workplace practice: Winner: Unilever Tea Kenya Limited and Unilever Tea Tanzania Limited for the 'Lightning Detection System' Highly commended: Safaricom Foundation for the 'The Safaricom Foundation World of Difference Project'</p>
2	<p>Most Ethical & responsible Business Practice for Supply Chains: Winner: Sandali Wood Industries Limited for 'Responsible Chain Of Custody' Highly commended: Nile Breweries Limited for "'From Grain to Glass" - reducing HIV/AIDS in Our Supply Chains</p>
3	<p>Environmental Excellence: Winner: Eastern Produce Kenya Limited for 'EPK Sustainable Environmental Management Program' Highly commended: Unilever Tea Tanzania Ltd for 'Indigenous Forest Conservation'</p>
4	<p>Most Sustainable & Scalable Community Investment – Sponsored by Dow Chemical Company Winner: Tullow Uganda Operations Pty Ltd for the 'TullowKaiso-Tonya Programme' Highly commended: Mabati Rolling Mills for the 'Mabati rolling Mills (MRM) Project'</p>

5.2.0 Issues and Options

Evidently, several Kenyan companies have thus strived to meet their social responsibilities through different practices. This section highlights typical implications with respect to positive impacts as well as past experiences of some of the irresponsible business behaviors.

5.2.1 Potential Impact of CSR

Corporate Social Responsibility has been suggested to be “one of, if not *the* most important issue of our time” (Hopkins, 2007, p. xiii), and while it is commonly agreed that CSR is important for businesses, there is still a huge debate as to whether CSR has the potential to make significant positive contributions towards social, environmental, and economic conditions in developing countries (Gilbert, 2008).

This question has been raised in a variety of quotas ranging from business managers, owners, lobby groups, researchers, and academicians alike. A series of studies and forums have been held to obtain solid answers. Another notable initiative, known as the “Impact Measurement and Performance Analysis of CSR” (IMPACT), comprised of a consortium of educational and development partners, launched project ‘IMPACT’ which until March 2013, will ask, and attempt to reply to questions such as: What benefits does CSR actually bring to the economy and society at large? How can managers, policy-makers and stakeholder’s better measure and analyze its outcomes? What does this mean for smart mixes of public policies and corporate strategy?

According to Visser (2002), following her analysis of the status of CSR in developing countries, the author proposed that improved ethical responsibilities and incorporating good governance, should be assigned the highest Corporate Social Responsibility priority by companies in developing countries. The author argues that *‘governance reform holds the key to improvements in all the other dimensions; including economic development, rule of law, and voluntary action. Hence, embracing more transparent, ethical governance practices should form the foundation of CSR practice in developing countries, which in turn will provide the enabling environment for more widespread responsible business.’*

5.2.2 The Irresponsible Behavior

While many large and small corporations are taking seriously their role in business and society as promoters of safe goods and services, some other companies are disturbingly irresponsible, committing obvious crimes, causing harm to thousands and what is worse such firms face few, if any, repercussions for their actions. A few of such big names that have been on the global spotlight recently include:

Pfizer, the biggest pharmaceutical in the world accused of illegal drug promotion in 2009: (Punished for Very Bad Behavior by fining them \$2.3 billion paid to the US government).

Wal-Mart, the largest retail store in America, has accumulated a list of offenses around the world, especially when it comes to treatment of its workers. The firm is accused of not only underpaying employees, but they are also overworked and have little recourse, as the executives of the company spend millions each year ensuring that any attempts to form a union are quickly terminated by dismissing such proponents from employment with the company.

Widely respected Coca cola has its fair share of offenses ranging from the use of unethical means to silence union leaders (in 1989 and 2002, eight union leaders from bottling plants in Colombia were killed after they raised concerns about labor practices, and many members of the union and workforce there have been kidnapped and tortured to prevent them from supporting it), to the unethical means of obtaining water for their water drink Dasani, to accusations of racial discrimination.

Consumers in Kenya have also not been spared from the irresponsible behaviors by some businesses. Unfair practices against consumers, which include false, misleading or deceptive representations, still remain unchecked. Commercial banks in Kenya for instance deceptively advertise loans as 'free', with no one explaining to ignorant potential customers the hidden charges around these loans, yet the rules of fair play would demand that sufficient information be made available. Mortgage companies deliberately withhold critical information vital for decision-making. Most times the language used on contractual documents is not clear for potential customers.

5.3.0 Research Method

In view of the above discussion, while the objectives of undertaking CSR and CRM activities are evident (image building, giving back to society, uplifting the welfare of the needy), however, it was not clear whether by Kenyan companies practicing socially responsible behavior, it leads to increased purchase of their products. To accomplish this, the research was designed to use a survey research method.

5.3.1 Data Collection

A survey was thus undertaken between August and October 2007 to determine the awareness levels of CSR and CRM by Kenyan consumers, to establish whether consumer behavior is affected by a company's involvement in CSR and CRM activities, and to determine if there is a difference in behavior in terms of gender, age and income.

The study was conducted in two towns-Nairobi (urban) and Nakuru (peri-urban) to ensure representation of the different socio-economic groups and lifestyles. Both qualitative and quantitative researches were used to collect data from a sample of 528 respondents. Data was then analyzed using the SPSS package in which statistical measures were used to give meaning to the quantitative data, while content analysis was used to give meaning to the qualitative data.

From the study, the key findings were that majority of respondents seemed aware about what CSR is all about and the related activities; however, CSR and CRM activities did not seem to heavily influence the purchase decision of customers instead, quality and price of the product were the dominant factors influencing consumer purchase behavior. There was no significant difference in behavior of the consumers based on the demographic factors of age, income or gender.

5.3.2 Study Findings

The findings showed that although majority of respondents seemed aware about what CSR and CRM were all about and that they could identify companies which practice CSR, most could hardly recall specific causes supported by certain companies. Respondents also seemed to have a favorable attitude towards the practice of CSR, as long as it was for a genuine cause

With regards to whether CSR and CRM activities do influence purchase behavior of consumers, most respondents indicated that their purchases were not heavily influenced by the CSR or CRM efforts of companies. Instead, the quality and price of the product were the dominant factors that they indicated as the major influencers of what they purchased.

The study also revealed that although most consumers in Kenya were aware of what constitutes responsible or irresponsible corporate behavior, majority did not know their rights as consumers when faced with

irresponsible corporate behavior. Most consumers had no idea how to seek redress in the event their rights as consumers were violated by a company. This was because i) they did not know the course of action to take if a firm was found to be socially irresponsible ii) they did not, in any case, have too many options in terms of goods and services so as to boycott those products from a socially irresponsible company iii) the consumer protection law was non-existent.

The major conclusion drawn from the study therefore was that consumers in Kenya are aware of what constitutes corporate responsible or irresponsible behavior, however, majority of the consumers do not know their rights as consumers, in the event they encountered an irresponsible behavior from companies. This shows that many consumers lack knowledge about the options available to them to seek redress following exposure to irresponsible behaviors from a company.

5.4.0 Recommendations and Conclusions

5.4.1 Enterprise Development Strategies

Any business that aspires to exist for long requires a set of strategies to remain competitive and relevant to society. However in pursuit of some of the business oriented strategies exclusively, there is a danger of causing a negative impact on the very stakeholders a business relies on for its progress.

It is with this in mind that we recommend the embracement of CSR in all of firm's strategic moves. Why is this the case? The answer is simple. As stated by Chandler & Werther, (2006) *'CSR exists to address the concerns of stakeholders who are impacted by businesses pursuing the profit motive'*. It is undeniable that the primary focus of businesses, is the pursuit of profit—not CSR. But what CSR seeks to do is *'to present business decision makers with a more balanced view of their operating environment'* so that decisions can be made in a manner that leaves all stakeholders beneficiaries. Given the rapidly changing environments in which businesses operate, it is this strategic approach to CSR that offers firms *'the best means of navigating today's turbulent global business environment so that all stakeholders (including shareholders) benefit over the long term'*.

Furthermore, in view of the helpless situation consumers seem to find themselves in when confronted with irresponsible corporate behavior, we propose a series of action steps aimed at creating an environment in which Kenyan consumers are treated fairly by businesses; that they (consumers) get to know their rights and can use them effectively, and that the consumer law is fair to both consumers and business. Recommendations with policy implications include the enactment of the consumer rights bill, establishment of a consumer protection authority, formation of more effective partnerships between existing consumer protection bodies, and the education of consumers on their rights.

5.4.2 Conclusion

Business success through fair competition and being mindful of consumer, society and environmental welfare are issues of vital importance both for companies and citizens of any country, because if handled in the right way, they lead to business and economic growth. Successful businesses lead to enhanced economic growth; empowered consumers and fair competition policy drive competitive markets, which in turn promotes efficiency and innovation in business. Kenyan businesses thus need to embrace strategies that not only promote their growth but also promote social and environmental benefits for the community. Kenya's consumer policy system too must be given the necessary attention so that the required regulations are passed into law thereby empowering the consumer, who under the current circumstances is still vulnerable to exploitation by businesses.

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Chapter Six

An Investigation of Enterprise Based Training and Entrepreneurial Performance: The Case of the Industrial Training and Manufacturing Enterprises in Nairobi

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ABSTRACT

Enterprise based training is any form of skill transfer that is as a result of identified training needs of an enterprise. In Kenya, the Directorate of Industrial Training (DIT) is mandated through the Industrial Training Act (cap. 237) to direct and enhance this type of training for all persons engaged in industry by improving the quality and efficiency of the training and by sharing the cost of such training as evenly as possible amongst employers. Although the DIT has been coordinating industrial training since 1973, it was not known as to whether such training had resulted in significant entrepreneurial performance for the participating firms since no empirical studies to this end had been carried out. Secondly, from officially available data, DIT supported industrial training appeared to have reached only about 10% of its formal customers whereas the informal sector that contributes about 30% of the Gross Domestic Product in Kenya has been ignored in industrial training delivery although the law does not discriminate against the informal sector enterprises. This study investigated as to whether DIT supported industrial training had contributed to

improved entrepreneurial performance among participating enterprises relative to non-participating enterprises. It also investigated the constraints encountered by industrial training delivery and has proposed appropriate interventions so as to enhance training delivery in line with the legal mandate and the demands of national aspirations of industrialization. The study focused on 168 manufacturing enterprises in the Nairobi area which accommodates 74% of the manufacturing firms on the Kenya Association of Manufacturers countrywide list. Eighty training manufacturing enterprises were randomly selected from the DIT list of enterprises that trained with DIT in the 2002-2004 year period while eighty eight nominal non-training enterprises (enterprises that did not train with the DIT in the above period) were randomly selected from among enterprises in Nairobi and also on the KAM list but did not train with DIT during the above period. The study collected data using three surveys and used three categories of questionnaires. The questionnaire category 1 was administered to the 168 manufacturing firms. The questionnaire category 2 was administered to 40 purposively selected key informants while questionnaire category 3 was administered to 40 purposively selected informal sector operators. The overall response rate was 47.6%. Data analysis was conducted through content analysis as well as through descriptive and inferential statistics using computer packages. The investigation established that: training enterprises outperformed the non-training enterprises; there were high levels of EBT among both training and non-training enterprises (87%) although EBT was higher among the training enterprises. The study also established that Enterprise Based Training contributed to a fair extent (10%) to the Entrepreneurial Performance of the enterprises in Nairobi. The study also established that there was a significant difference at the 5% level of significance between the innovativeness of the training and that of the nominal non-training manufacturing enterprises in Nairobi but there was no significant difference at the 5% level of significance between the training and that of the nominal non-training manufacturing enterprises with regard to enterprise growth, productivity, as well as the overall enterprise performance. It is recommended that: the relevant industrial training law be reviewed by the Government of Kenya; industrial training be expanded to cover all registered Small and Medium Enterprises and that it be used by the Government of Kenya and other Development partners as an instrument for both policy and programme intervention.

6.1.0 Introduction

This investigation was for both academic and practical utility. In the first instance, it was also designed to establish the relations between variables while in the latter instance it was designed to address practical questions for the policy makers, the EBT practitioners, the EBT researchers, the owners, managers and employees of the enterprises. The researcher's major concern was that there were contradicting views on the benefits accruing from the Industrial Levy Training Fund supported EBT. While some authors advocated for its existence others just stopped short of calling for its abolishment

The study has therefore firstly investigated the incidence of EBT among manufacturing enterprises in Nairobi. This has laid a foundation for further work of investigating whether Enterprise based training had resulted in any impact on the Enterprise performance. Lastly the study has investigated whether EBT had resulted in the training manufacturing enterprises participating in ITLF benefiting relative to the nominal non-training manufacturing enterprises in terms of growth, innovativeness and productivity. It has established that there was a positive though low impact of Enterprise based training on Enterprise performance. Secondly the study has established that the Training enterprises generally outperformed the non-training enterprises out of 19 selected statistics.

The selected statistics were: 1. Mean employment (persons), 2. Mean enterprise age, 3. Mean wage, 4. Percentage of enterprises having a training budget, 5. Percentage of enterprises recognizing unions, 6. Percentage of enterprises having high technology, 7. Mean number .of persons trained in 2004, 8. Percentage of enterprises practicing Total Quality Management, 9. Percentage of enterprises doing exporting, 10. Percentage of enterprises doing quality control, 11. Percentage of enterprises engaged in R&D, 12. The percentage of enterprises that were automated, 13. Percentage of persons who perceived the contribution of EBT to Enterprise performance was above very good, 14. Percentage of persons who perceived the contribution of EBT to the Performance of the trainee as being above very good, 15. The Growth mean index-G, 16. The Innovativeness mean index-I, 17. The Productivity index-P, 18. The Entrepreneurial performance E- index 19. EBT training mean index- TR.

Background literature (Broad & Newstrom, 2001; DIT, 2004, 2007; Republic of Kenya, 2004, 2007) indicates that there had been major investments in Kenyan enterprises in technical as well as in management training both locally and internationally. Yet, contradictory views existed on the importance of the ITLF supported EBT. Scanty empirical evidence was available to link EBT to performance and the DIT (2004) had conceded that there was low reach of the DIT to its targeted clientele. Confronted as well with DIT's total lack of reach to some of its legally mandated clientele, (Republic of Kenya, 2007) and in general the existence of major gaps in the knowledge and practice of EBT (Grierson, 2002) and its relative importance in Kenya it was difficult to say positively and categorically as to whether enterprise based training had had any impact on the performance (Johanson & Adams, 2003) or even whether it had contributed to any significant difference in the productivity, growth or innovativeness of the training relative to that of the nominal non-training manufacturing enterprises participating in the ITLF (Grierson, 2002).

This study has therefore investigated as to whether the variances in the firm attributes of growth, innovativeness and productivity were significant between the training and the nominal non-training manufacturing enterprises in Nairobi in addition to investigating the constraints hindering EBT delivery. This study was guided by the following objectives:

1. To establish whether the Training enterprises were statistically speaking different from the Nominal non-training enterprises.
2. To determine the prevalence of the various categories of EBT in Nairobi.
3. To determine to what extent industrial training had contributed to entrepreneurial performance among participating enterprises as reflected in
a) growth, b) innovativeness, and c) productivity. ..
4. To establish the constraints hindering the delivery of industrial training programmes among the DIT's present as well potential customers.

The study was conducted through the use of three questionnaires targeted as follows:

- (i) The questionnaire category one

This questionnaire was administered to one hundred and sixty eight systematically and randomly selected formal manufacturing enterprises stratified into eighty sample training manufacturing enterprises and eighty eight sample nominal non-training manufacturing enterprises. The eighty

sample training manufacturing enterprises had been pre-selected from the DIT and KAM records. The purpose of this questionnaire was to probe into the prevalence of the various categories of EBT as well as the prevalence levels of the sub-variables of enterprise performance, the forces hindering enterprise based training delivery and the probable interventions. The response rate was 41%.

(ii) The questionnaire category two

This questionnaire was administered to forty key informants purposefully sampled. Ten of the informants were drawn from senior DIT staff, ten from employers' representatives, ten from employees' representatives while the remaining ten were drawn from other interests' representatives in DIT training committees forming the DIT government. The purpose of this questionnaire was to probe into, the forces hindering enterprise based training and also the probable interventions so as confirm or otherwise the findings from above. The response rate was 75%.

(iii) The questionnaire category 3

This questionnaire was administered to 38 purposively selected informal sector manufacturing enterprises. These comprised Jua kali operators in Ziwani Engineering Jua Kali Association, Kamukunji Jua Kali Association and Classic Jua Kali Association. The questionnaire was intended to solicit views among the informal sector manufacturing operators on the possible involvement of DIT in the industrial training provision among the informal sector members. The other questionnaires also addressed this issue with the intention of finding out whether there was a convergence or divergence of views among these three major stakeholders on industrial training provision among the informal sector operators

6.1.1 The summary of the descriptive statistics for Training and Nominal non-training manufacturing enterprises in Nairobi

The investigation was guided by the specific research objective number one which was to establish whether the Training and the Nominal non-training enterprises were statistically speaking different. It also sought to demonstrate the similarities as well as the differences among these two. In addition it sought to demonstrate that the basic assumptions made about the two groups of enterprises in the design of this study were valid.

Out of the 168 sampled manufacturing enterprises 69 or 41% responded. Out of the 69 respondents 30 or 43% were Training enterprises while the remaining 39 or 57% were Nominal non-training enterprises. The comparison of these two categories of enterprises was as below.

i) Training enterprises outperformed the non- training enterprises at every level for 19 selected statistics (as listed above under section 1.0). Examining the individual categories, it was established that the large training category outperformed the corresponding nominal non-training category by 42% to 37% whereas the medium training category outperformed the corresponding non-training medium category by 63% to 32%. The small training category outperformed the corresponding non-training small category by 89.5% to 10.5%.

ii). It was also established that the performance of the training and nominal non-training enterprises in the 19 selected statistics was size dependent. Refer to Table 6.1 below.

Table 6.1: The summary of descriptive statistics by category and group

1	Category	Training		Nominal non-training	
		Number out 19	%	Number out 19	%
2	Small	17	89,5	2	10.5
3	Medium	12	63	5	32
4	Large	8	42	7	37
	Large + Medium+ small	37	65	14	25

The performance decreased for training enterprises from small to large enterprises while on the other hand it increased for the nominal non-training enterprises from small to large enterprises.

iii).From summary statistics, it was established that the data received from the research were comparable to the data held by the NSSF and were hence to a fair extent valid. The NSSF data were analyzed and compared with the research data received from the questionnaire category 1. The results were as follows: a) The mean of the number of employees from the research data was 238 as compared to the mean of 273 from the NSSF data, b) the median of the number of employees from the research data was 110 as compared to the median of 107 from the NSSF data. From these summary statistics, it was established that the data received from the

research were comparable to the data held by the NSSF and were hence to a fair degree valid.

The two sets of data were also analyzed for variance in order to find out as to whether the difference between them was significant at the 0.05 level of significance. For 1 degree of freedom of the numerator and 128 degrees of freedom in the denominator the critical F statistic is 3.915138. In this case the F-statistic is neither equal nor greater than the critical F-statistic at the 0.05 level of significance and hence there were no grounds on which the Null hypothesis could have been rejected. The Null hypothesis was hence upheld and it was concluded that there was no significant difference between the research data received through the category 1 questionnaire and the data held at the NSSF as far as numbers on permanent employment were concerned.

6.2 The summary of the prevalence of Enterprise based training among the manufacturing enterprises in Nairobi

This part of the investigation was informed and directed by specific research objective number two of this investigation. The investigation established the incidence of various types of EBT in the manufacturing enterprises and further drew comparisons of the various types of EBT among the training and the non-training manufacturing enterprises. Here below were the findings:

1. It was established that the most prevalent types of EBT among the training manufacturing enterprises in a descending order were; (i) formal in-house training by outsiders (97%), (ii) formal in-house training by staff (77%), (iii) external training by training source (77%), (iv) in-formal training by workers (40%), (v) training through trade buyers/suppliers (30%), (vi) in-formal training by self teaching (23%), (vii) external training by distance learning (23%) and (viii) training through foreign networks (10%). Refer to Table 6.2 below.

Table 6.2: The prevalence of Enterprise based training among all manufacturing training enterprises

Item	Type of training	Frequency	%	Ranking
a	Formal in-house training by staff	23/30	77	2
b	Formal in-house training by outsiders	29/30	97	1
c	In-formal training by co-workers	12/30	40	3
d	In-formal training by self teaching	7/30	23	5
e	External training by training source	23/30	77	2
f	External training by distance learning	7/30	23	5
g	Training through trade buyers/suppliers	9/30	30	4
h	Training through foreign networks	3/30	10	6

2. It was established that the most prevalent types of EBT among the Nominal non-training manufacturing enterprises in a descending order were; (i) formal in-house training by outsiders (63%), (ii) external training by training source (48.5), (iii) formal in-house training by staff (43%), (iv) in-formal training by co-workers (23%), (v) training through trade buyers/suppliers (17%), (vi) in-formal training by self teaching (14%), (vii) training through foreign networks (11%) and (viii) external training by distance learning (11%). In summary it was noted that 30/39 i.e. 77% of all the Nominal non-training manufacturing enterprises practiced one form or the other of EBT. Refer to Table 6.3 below.

Table 6.3: The prevalence of Enterprise based training among all manufacturing non-training enterprises

Item	Type of training	Frequency	%	Ranking
a	Formal in-house training by staff	15/35	43	3
b	Formal in-house training by outsiders	22/35	63	1
c	In-formal training by co-workers	8/35	23	4
d	In-formal training by self teaching	5/35	14	6
e	External training by training source	17/35	48.5	2
f	External training by distance learning	3/35	8.5	8
g	Training through trade buyers/suppliers	6/35	17	5
h	Training through foreign networks	4/35	11	7

3 It was further established that the most prevalent types of EBT among all the manufacturing enterprises in a descending order were; (i) formal in-house training by outsiders (77%), (ii) external training by training source (63%), (iii) formal in-house training by staff (58%), (iv) in-formal training by co-workers (45%), (v) training through trade buyers/suppliers (23%), (vi) in-formal training by self teaching (18%), (vii) external training by distance learning (15%) and (viii) training through foreign networks (11%). In summary it was noted that 60/69 i.e. 87% of all the manufacturing enterprises practiced one form or the other of EBT. Refer to Table 6.4 below.

Table 6.4: The prevalence of Enterprise based training among all formal manufacturing enterprises

Item	Type of training	Frequency	%	Ranking
a	Formal in-house training by staff	38/65	58	3
b	Formal in-house training by outsiders	50/65	77	1
c	In-formal training by co-workers	29/65	45	4
d	In-formal training by self teaching	12/65	18	6
e	External training by training source	41/65	63	2
f	External training by distance learning	10/65	15	7
g	Training through trade buyers/suppliers	15/65	23	5
h	Training through foreign networks	7/65	11	8

6.3 The summary of the relationship between Enterprise based training and Entrepreneurial performance

This part of the investigation was guided by specific objective number three. It describes the investigation of the regression relationship of the Innovativeness (I) index, the Growth (G) index and the Entrepreneurial performance (E) index on the EBT training (TR) index among all the manufacturing enterprises, the Training manufacturing enterprises and the Nominal non-training manufacturing enterprises. The results were similar for all categories of firms and as follows:

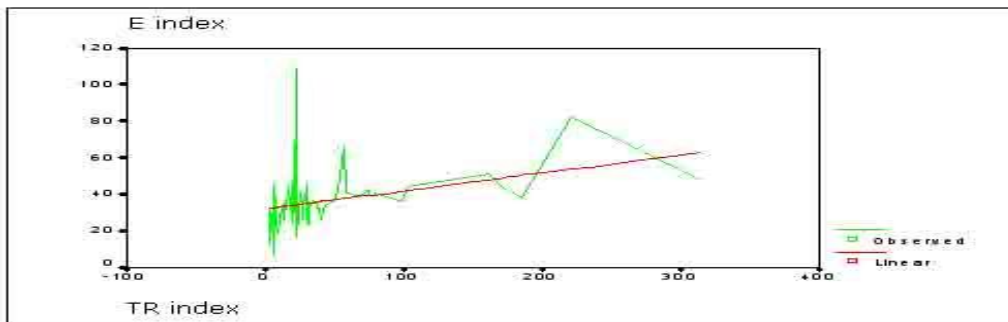
1. For all the manufacturing enterprises, it was established that the b₁ constant which measured the impact of EBT on enterprise performance was positive at 0.0994 (or 9.94%) while the Co-efficient of determination R² value was also low at 0.139. The researcher hence concluded that there was a

positive causal though low relationship between Enterprise based training and Entrepreneurial performance The positive relationship was captured in the below linear regression relationship.

$$\text{Entrepreneurial Performance (E)} = 0.0994 (\text{TR}) + 30.7163 + (-) 0.002\dots (1)$$

Plate 1 The all manufacturing enterprises (E) indices							
linear regression on the (TR) indices							
Independent: (TR) Index var 00001							
Dependent Mth	R ²	d.f.	F	Sigf	b0	b1	variable
E) INDEX LIN	.139	63	10.17	.002	30.7163	.0994	var 00004

Plate 1a Graphical linear regression of the E indices on the TR indices for all the manufacturing enterprise



From the linear regression results displayed in Plate 1 the relationship between Enterprise based training and the Entrepreneurial performance for all the manufacturing enterprises is characterized by the following:: $b_1 = 0.0994$, $b_0 = 30.7163$, significance = 0.002 and $R^2 = 0.139$.The relationship can therefore be represented by the linear regression equation:

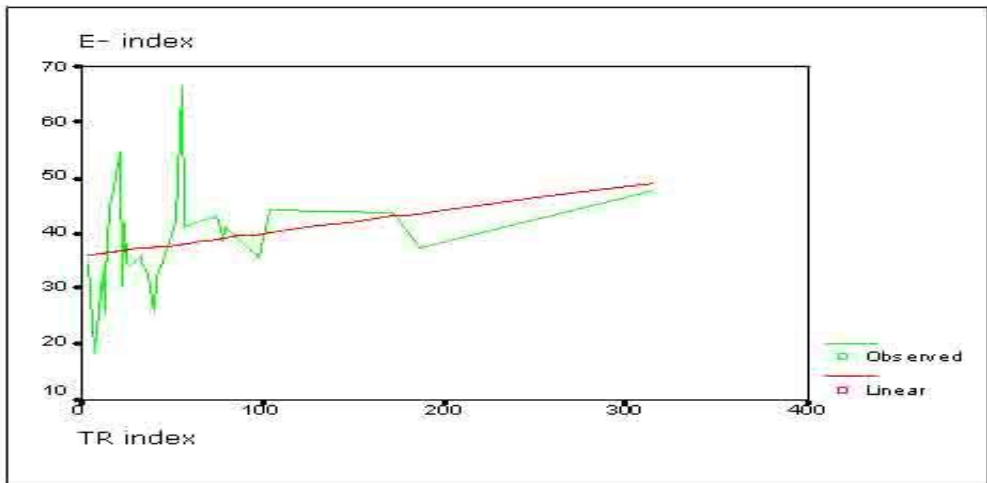
$$E = 0.0994(\text{TR}) + 30.7163 + (-) 0.002. \text{This is in agreement with plate 1a.}$$

2. For the nominal non-training manufacturing enterprises, it was established that the b_1 constant which measured the impact of EBT on enterprise performance was positive at 0.0434 (or 4.34%) while the Coefficient of determination R^2 value was also low at 0.092.The researcher hence concluded that there was a positive though low relationship between Enterprise based training and Entrepreneurial performance The positive relationship was captured in the below linear regression relationship.

$$\text{Entrepreneurial Performance (E)} = 0.0434(\text{TR}) + 34.3383 + (-) 0.103\dots\dots(2)$$

Plate 2. The nominal non-training training manufacturing enterprises (I), (G) and (E) indices linear regression on the (TR) index							
Independent: (TR) index var 00001							
Dependent Mth R ² d.f. F Sigf b ₀ b ₁ variable							
(E) INDEX LIN .092 28 2.84 .103 34.3387 .0434 var 00004							

Plate 2a Graphical linear regression of the E index on the TR index for the nominal non-training manufacturing enterprises



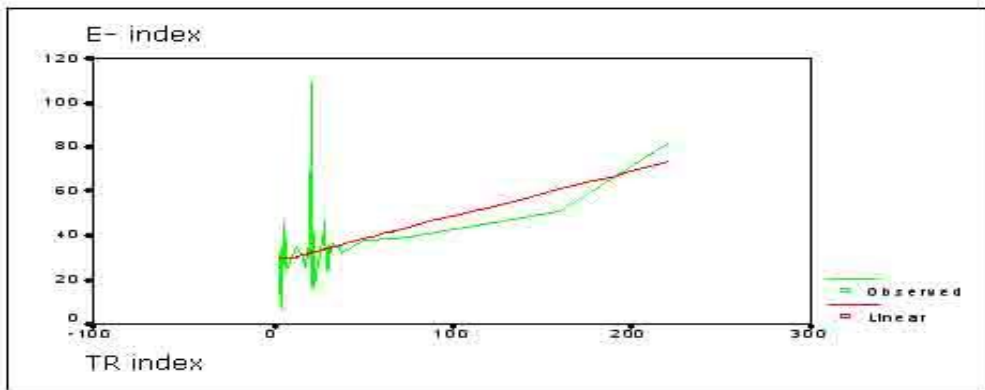
From the linear regression results displayed in Plate 2a the relationship between Enterprise based training and the Enterprise performance for the nominal non- training manufacturing enterprises is characterized by the following:: $b_1 = 0.0434$, $b_0 = 34.3383$, significance = 0.103 and $R^2 = 0.092$. The relationship can therefore be represented by the linear regression equation: $E = 0.0434(TR) + 34.3383 + (-) 0.103$. This agrees with plate 2a.

3. For the training manufacturing enterprises, it was established that the b_1 constant which measured the impact of EBT on enterprise performance was positive at 0.2059 (or 20.59%) while the Co-efficient of determination R^2 value was also low at 0.235. The researcher hence concluded that there was a positive though low relationship between Enterprise based training and Entrepreneurial performance. The positive relationship was captured in the below linear regression relationship.

$$\text{Entrepreneurial Performance (E)} = 0.2059(TR) + 26.8282 + (-) 0.003 \dots (3)$$

Plate 3 The training manufacturing enterprises (E) indices linear regression on the (TR) indices							
Independent: (TR) index var 00001							
Dependent	Mth	R ²	d.f.	F	Sigf	b ₀	b ₁ variable
(E) INDEX LIN		.235	33	10.13	.003	26.8282	.2059 var 00004

Plate 3a Graphical linear regression of the E indices on the TR indices for the training manufacturing enterprises



From the linear regression results displayed in Plate 3 the relationship between Enterprise based training and the Enterprise performance for the training manufacturing enterprises was characterized by the following, $b_1=0.2059$, $b_0 = 26.8282$, significance = 0.003 and $R^2 = 0.235$. The relationship can therefore be represented by the linear regression equation:
 $E = 0.2059(TR) + 26.8282 + (-) 0.003$. This agrees with plate 3a.

6.4 The summary of the variance between the indices of the training and those of the nominal non training manufacturing enterprises

This part of the investigation was guided by specific objective number three. This section investigated the variances between the Innovativeness, the Growth, the Productivity and the Enterprise performance indices in order to assess the magnitude of the differences in the above attributes in as far as Training and Nominal non-training enterprises were concerned. Specifically, this section on the analysis of variance sought to find out whether the differences of the relevant indices were significant at the 5%

level of significance between the training and the Nominal non-training manufacturing enterprises. The results were as here under:

1. From the Analysis of variance (ANOVA) of the Innovativeness index, it was established that the F statistic was 4.994308 and that the relevant degrees of freedom were sixty four (one in the numerator and sixty three in the denominator). It was also established from appropriate F-statistic tables that the critical F-statistic for the above stated degrees of freedom was 4.00 at the 0.05 level of significance. In this case the F-statistic was greater than the critical F-statistic at the 0.05 level of significance and hence there were enough grounds on which to conclude that there was a significant difference at the 0.05 level of significance between the Innovativeness (I) indices between the Training and the Nominal non-training manufacturing enterprises.

2. From the ANOVA of the Growth index, it was established that the F statistic was 0.140781 and that the relevant degrees of freedom were sixty four (one in the numerator and sixty three in the denominator). It was also established from appropriate F-statistic tables that the critical F-statistic for the above stated degrees of freedom was 4.00 at the 0.05 level of significance. In this case the F-statistic was neither equal nor greater than the critical F-statistic at either the 0.05 level of significance and hence there was enough ground on which to conclude that there were no significant differences between the Growth (G) indices for the Training and those of the Nominal non-training manufacturing enterprises.

3. As for the ANOVA of the Productivity (P) index, it was established that the F statistic was 0.1949458 and that the relevant degrees of freedom were 64 (1 in the numerator and 63 in the denominator). It was also established from appropriate F-statistic tables that the critical F-statistic for the above stated degrees of freedom was 7.08 at the 0.01 level of significance, and 4.00 at the 0.05 level of significance. In this case the F-statistic was neither equal nor greater than the critical F-statistic at either the 0.05 or at the 0.01 level and hence it was concluded that there was no significant difference between the Productivity (P) indices for the Training and Nominal non-training enterprises.

4. From the ANOVA of the Entrepreneurial Performance index, it was established that the F statistic was 2.005011 and that the relevant degrees of freedom were sixty four (one in the numerator and sixty three in the denominator). It was also established from appropriate F-statistic tables that

the critical F-statistic for the above stated degrees of freedom was 4.00 at the 0.05 level of significance. In this case the F-statistic was neither equal nor greater than the critical F-statistic at either the 0.05 level of significance and hence there were enough grounds on which to conclude that there were no significant difference between the Entrepreneurial (E) performance indices for the Training and those for the Nominal non-training manufacturing enterprises.

6.5 The constraints faced by the Directorate of Industrial Training in the delivery of Enterprise based training

The investigation of the constraints that hindered the efficient delivery of Enterprise based training was guided by specific the research objective number four of this study. The results were as here below:

(a)The lack of qualified and experienced instructional and administrative staff to run the DIT activities, (b) the low level of government funding which subsequently translated into low level of levy collection, (c) the government bureaucracy which resulted in delayed or non-response to industry, (d) the obsolete equipment in DIT training centres, (e) the lack of commitment by some employers which resulted into a high default rate and failure by DIT to collect levy, (f) the delayed communication and non-communication which resulted in a low level awareness of DIT activities, (g) the demotivated DIT staff characterized by wrong attitudes to their work and lack of technological changes prevalent in industry, (h) the prevalent mode of levy collection which required many persons to be employed as enforcement officers for it to be effective, (i) the out-dated Enterprise based training Act, (j) the lack of transport for operational staff and especially the levy collection enforcement officers and (k) the low levy contribution by the government of Kenya as an employer even when the ITA bound the government.

6.6 The summary of the views held by stakeholders on the delivery of Enterprise based training

The investigation in this section was guided by specific research objective number four. It drew, in descriptive statistics, the views among the formal manufacturing enterprise respondents as well as the views among the DIT management on salient matters regarding enterprise based training. It also

highlighted where there was convergence of these views as well as where there were differences. The views were summarized as here below:

(a) The stakeholders (72%) favoured the conversion of the DIT into a Semi-autonomous Government Agency. (b) The stakeholders favoured the maintaining of the current sector based levy system by 45% while 43% were against and 12% had no any opinion. (c) The stakeholders (79%) favoured the admission of the Jua Kali into the ITLF in organized groups as a separate industry with its own training committee and a different mode of levy contribution. (d) The stakeholders (57%) favoured the linkage of levy reimbursement to levy contribution. (e) The stakeholders (88%) favoured the introduction of a levy system that supported the training of all cadres of the workforce of the contributing enterprises.

Table 6.5: Summary of stakeholder preferences

	Proposition	% favouring	% opposing	% with no opinion
1	Convert of DIT into SAGA	72	28	
2	Maintain current sector based system	45	43	12
3	Admit of Jua Kali into the ITLF	79	21	
4	Link of reimbursement to contribution level	57	43	
5	Introduce a levy system catering for all cadres of the workforce	88	12	

6.7 The interventions perceived by the stakeholders as being appropriate to improve the delivery of Enterprise based training

The investigation of the perceived interventions to improve Enterprise based training delivery was based upon the research objective number four. The results were as here below:

(a) Revise the Industrial Training Act (ITA) and convert the DIT into a Semi Autonomous Government Agency (b) change the mode of levy contribution from per capita to one based on a percentage of the payroll or wage bill, (c) bring on board all categories of employers and enterprises, (d) train all cadres of staff employed by the contributing enterprise, (e) introduce linkage between levy reimbursement and levy contribution, (f) equip the DIT training centres with appropriate new equipment,

rehabilitate the old and make Information Communication Technology a cornerstone of the DIT technical training for the foreseeable future, (g) recruit more staff and institute retention and motivational measures for them, (h) introduce regular further training for instructional staff in industry to acquaint them with technological changes, (i) enhance service delivery to the employers by appropriate and timely training approvals and timely training reimbursement, (j) provide appropriate operational resources such as vehicles to the levy inspectors, (k) step up the awareness campaign through normal communication with employers and also through the mass media and (l) since the ITA bound the government, the government should pay the Enterprise based training levy appropriately.

6.8 The conclusions of the study

From the results and findings the following conclusions were made:

- The prevalence of Enterprise based training among the manufacturing enterprises in Nairobi was high at 87% (refer to section 1.2, 3) and there was a positive though low impact (since $b_1=9.94\%$) of Enterprise based training on Enterprise performance amongst the manufacturing enterprises in Nairobi and hence Enterprise based training was a viable instrument to be used for both policy and programme intervention.
- There was a significant difference at the 5% level of significance between the innovativeness of the Training and that of the Nominal non-training manufacturing enterprises in Nairobi but there was no significant difference at the 5% level of significance between the Training and that of the Nominal non-training manufacturing enterprises with regard enterprise growth and productivity as well as the overall enterprise performance. It was concluded that this state of affairs was brought forth by the inappropriate targeting of the EBT support only to the innovative (supervisory and managerial) and not the productive (operational and clerical) arms of the manufacturing enterprises by the Industrial Training Levy Fund among other things.
- Taking into account the finding that there was a positive though low relationship between Enterprise based training and Enterprise performance (since the b_1 linear regression constant was positive at 0.0994) the researcher concluded that, Enterprise based training had

contributed to the performance of the participating enterprises supported by the ITLF even though the differences in the growth and productivity attributes were not significant at the 0.05 level. Based on the higher b_1 (0.2059) for the training enterprises as compared to b_1 (0.0434) for the nominal non-training enterprises, it could be concluded that it was prudent to encourage the non-training enterprises to train.

- Further, the training manufacturing enterprises practiced one form or the other of EBT while only seventy seven per cent of the Nominal non-training manufacturing enterprises practiced one form or the other of EBT. It was hence concluded that it was prudent for the DIT to encourage the Nominal non-training manufacturing to undertake ITLF supported training with a view to improving their enterprise performance.
- The constraints that hindered the delivery of enterprise based training as established in the findings revolved around the inappropriateness of the Industrial Training Act and also the inadequacy of finance, staffing and the provision of operational tools such as modern training equipment and operational vehicles. The constraints were hence both structural and operational.
- The perceived interventions to remedy the delivery of enterprise based training as established in the findings revolved around the review of the ITA to give the DIT the appropriate semi-autonomy, appropriate industrial democracy and the provision of adequate operational tools such as staffing, appropriate training equipment, financing and operational vehicles. The interventions were hence structural and operational.
- The relevant b_0 line regression constants were all positive but rather low. This was with respect to the growth, the innovativeness as well as the overall Enterprise performance. This meant that there was a residual Enterprise performance that could not be explained by the absence of Enterprise based training. The researcher concluded that this was consistent with the existence of other contributory factors to Enterprise performance such as investment and production capabilities.

6.9 The recommendations of the study

Arising from the foregoing conclusions the study makes the following recommendations:

1. That the EBT provision support by the Industrial Training Levy Fund be expanded to cover all enterprises and all cadres of workers in industry in order to support both the innovative as well as the productive arms of the enterprises as provided by existing legal mandate.

2. That EBT provision support be enhanced so that it may be used by the Government of Kenya (GOK) and by other development agencies as an instrument for both policy and programme intervention in national development.

3. In order to accord the DIT the ability to acquire the appropriate operational tools without a lot of bureaucracy, the DIT should be accorded semi- autonomous status by GOK in line with the wishes of the stakeholders.

4. That EBT be used by enterprise owners and managers together with investment and production capabilities to enhance the enterprises' total performance with a view to facilitating national development.

5. That management of the Industrial Training Levy Fund be strengthened by the DIT through staffing and training so as to enhance the institutions financial viability and capability in order to place it in a position to further support EBT delivery among the Kenyan enterprises and thus improve their Enterprise performance with a view to contributing to the realization of the national development objectives.

6. That the mode of levy contribution be linked by the stakeholders to the payroll so as insulate the ITLF from the vagaries of inflation and also the non-responsiveness of the training committees to increase the levy payment.

7. That the levy contribution rate be set by the stakeholders appropriately taking into account the requirements of the legal mandate as well as the needs of competition both regionally and internationally.

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Chapter Seven

The Role of Harambee Contributions in Corruption: Experimental Evidence from Kenya

Abraham K. Waithima¹⁸

7.1.0 INTRODUCTION

This chapter presents an experiment involving a public good game and a common pool resource game to investigate if individuals compensate their "Harambee" contributions by engaging in corruption. The results show an inverse relationship between public good contributions and common pool resource extractions, in that cooperators in public good contributions extract less from the common pool resource. To the extent that the experiment mimics the alleged link between contributions to harambee and corrupt acts of embezzlement ex-post, the basis for blaming harambee on corruption is not established by the results. Consistent with the findings documented in Henrich et al, 2001 which showed that Kenyan subjects brought their everyday experience of harambee into the public good setting, this paper also documents the fact that participants in the games brought their real life experience of harambee to bear on their decisions. This highlights the important and potentially positive reinforcing role that social norms and institutions can have on individual decisions.

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7.1.1 Background

Harambee (Swahili word for "let us all pull together") is a self-help initiative in Kenya that is used to bring people together to contribute towards the provision of communal goods. So important has been the initiative that over the period 1980-1984, 12% of all national capital formation was through harambee (Ngau, 1987) while by the end of 1980s, about 50% of all secondary schools were built through the initiative (Transparency International, 2003). With time, politicians found harambee to provide an appropriate avenue to sell their candidature to the electorates. Harambee contributions began to be seen as a ticket for politicians to buy their way into public offices for them to compensate themselves by engaging in corruption once elected to public office (Waiguru, 2002). Because of its alleged link to corruption, the Public Officer Ethics Act (POAE) of 2003, outlawed the personal involvement of public officers in organizing harambees (Chweya, 2005). This paper makes a contribution by using experimental games to investigate the alleged link between harambee and corruption by examining whether individuals compensate their public good contributions (akin to harambee contributions) by their level of extraction from a common pool resource ex-post.

The original spirit of Harambee was that individuals would voluntarily contribute their resources in form of cash, although labour and other materials were also welcome towards the provision of a communal good (Ngau, 1987). Harambee was popularised in Kenya immediately after independence by her first president when he made the remarks:

¹⁹"But you must know that Kenyatta alone cannot give you everything. All things we must do together to develop our country, to get education for our children, to have doctors, to build roads, to improve or provide all day-to-day essentials. I give you the call: Harambee!" (Jomo Kenyatta, 1963)

Several factors have been cited as contributing factors to the success of harambee which include the local nature of the goods financed through

¹⁹ This remark was made by Kenya's first president, Jomo Kenyatta in his first address to the nation in 1963 after independence. Kenyatta is credited to have popularised the harambee initiative in the country.

harambee where each donor sees their direct benefit from the good (Wilson, 1992). Secondly, the projects funded through harambee are mainly in the rural areas which are characterized by a stable population who are closely-knit together (Barkan & Holmquist, 1986). In a stable population, those who contribute towards a project can see their long-term benefits from the project.

With time, harambee became a way of life in Kenya (Ng'ethe, 1979) and a traditional custom of Kenyans (Government of Kenya, 1997). The gains made in Kenya through harambee cannot be overstated. Through the harambee initiatives, dispensaries, churches and especially schools have been built (Chieni, 1998).

Towards the end of the 1980s, harambee had transformed itself into a lubricant of political corruption as harambee contributions became a measuring rod of the performance and suitability of political candidates especially towards a general election (Kibwana et al, 1996). From voluntary contributions, harambee contributions effectively became mandatory mainly enforced by the provincial administration, where public servants such as chiefs would decline rendering a service to a common citizen until they made a contribution towards a harambee. The harambee contributions were not just enforced on the citizens but they almost became a prerequisite for businessmen getting government contracts especially if the harambee was presided over by politicians (Chweya, 2005). Professionalism in execution of government contracts was in turn replaced by the level of generosity of businessmen's harambee contributions (Kibwana et al, 1996). At the provincial administration level, in a number of cases government service would only be rendered at the exchange of harambee contributions (Transparency International, 2003). Without proper accountability of the funds raised in harambees, those charged with the responsibility of overseeing the utilization of the funds began to misappropriate the funds and as a consequence, many Kenyans came to view harambee as a source of bribery and extortion (Kibwana et al, 2001). In politics, harambees had become an auction where poor voters sell political offices to the highest bidder, and politicians buy occupancy of local councils, parliament and even presidency (Transparency International, 2003). While the poor in Kenya view harambee as a means of uplifting their conditions, to the politicians it is an avenue of selling themselves to the public. In a sense, harambee has led to the commercialization of leadership and power,

making it impossible for less endowed people to compete with the rich for leadership positions. Towards the end of 1990s, politicians from the opposition were already calling for the banning of harambees because of its alleged link to corruption.

Even though harambees have been linked to corruption, there has not been any empirical work to establish the relationship between the two. It is this gap that this paper seeks to fill by exploring the role of harambee in corruption using experimental methodology. Previous work on public good games in Kenya is scant. A widely cited study on the effects of social norms on contributions to a public good game is Henrich et al (2001). Using subjects from 15 small-scale societies to run ultimatum, dictator and public good game, the study found the Orma community from Kenya to double their contributions in the public good game once they understood the game to be a harambee one. This finding shows the entrenchment of the harambee spirit in the minds of Kenyans.

Using a set up similar to the one by Sell and Yeongi (1997) and Fehr and Leibbrandt (2008), this paper uses a two-stage experiment consisting of a one-shot public good game in the first stage and a one-shot common pool resource game in the next. Sell and Yeongi's paper sought to determine if public goods and common pool resources generate equivalent levels of cooperation when payoffs are the same. The interest was driven by the social dilemmas presented by public goods and common pool resources. The dilemmas are generated by different decisions that individuals have to make. In a public good game, the dilemma arises from the fact that a player is asked to give up some of his resources in order to create a common resource to be shared by all. On the other hand, in a common-pool resource game, a player is asked to restrain from extracting from a resource he has a stake in jointly with others in his group. Sell and Yeongi (1997) found more cooperation in common pool resource extraction than in public good contributions, which they attributed to loss aversion and endowment effects²⁰

²⁰ In the case of public good provision, a member of a group is required to give up some of their endowment to acquire a public good to be shared by all members of the group. Both loss aversion and endowment effect work against cooperation in public good provision. In the sustenance of a common pool resource, a member is asked to restrain from extracting from an endowment that he owns jointly with the other members of his group. Both loss

Fehr and Leibbrandt (2008) used a similar procedure by combining a public good game and a common pool resource field experiment. They sought to examine the role of other-regarding and time preference for cooperation among fishermen in Brazil. They conducted a public good experiment followed by a field experiment to examine the mesh sizes of the fishnets used by fishermen. They found fishermen who were more cooperative in the public good experiment used nets with bigger mesh sizes thus exploiting the fishing ground less and imposing fewer future negative externalities on others and themselves.

This paper presents evidence of an inverse and significant relationship between individual levels of public good contributions and the level of common pool resource extractions. To the extent that public good contributions approximate harambee contributions, this paper does not find support for the allegations that individuals compensate their harambee contributions by over extraction ex-post. Instead, this paper finds cooperators in harambee to be other-regarding in common pool resource extractions. Consistent with the endowment effect and loss aversion, the results show more cooperation in subjects' restraint from taking from a common pool resource than in public good contribution. This accords with the findings by Sell and Yeongi (1997).

The findings also support the important role that socioeconomic factors play in the management of common resources. In line with the vast literature that shows the adverse effects of heterogeneity on common resource management, this paper finds both ethnic and gender heterogeneity within groups to have significant negative effects on common resource provision and maintenance.

Following this introduction, the rest of the paper is organized as follows: section 2 presents the social dilemma arising from common resources, section 3 presents the experimental design, section 4 reports the results while section 5 offers some discussions and concludes.

aversion and endowment effect work to maintain cooperation in the sustenance of a common pool resource.

7.2.0 Social dilemma arising from common resources

Non-excludability makes public goods and common pool resources prone to the problem of free-riding and overexploitation respectively. The difference between public goods and common pool resources lies in their level of subtractability (Camerer, 2003). While public goods are considered low in subtractability and one person's use does not appreciably limit the use by the other, a common pool resource, is high in subtractability in that one person's use limits another's.

Taylor and Ward (1982) highlight several conditions under which a public good game will take the form of a prisoner's dilemma. Among these conditions is if each player does best for himself by free riding while the others contribute²¹. Without compulsory contributions, harambee fits perfectly into a prisoner's dilemma case. If a single harambee initiative is able to raise the funds required for a particular public good, this then would be like an n-player one-shot public good game. Some studies such as Maxwell and Ames (1981) and Gintis (2000) found that in a one-shot public good game, most subjects contribute half of their initial endowment towards the public good and therefore shows that not everyone behaves purely selfishly in a one-shot public good game.

Free riding becomes evident with repeated public good games with the level of contributions decaying as the game progresses. The decay in contributions has been attributed to learning and strategies hypotheses (Andreoni, 1988). Utilizing games where individuals were matched as partners in some groups and strangers in others, Andreoni (1988) found both hypotheses to be insufficient in explaining the decay in contributions, and argues that the decay is rather brought about by a group's attempt to establish a social norm of punishing free-riders. Further explanation of the decay in public good contributions is "regret theory" (Loomis & Sugden, 1982). The theory posits that if a subject in one round of play discovers that he did better by free riding, he becomes "elated" and is likely to free ride more in the next round. On the other hand if a subject discovers that he did worse in one round (contributed more than other group members), he has "regret" and will cut down his contributions in consequent rounds. The

²¹ Other conditions are (a) if no player can profitably provide any of the good by himself and (b) if all players contribute, each player's welfare is improved.

combined effects of the formerly "elated" and "regret" subject is decay in contributions as the game progresses.

A common pool resource consists of a natural or humanly created resource which is large enough to make it costly to exclude potential beneficiaries (Carpenter, 1998). The common pool resource dilemma was first identified by Gordon (1954) in the fisheries sector. The difficulty of exclusion and the high subtractability of a common pool resource leads to the common pool resource dilemma that Hardin terms as "the tragedy of the commons" (Hardin, 1968). The unsustainability of common pool resource stems from the conflict between individual and collective interests. Cooperation in common pool resource is measured by an individual's measure of restraint in extraction from the common pool resource. Ostrom et al, (1992) show that communication among group members immediately following a session of interaction can be an effective tool in boosting cooperation. They specifically found the net yield from a common pool resource to rise to an average of 74% of the maximum yield directly after allowing communication. However, even with communication, net yield declines to an average of 55% as the game progresses over subsequent rounds. Sell and Yeongi (1997) using a one-shot public good and common pool resource game and a simple payoff structure found cooperation in the common pool resource extraction to be 62.8% on average compared to 49.6% in the public good game.

Just as with a public good, the social dilemma arises because an individual's payoff is higher when they defect than when they cooperate. Yet all users of the common pool resource get lower payoffs if all defect than if they cooperate (Dawes, 1980). The dominant strategy in a common pool resource game is for a subject to extract more than their fair share of the resource. Laboratory experiments show voluntary cooperation among subjects in order to sustain common pool resources or public goods (see Camerer, 2003; Croson, 2008; Fehr & Gächter, 2000; Ledyard, 1995) especially if other subjects cooperate (see Fischbacher et al, 2001; Frey and Meier, 2004; Shang and Croson, 2008). In contributing to a public good and maintaining a common pool resource, some studies have shown that subjects care about the welfare of others (other-regarding preferences) (see Andreoni, 1988; Bolton and Ockenfels, 2000; Charness and Rabin, 2002; Dufwenberg and Kirchsteiger, 2004; Falk and Fischbacher, 2006).

7.2.1 Socioeconomic factors and common resources

Heterogeneity, whether in the form of ethnicity, gender or income, has been shown to affect cooperative behavior. Individuals are likely to cooperate more when there is a sense of group identity, which is stronger in more homogenous groups where members develop a group identity based on what they are, do or have (Kramer & Brewer, 1984). Cardennas (2003) shows that participants' wealth and inequality within a community reduces cooperation in the usage of a common resource when groups were allowed to have face-to-face communication between rounds. LaFerrara (1998) found a similar relationship between a community's income inequality and the degree of participation in groups which provide economic benefits or informal insurance to their members in Tanzania.

Ethnic heterogeneity has also been shown to impact on public good provision. Banerjee et al, (2005) shows that more caste or religious fractionalization across Indian states is associated with lower levels of public good provision. Across communities in Northern Pakistan, Khwaja (2000) found that infrastructure is better maintained where there is less heterogeneity in terms of clan, religion and political division. Using school records in western Kenya, Miguel and Gugerty (2004) try to determine if ethnicity enforces social sanctions, and find that where a greater percentage of parents of a particular school are drawn from the same ethnic group, such schools tend to be better funded than where parents are drawn from diverse ethnic groups. These results are similar to Goldin and Katz (1997) who finds that public secondary schooling expanded slowly in ethnically diverse U.S. school districts from 1910 to 1940. For U.S. school funding, similar results were found by Alesina et al, (1999) and Poterba (1997).

The reason for better funding of a school where parents are ethnically homogenous, as Miguel and Gugerty (2004) argue, is that such parents are better able to impose social sanctions so as to minimize free-riding. This result is supported by Besley et al, (1993) and Habyarimana et al, (2007a). Habyarimana et al, (2007a) for example, using experimental games among subjects drawn from slums in the neighborhood of Kampala, identify three mechanisms that link ethnic heterogeneity to public good under provision namely "preferences", "technology" and "strategy selection". Successful public good provision in a homogeneous ethnic community is attributed to a strategy selection mechanism in which co-ethnics play cooperative

equilibria whereas non-coethnics do not. Besley et al, (1993) find no evidence for a prominent preference mechanism that emphasizes the commonality of tastes within ethnic groups. This is in contrast to the finding by Bates (1973) who finds ethnic groups that are geographically concentrated may have divergent interests over outcomes that have a geographical component, especially the location of public investments. Co-ethnics are willing to bear the cost of providing a public good if they believe that most of the beneficiaries will be co-ethnic, and this may account for the high rate of provision for public goods in a homogeneous community (see for example Vigdor, 2004; Poterba, 1997).

While there is consensus about the negative effects of ethnic heterogeneity on public good provision, the evidence on gender is far more mixed. Women have been found to be more cooperative in contributing towards public goods than men (see for example Kleiman and Rubinstein, 1996; Seguino and Lutz, 1996; Nowell and Tinkler, 1994). This finding is attributed to the difference in how men and women perceive moral problems. While women perceive the moral problem as being about care and relationships, men think about morality in terms of rights and rules (Gillian, 1982). Other researchers have, however, found women to contribute significantly less than men towards public good provision (see for example Brown-Kruse and Hummels, 1993; Sell and Wilson, 1991; Rapoport and Chammah, 1965). Cadsby and Maynes (1998) using the same experimental design as Brown-Kruse and Hummels (1993) do not find significant difference between men and women's contribution towards public good. Both Cadsby and Maynes (1998) and Nowell and Tinkler (1994), however, found higher cooperation in an all-female group which they attributed to the tendency of females to behave more like each other.

These studies differ in their experimental design in several respects such as whether they are repeated or one-shot games, the freedom given to the subjects regarding the amount to contribute, with some allowing subjects to contribute any amount while others required subjects to contribute all or nothing, the ability of the subjects to monitor the actions of the other group members, and finally the level of interaction allowed between subjects. The differences in experimental design, to a large extent might account for the differences in the findings.

Just like the effects of gender and gender composition on common resources are varied, so is the effect of group size. Kollock (1998) and

Poteete & Ostron (2004) for example show that group size can have adverse effects on common resource management coming through its effect on group trust. As group size increases, so does the degree of divergence in interest, thus eroding the opportunities for frequent interactions to build reputation. This in turn erodes cooperative behavior. There is, however, no consensus that group size increases free riding, Bonacich, Shure, and Meeker (1976) using an N-person prisoner's dilemma tasks reported mixed results on the effect of group size and cooperation²²

Isaac and Walker (1988) clarify that it is not the pure "number effect" that leads to free riding. Rather it is the decline in marginal per capita return (MPCR) as the group size grows. When MPCR to investment in a public good is adjusted to compensate for the increase in group size, the conventional hypothesis that free riding is exacerbated in large groups is not supported (Isaac & Walker, 1988). It is only when MPCR declines with group size that the conventional hypothesis is supported. The effect of group size on common resources is also dependent on the marginal cost of individual contributions. If the marginal cost is sufficiently high, the probability of success increases with group size in which case larger groups achieve higher levels of collective provision than smaller ones (Esteban & Ray, 2001).

7.3.0 Research methodology

Many studies on corruption including the well established Corruption Perception Index (CPI)²³ by Transparency International have relied mainly on survey data. Questions abound on the reliability of the findings of such research. The questions emanate from doubts about to whether people truthfully report their involvement in corruption. Three general concerns regarding survey data based on behavioral questions have been raised,

²² Similarly, Gaube (2001) and Lipford (1995) show that contributions by church members does not decline with an increase with membership.

²³ Corruption Perception Index (CPI) combines information from different expert and business surveys on the perceived level of public-sector corruption in a country. The index ranges from 0 (most corrupt) to 10 (least corrupt).

these relate to "hypothetical bias", "idealized persona bias" and "incentive compatibility" (Carpenter, 2002).

To illustrate hypothetical bias, consider the likely response to the question "Would you ever accept a bribe offered to you?" An individual's response to this question can only be hypothetical and may not necessarily reflect what the individual would do if they were actually offered a bribe. The idealized persona bias can be illustrated by the response to the question "How many times in a week do you encounter situations where a bribe is demanded from you?" A person answering this question may either respond on the basis of what he thinks the researcher wants to hear or in relation to what he would like to be. The incentive compatibility issue with survey data arises from the fact that there is no incentive in survey research for the respondent to take the survey seriously (Bertrand & Mullainathan, 2001).

The challenges with studying corruption using surveys are compounded by the secrecy of corruption involvement because of its illegality. Experiments then become a natural alternative in studying corruption. Laboratory experiments offer the possibility to overcoming unobservability of corrupt activity by generating data from a bribery game while controlling the environment and the characteristics of the subjects involved (Roth, 1988). In an experiment, a subject is confronted by a non-trivial amount of money and his final payoff is solely dependent on his actions in the experiment. The monetary reward acts as an incentive for the subject to reveal his type. To show the different results obtained from surveys and experiments, a number of studies have compared "measure of trust" findings from both survey and experiments (see for example Glaeser et al, 2000; Burks et al, 2008; Glaeser et al, 1999; Ben-Ner and Puttermann, 1999). These studies find measures of trust from experiments to be largely uncorrelated with responses to survey questions designed to measure social capital. They find that respondents who indicate they are trusting do not exhibit this trust in an experiment with monetary stakes.

Similar discrepancies have emerged when findings from surveys and experiments on corruption are compared. A good example of this are the findings from two key surveys that show women to be less corrupt than men (see Dollar et al, 2001 and Swamy et al 2001). The findings of these two studies have been the basis for advocating for the greater involvement of women in the public service. Most experiments on gender and corruption

have however not found gender differences in corruption (see for example Alatas et al, 2009; Armantier and Boly, 2008; Frank and Lamsdorff, 2008)²⁴

The difference in the findings may be attributed to the difference in what the two sets of studies were investigating. For example, in one of the surveys that Swamy et al (2001) conducted, the researchers examined responses to hypothetical questions on whether one can be justified for accepting a bribe in the line of their work. A larger percentage of women (77.3%) than men (72.3%) supported the statement that "someone accepting a bribe in the course of their duties can never be justified". However, the fact that a respondent does not think that accepting a bribe is justifiable does not mean that they would not act corruptly when offered an actual bribe.

There is obviously a need for being cautious in interpreting experimental findings and their general application because conditions in a laboratory differ from those in the real world with all its complexity. The second reason for the caution is the fact that experiments mainly draw their subjects from students who are not a representative of the general population. Levitt and List (2007) and List (2006) have suggested the incorporation of field experiments to complement laboratory experiment findings. On this front, the evidence in relation to corruption is encouraging. Armantier and Boly (2008) conducted a bribery game combining a lab experiment in Montreal and a field experiment in Burkina Faso. While the study did not find any difference with regard to subjects acting opportunistically in both the laboratory and field set up, increasing the bribe amount was found to exacerbate corruption in the field set up but not in the laboratory situation²⁵

²⁴ In contrast, other experimental studies have found gender differences in the propensity to act corruptly (see for example Rivas, 2008; Frank and Schulze, 2000).

²⁵ The experiment involved grading of exam papers where the 11th paper had some US\$ Bills and a message stating "Please find few mistakes in my exam paper". To distinguish between laboratory and field experiment, subjects in the laboratory set up were informed that they were involved in an experiment while those in the field set up were only made aware that they were in an experiment after they had graded the papers.

This paper adopts experimental games as a research methodology first because of the novelty of the methodology in the Kenyan context and secondly because all studies on corruption in Kenya have been based on surveys. Thus, not only will this work contribute to the existing work on corruption but it will also make a significant contribution in the use of experimental methodology in the Kenyan context.

7.3.1 Experimental design

The experimental design used in this paper attempts to mimic the allegations that harambee contributors compensate their contributions to harambee by engaging in corruption ex-post. The two-stage experiment consists of a public good game played first followed by common pool resource game²⁶.

The games were played in groups of 10 randomly assigned subjects. The set up, as pointed out earlier, is adopted from Sell and Yeongi (1997)²⁷ whose objective was to determine if levels of cooperation are similar in respect of public goods and common pool resources. The motivation for adopting Sell and Yeongi's model is its simplicity and the fact that it uses similar payoff functions in both the public good and common pool resource games. The public good game set up fits into what is generally referred to as a simple

²⁶ It would have been informative if the games could have been played in reverse order as well to provide clarity on the direction of causality. This was not possible mainly because of two reasons. First is the objective of the chapter is to investigate if individuals compensate their public good contributions by their extractions from the common pool resource. Secondly, is the budgetary constraint.

²⁷ Sell and Yeongi's experiment consisted of groups of four. In the public good game each member was endowed with 25 tokens which he could invest in either a private account earning one cent per token or a group account earning three cents. The group earning would then be shared equally among the group members regardless of individual member's investment. In the common pool resource game, each individual was given a chance to withdraw from a group account to invest in a private account. The earnings in the private account was one cent and whatever remained in the group account earned three cents per token which would be shared equally among the group members irrespective of what an individual had withdrawn from the group account to invest in the private account. Both the public and common pool resource had similar payoff function with MPCR equal to 0.75.

linear public good game adopted from Isaac and Walker (1988)²⁸. For the common pool resource game, Ostrom et al (1992) use a more complicated payoff function where the yield from the common pool resource reaches a maximum when individuals invest some but not all of their endowment in the common pool resource²⁹.

The two stages of the experiment are explained below.

7.3.1.1 Stage one: The public good game

The public good game began with each member of a group getting an initial endowment W (100 tokens). From their endowment, each member was given a chance to privately and anonymously make a contribution $X_i \in$

²⁸ The payoff for the i^{th} player in group j in Isaac and Walker's set up is determined as:

$$P_{ij} = W_i - x_i + (1/n)G(x_i + \sum_{x_j}) \dots\dots\dots(1)$$

Where W_i is the initial endowment for player i , x_i is his contribution to public good, n is the group size, G is the pool's growth factor and \sum_{x_j} is the sum of the other players contribution to public good.

²⁹ As such the payoff function for individual i in Ostrom, Walker, and Gardener (1992) is given as:

$$\begin{aligned} u_i(x) &= we \text{ if } x_i = 0 \\ &= w(e - x_i) + \left(\frac{x_i}{\sum x_i} \right) F(\sum x_i) \text{ if } x_i > 0 \dots\dots\dots(2) \end{aligned}$$

Where e is an individual's resource endowment, x_i is individual i 's investment in common pool resource and $0 \leq x_i \leq e$. w is the normalized marginal payoff when investment is outside of common pool resource. $F(\sum x_i)$ is a production function that specifies the group return to investment in the common pool resource. F is a concave function, with $F(0) = 0$, $F'(0) > w$ and $F'(ne) < 0$. n is the group size.

Equation 2 reflects the fact that if individuals invest all their endowments in the outside alternative, they get a sure payoff we , whereas if they invest some of their endowments in the common pool resource, they get a sure payoff $w(e - x_i)$ plus a payoff from the common pool resource, which depends on the total investment in that resource $F(\sum x_i)$ multiplied by their share in the group investment $\left(\frac{x_i}{\sum x_i} \right)$. The set up in Ostrom et al (1992) deals with a man-made common pool resource which depends on individual contributions for its sustenance. The common pool resource adopted in this thesis is a natural resource such as a fishery from which individuals extract and where an individual's contribution to its sustenance is in their restraint in extraction.

[0, 100] to their group kitty which grew at rate h where $1 < h < n$. At the end of the game, the common kitty was shared equally among the group members regardless of one's contribution. Under these general rules, a subject's utility function is of the form:

$$U_i = f\{h(X_i, X_{-i})\} \dots\dots\dots(3)$$

Where h is the growth factor

X_i = the amount contributed by the i^{th} member to the group kitty.

X_{-i} = the amount contributed by other members.

For the i^{th} member, $\frac{\partial U_i}{\partial X_i} > 0$, $\frac{\partial U_i}{\partial X_{-i}} > 0$, $\frac{\partial U_i}{\partial (W-X_i)} > 0$ while $\frac{\partial U_i}{\partial (W-X_{-i})} < 0$. A player's payoff is increasing in the amount of his contributions but each token contributed to the public good provides a private return that is less than the contribution (Hofmeyr et al, 2007). For example, assuming $h = 5$ and $n = 10$ then the marginal per capita return (MPCR) is 0.5^{30} . A group member faces a dilemma as to how much to contribute to the public good and how much to keep for himself. An individual's payoff in group j at the end of the game is:

$$P_{ij} = W - X_i + \frac{h(\sum_{i=1}^n X_i)}{n_j} \dots\dots\dots(4)$$

Let $h(\sum_{i=1}^n X_i) = \Omega_j$ so that $P_{ij} = W - X_i + \frac{\Omega_j}{n_j}$. Table 7.1 shows payoffs in a two-player public good game where Ω_{jmk} is the group's kitty when both players cooperate, Ω_{jm} and Ω_{jk} are respectively the kitty when only player M or K cooperates while the other defects.

³⁰ For group j , $MPCR_j = \frac{h}{n_j}$. In the true sense of a public good, the public good described here does not fit a "pure" public good which is characterized as having perfect nonrivalry in consumption. For a pure public good, increasing group size does not reduce the marginal benefit of the public good to other consumers. The public good described here fits into the "impure" public good which can be jointly consumed but in which increases in group size tend to diminish the marginal benefit to all consumers (Isaac & Walker, 1988).

Table 7.1: Payoffs for a two-player public good game

Player M	Player K	
	Cooperate	Defect
Cooperate	$W_m - X_m + (\frac{\Omega_{jmk}}{2})$	$W_m - X_m + (\frac{\Omega_{jm}}{2})$
	$W_k - X_k + (\frac{\Omega_{jmk}}{2})$	$W_k + (\frac{\Omega_{jm}}{2})$
Defect	$W_m + (\frac{\Omega_{jk}}{2})$	W_m
	$W_k - X_k + (\frac{\Omega_{jk}}{2})$	W_k

From the payoffs, it is Pareto efficient for both players to cooperate and contribute their entire endowment to the public good since their payoffs would be higher than any other payoff. The set up of the game presents one dominant strategy; that of defection since each individual can do better by free riding on the other members' contributions. Just as in a prisoner's dilemma (PD), defection in public good games is a Pareto inferior strategy even though a dominant one. If all members defected, everyone would end up getting their initial endowment equal to W .

In the current set up, if all members of a group defected, everyone ended up with 100 tokens. At the other extreme, if every member cooperated by contributing their entire endowment, each would end up with 500 tokens.

7.3.1.2 Stage Two: The common pool resource game

At this stage, each group was given an initial endowment $G = 1000$ tokens and each member of a group was given a chance to independently and anonymously extract an amount $R_i \leq G$ from the pool. Each subject kept to himself the amount he extracted from the pool. The amount that each left in the pool grew by a factor g where $1 < g < n$. So as to avoid retaliation in extractions, each member of a group found the pool with similar amount i.e. G . In this set up the i^{th} player in group j faces a utility function of the form:

$$U_i = f\{R_i, R_{-i}, g(G - R_i, G - R_{-i})\} \dots \dots \dots (5)$$

Where R_i is the i^{th} player's level of extraction.

R_{-i} is the level of extraction by the other players.

$G - R_i$ is the amount left in the resource pool by the i^{th} player

$G - R_{-i}$ is the amount left in the resource pool by the other players

For the i^{th} player $\frac{\partial U_i}{\partial R_i} > 0, \frac{\partial U_i}{\partial R_{-i}} > 0, \frac{\partial U_i}{\partial (G-R_i)} > 0$ and $\frac{\partial U_i}{\partial (G-R_{-i})} > 0$. The payoff for i^{th} player in group j is:

$$F_{ij} = R_i + \frac{g\{\sum_{i=1}^n (G-R_i)\}}{n_j} \dots\dots\dots (6)$$

For a player, the marginal utility derived from the amount extracted is higher than the amount he leaves in the pool, thus $\frac{\partial U_i}{\partial R_i} > \frac{\partial U_i}{\partial (G-R_i)}$ since whatever he leaves in the pool is shared equally by all the group members. Just as in the public good game, in the common pool resource game, a player faces a dilemma of how much to extract for himself and the amount to leave in the common pool. A player's utility is increasing in the amount left in the common pool as well as in the amount extracted. However, the net yield of a unit left in the common pool yields to the player less than a unit he extracts. Assuming $g=5$ and $n=10$ then the MPCR from a one unit resource left in the pool is 0.5 and an individual can always do better by extracting more than their fair share of the common pool resource.

In the common pool resource game, cooperation is measured by the level of restraint from extracting. If all members of a group cooperated fully, each would end up with a payoff of 5,000 tokens. Using the notations of the utility function in equation 5, Table 7.2 presents the payoffs for a two-person common pool resource game. But just like in the prisoner's dilemma whose equilibrium is defection, the equilibrium in this game is to extract the full amount of the common pool resource. In equilibrium then, each player ends up with a payoff less than the Pareto efficient one³¹. A potential hypothesis is that an individual who is concerned about fairness and equity could only extract for himself $R_i \leq R_j = \frac{G}{n_j}$ while one who is selfish would extract $R_i > R_j$.

³¹ Note that $G < (R_j + g(G - R_j))$ since $1 < g < n$. Most groups had a membership of 10 subjects and $g=5$. The value of g and G was common knowledge to all the subjects.

Table 7.2: Payoffs for a two-player common pool resource game

Player M	Player K	
	Defect	Cooperate
Defect	G	$G + \frac{g}{2}(G - R_j)$
	G	$R + \frac{g}{2}(G - R_j)$
Cooperate	$R_j + \frac{g}{2}(G - R_j)$	W_m
	$G + \frac{g}{2}(G - R_j)$	$R_j + \frac{g}{2}(G - 2R_j)$

7.3.2 Game procedure

On the day of the experiments, subjects gathered in a large hall and the principal researcher explained that in groups of 10 people they would take part in a two-stage experiment.

In the first stage each member would receive an initial endowment of 100 tokens from which each would have a chance to voluntarily and independently make a contribution to a common kitty. The experimenter would then multiply the sum of a group's contributions by five and the proceeds would be shared equally among the group members, irrespective of an individual member's contribution. In the second part of the game, subjects were informed that each member of a group would be given a chance to privately extract resources from a common pool (1000 tokens for each group). A subject would keep for themselves the amount they extracted. Whatever remained in the common pool after each member of a group had their chance to extract something for themselves would be multiplied by 5 and thereafter be shared equally among the group members irrespective of what an individual member appropriated to himself.

Subjects were informed that no member would get to know how much the other members of the group had either contributed in the first game or extracted in the second game. A member's payoff would be dependent on his own actions in the game and that of the other members of his group. Examples of how individual actions in the game impacted individual and group payoffs were worked out in addition to the time allocated for questions.

After the explanations, subjects were randomly grouped into groups of ten³² and allowed time to interact, get to know each other and lay strategies to maximize their group payoffs. Each group was given the opportunity to independently clarify whatever was unclear with the principal researcher. Once the procedures were clear, each group was directed into a classroom in which there was a computer and a research assistant³³. Each group sat facing away from the computer. This was done to ensure that each subject's decisions in the games were strictly private. The computer interactive interface displayed on each subject's computer screen is presented on table 7.10 in the appendix³⁴. Once a subject had had his chance to play the game, he was requested to fill in an electronic questionnaire. Note that no subject got to know his payoff until each member of a group had played the game. The questions in the questionnaire were about bio-data and a subject's opinion about harambee and corruption. To avoid interaction between those who had had their chance to play the game and those who were waiting for their turns, once a subject was done, he/she was directed to a waiting hall.

³² In a number of centres, the number of participants was not exactly divisible by 10, some groups ended up with fewer or more subjects. See Table 8. 4 for a summary of the group sizes. Since the growth factor remained the same, MPCR declined with the group size. The growth factor was held constant mainly to keep the games simple and the fact that the games were pre-programmed.

³³ To ensure consistency of instructions, the same research assistants were used in all the universities.

³⁴ Note that each subject made their decision on how much to extract from the common pool resource immediately after their decision on how much to contribute to the public good. Only once an individual had completed both decisions, was the next member of the group invited^{to play} the game. A subject only got to know the combined payoff when every member of the group had had their chance to contribute towards the public good and extract from the common pool resource.

7.3.3 Subject pool

The experiment was conducted among 941 undergraduate and postgraduate students drawn from 14 universities and colleges spread all over Kenya. The universities are located in the various Kenyan provinces. On average 67 students from each university or college took part in the experiment. Of the 941 students, 644 (representing 68.4%) were male and the majority (98%) of the subjects were in the age bracket 18-30 years. The ethnic and religious distribution of the sample is presented in Table 7.3.

Table 7.3: Demographic distribution of the sample

Gender composition	
	Percent
Male	68.4
Female	31.6
Ethnic composition	
Kikuyu	36.7
Luhya	12.3
Luo	11.7
Kalenjin	14.6
Kisii	5.7
Kamba	9.14
Others	9.78
Religious composition	
Protestant	69.9
Catholic	24
Muslim	4.6
Others	1.5

In total, there were 99 groups with group sizes ranging from six to twelve. Table 7.4 presents a summary of the group sizes and the mean public good contribution and common pool resource extraction per each group size.

Table 7.4: Public good contributions and common pool resource extractions on basis of group size

Group size	Proportion of sample	Average proportion of endowment contributed in public good	Average proportion of common pool resource extracted
6	0.01	1.00	0.001
7	0.02	0.48	0.600
8	0.08	0.71	0.192
9	0.35	0.64	0.254
10	0.42	0.63	0.229
11	0.10	0.43	0.096
12	0.02	0.59	0.117

7.4.0 Results

Result one: Only a small percentage of the sample chose to free-ride

Table 7.5 compares public good contributions and common pool resource extractions on the basis of various demographic aspects of the sample. Regardless of social categorization, the data shows strong departure from the game theoretic prediction of free riding in public good provision. On average, subjects contributed 61.3% of their initial endowment to the public good which is consistent with the findings in one-shot public good games that subjects on average contribute between 40% to 60% of their endowment (Dawes & Thaler, 1988). Moreover, the mean contributions compare well with the contributions made by the Orma participants in Henrich, Boyd, Bowles, Camerer, Fehr, and Gintis (2001) who contributed 58% of their initial endowment in the public good game. Approximately half of the subjects contributed more than 50% of their initial endowment. Contrary to the game theoretic prediction of free riding in a public good game, only 1.3% of the sample contributed nothing while a fifth of the sample acted in true altruistic manner by contributing their entire initial endowment of 100 tokens.

Table 7.5: Comparing contributions in public good and extractions from the common pool resource on several categories

Category		Contributions in the public good game			Common pool resource extraction			
		Proportion contributed	Proportion that contributed		Proportion extracted	Proportion that extracted:		
			Zero tokens (Free-riders)	100 tokens (Entire endowment)		Less than R_j	R_j	More than R_j
Gender	Male	0.60	0.017	0.201	0.225	0.380	0.266	0.354
	Female	0.64	0.003	0.194	0.216	0.446	0.231	0.323
Religion	Protestant	0.62	0.012	0.213	0.222	0.400	0.260	0.340
	Catholic	0.58	0.018	0.158	0.213	0.405	0.239	0.356
	Muslim	0.60	0.000	0.214	0.262	0.405	0.262	0.333
	Others	0.62	0.000	0.133	0.257	0.333	0.267	0.400
Ethnicity	Kikuyu	0.64	0.020	0.227	0.192	0.472	0.233	0.294
	Luo	0.61	0.009	0.162	0.244	0.324	0.279	0.396
	Luhya	0.54	0.009	0.165	0.247	0.278	0.339	0.383
	Kalenjin	0.63	0.007	0.179	0.265	0.400	0.190	0.410
	Kisii	0.59	0.000	0.167	0.260	0.260	0.260	0.480
	Kamba	0.56	0.023	0.191	0.220	0.404	0.292	0.303
	Others	0.64	0.000	0.236	0.192	0.461	0.258	0.281
All		0.613	0.013	0.199	0.222	0.401	0.255	0.344

On average, subjects extracted 22.2% of the common pool. While 3.19% of the sample chose not to extract anything from the common pool resource, 2.66% extracted the entire 1000 tokens. The measure of over extraction from common pool resource used here is $C_i = R_i - R_j$ where R_i as earlier defined is the amount that an individual i in group j extracts from common pool resource and R_j is the equitable amount of common pool resource to each member in group j . $C_i < 0$ if an individual extracted less than R_j , $C_i = 0$ if an individual only extracts R_j and $C_i > 0$ where an individual extracted an amount greater than R_j . Contrary to the game theoretical prediction of overexploitation of common pool resource, 40.1% of the sample extracted less than R_j , 25.5% extracted exactly R_j and only 34.4% extracted more than R_j .

On average women contributed a higher proportion of their initial endowment in the public good game than men. The difference is marginally significant ($MW, z = 1.52, p = 0.12$). The proportion of male free-riders in the public good game is significantly higher than that of women, with the proportion of male free-riders being 1.7% compared to 0.3% female free-riders ($MW, z = 1.72, p = 0.09$). Even though men on average extracted more in the common pool resource than women, the difference is not statistically significant ($MW, z = 1.28, p = 0.20$).

The average contribution in the public good and the extraction in common pool resource game compares well across ethnic and religious groups, with no significant differences.

Result two: Individuals who make low public good contributions are significantly more likely to over extract in common pool resource game

Table 7.6 uses R_j as a separation point and reveals that the amount of common pool resource extractions decreases with the amount of contributions towards the public good. The table also shows that the highest proportion of free riders in the public good game is among those who extracted more than their fair share from the common pool resource. For example, while 4.5% of the free-riders extracted more than their fair share, 1.7% extracted less than their fair share. Finally the results in the table reveals that the proportion of the subjects that contributed their entire initial endowment decline with the amount of common pool resource extractions. For example, of those who contributed their entire endowment in the public good game, 22.3% extracted less R_j in the common pool resource game and only 16.2% extracted more than R_j .

Table 7.6: Comparisons of subject's action in both public good and common pool resource game

	Extraction in the common pool resource game		
	Extracts less than R_j	Extracts R_j	Extracts more than R_j
Mean contribution in the public good game	64.26	62.48	51.81
Proportion of free riders in the public good game	0.017	0.00	0.045
Proportion that contributed 100% of endowment	0.223	0.196	0.162

These results are confirmed by the regression results presented in Table 7.7 in which both OLS and Hierarchical Linear Model (HLM) regression are presented. HLM³⁵ helps to conceptualize decisions taken in multiple levels and takes into account nesting at both the individual and group levels (Raudenbush & Bryk, 1986). Group is the unit of interest and the subjects are nested within groups³⁶. Table 8.7 presents OLS and HLM regression results on the determinants of individual extractions in the common pool resource.

³⁵ The basic concept behind HLM are presented section B in the appendix, for fuller understanding (see for example Velez et al, 2006; Baltangi et al, 2001; Singer, 1998; Raudenbush and Bryk, 1986; Lindley and Smith, 1972) and for application (see for example Burns and Visser, 2008; Ruppert, Wand, and Carroll, 2003; Diggle, Heagerty, Liang, and Zeger, 2002).

³⁶ If only individual decisions and actions are taken into account in the analysis as in column (1) of Table 8.7, this would leave out some valuable information and decisions that were taken within each group. HLM takes the group characteristics into account.

Table 7.7: Determinants of factors that influence an individual's common pool resource extractions

Variable	Pooled OLS		Pooled OLS adjusted for group clustering		HLM	
	(1)	(2)	(3)	(4)	(5)	(6)
Proportional of initial endowment contributed		0.149*** (0.042)		-0.149* (0.088)		- 0.240*** (0.040)
Ethnic heterogeneity	0.129	0.110	0.129	0.110	0.150	0.111
(ELF)	(0.081)	(0.080)	(0.147)	(0.143)	(0.190)	(0.194)
MPCR	0.557***	0.586***	0.557	0.586	0.564	0.645
	(0.178)	(0.177)	(0.463)	(0.463)	(0.405)	(0.412)
Proportion of women in the group	0.419*** (0.063)	0.433*** (0.063)	0.419*** (0.138)	0.433*** (0.139)	0.409*** (0.147)	0.436*** (0.150)
Subject is male	0.030	0.0321	0.030*	0.032**	0.030**	0.031**
	(0.021)	(0.021)	(0.016)	(0.016)	(0.014)	(0.014)
Subject has benefitted from harambee	-0.011 (0.031)	-0.001 (0.031)	-0.011 (0.032)	-0.001 (0.032)	-0.011 (0.021)	0.008 (0.021)
Harambee is achieving objective	-0.025 (0.022)	0.029 (0.027)	-0.025 (0.032)	0.029 (0.034)	-0.066*** (0.018)	-0.014 (0.019)
Harambee is cause of corruption	0.030 (0.021)	0.002 (0.023)	0.030 (0.028)	0.002 (0.023)	0.046*** (0.016)	0.015 (0.017)
Ethnic dummies	Yes	Yes			Yes	Yes
Religious dummies	Yes	Yes			Yes	Yes
Regional dummies	Yes	Yes			Yes	Yes
Constant	-0.229 (0.130)	-0.173 (0.131)	-0.229 (0.302)	-0.173 (0.301)	-0.220 (0.288)	-0.128 (0.293)
Observations	941	941	941	941	941	941
R-squared	0.115	0.127	0.115	0.127		
Number of groups			99	99	99	99

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

OLS with cluster and HLM take care of the clustering at the group level

Table 7.8: Determinants of factors that influence an individual's public good contributions

Variable	Pooled OLS	OLS adjusted for group clustering	HLM
	(1)	(2)	(3)
Ethnic heterogeneity (ELF)	-0.128** (0.063)	-0.128 (0.138)	-0.166 (0.160)
MPCR	0.195 (0.138)	0.195 (0.268)	0.312 (0.340)
Proportion of women in a group	0.093* (0.049)	0.093 0.085	0.124 (0.124)
Subject is male	0.014 (0.016)	0.014 (0.013)	0.005 (0.011)
Subject has benefitted from harambee	0.068*** (0.024)	0.068** (0.029)	0.082*** (0.017)
Harambee is achieving its objective	0.363*** (0.017)	0.363*** (0.032)	0.216*** (0.014)
Harambee is one of the causes of corruption	-0.187*** (0.017)	-0.187 (0.027)	-0.129*** (0.013)
Ethnic dummies	Yes	Yes	Yes
Religious dummies	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes
Constant	0.379*** (0.101)	0.379* (0.212)	0.392 (0.241)
Observations	941	941	941
R-squared	0.567	0.567	
Number of groups		99	99

Standard errors in parentheses.*** $p < 0.01$,** $p < 0.05$,* $p < 0.1$

OLS with cluster and HLM take care of the clustering at the group level

The results show the proportion of the initial endowment contributed in public good game to have a negative and significant impact on the proportion of the common pool resource extracted. These results suggest that those who cooperate in public good provision did not compensate themselves by over extracting from the common pool resource. Rather, those who contribute a lot in the public good game extracted less in the common pool resource game.

Result three: There is more cooperation in the restraint from common pool resource extraction than in public good contributions

Following the work by Sell and Yeongi (1997), individual cooperation in the public good game is measured in terms of the proportion of initial endowment contributed towards the public good ($\frac{X_i}{100}$), while cooperation in the common pool resource game is measured by the proportion of the pool that each individual member leaves in the pool ($\frac{G-R_i}{1000}$). The mean cooperation in the public good contribution is 0.613 while cooperation as measured by the restraint from extraction is 0.778. There is therefore more cooperation in the restraint from taking from the common pool than in contributions to the public good. The difference is significant ($t=12.44, p=0.00$). The levels of cooperation reported here in both public good contribution and restraint from taking are higher than those reported by Sell and Yeongi (1997). In Sell and Yeongi (1997), the measure of cooperation in the public good game was 49.6% as compared to 62.8% in the restraint from taking from the common pool resource.

Result four: Individuals in an ethnically heterogeneous group contributed less towards a public good and extracted more from a common pool resource

Using an ELF³⁷ of 0.5 as a separating point, the groups whose ELF is 0.5 and less on average contributed significantly more than a group whose ELF was greater than 0.5. The group whose ELF was less than 0.5 on average contributed 75.91 compared to 59.43 tokens for groups whose ELF is above 0.5. The difference is significant ($MW, z = 4.88, p = 0.00$). Similarly, in the common pool resource game, on average, the more ethnically diverse groups extracted significantly more compared to the more ethnically homogenous groups (233.56 compared to 130.71, $MW, z = -5.68, p = 0.00$). See Table 7.9 for the comparisons.

³⁷ Ethno-linguistic Fractionalization Factor (ELF) ranges between 0 (most ethnically homogenous) and 1 (most ethnically heterogeneous).

Table 7.9: Public good contributions, common pool resource extractions and ELF comparisons

Measure of ELF	Mean public good contribution	Mean common pool resource extraction
Less or equal to $\frac{1}{2}$	75.91	130.71
Greater than $\frac{1}{2}$	59.43	233.56

These results are supported by the regression results of Tables 7.7 and 7.8, albeit the regression coefficients are insignificant. Individuals in ethnically heterogeneous groups contributed less in the public good game (Table 7.8) and extracted more from the common pool resource (Table 7.7)³⁸.

Result five: Gender composition matters in both public good provision and in common pool resource extraction

As the proportion of women in a group increases, the proportion of initial endowment contributed towards the public good rises (Table 7.8) although the coefficient is not significant. At the same time, extraction from the common pool resource rises significantly. This is a puzzle. Note also that male subjects are more likely to contribute to the public good and extract from the common pool resource³⁹.

Result six: A subject's attitude and experience with harambee is significantly correlated with their level of public good contribution

³⁸ The insignificance of the measure of ethnic heterogeneity on the level of contribution in the public good and the common pool resource games is not surprising given that ethnic heterogeneity is a group specific characteristic. Given that subjects had time before the game to discuss what they should do, the correlation between decisions made by individual group members would be inextricably tied to the demographic profile of the group.

³⁹ It was speculated that as gender heterogeneity (proportion of women) increases, men tended to extract more from the common pool resource. To validate this speculation, a regression was run with an interaction term between male subject and the proportion of women in a group. The coefficient of the term (male subject*proportion of women in a group) was insignificant both as a determinant of public good contributions and extraction from the common pool resource. Results of this regression are not reported here.

As results in Table 7.8 show, the three dummies on one's attitude and experience with harambee have a significant impact on one's public good contributions. The results show that if one has benefitted from harambee which is the majority of the subjects in the sample, they contributed significantly more than those who indicated not to have benefitted. If a subject was of the opinion that harambee is achieving its objective, they contributed more towards public good. Those who were of the opinion that harambee is one of the causes of corruption contributed significantly less than those who do not consider harambee to be a cause of corruption. Interestingly, the regression presented in Table 7.7 suggest that individuals who indicated that harambee was a cause of corruption extracted more in the CPR game, albeit the coefficient is insignificant once one accounts for contribution in the public good game.

7.5.0 Discussion and Conclusion

The results show an inverse relationship between public good contributions and common pool resource extractions, in that cooperators in public good contributions extract less from the common pool resource. To the extent that the experiments mimic the alleged link between contributions to harambee and corrupt acts of embezzlement ex-post, the basis for blaming harambee on corruption is not established by the results. This result is similar to the one by Fehr and Leibbrandt (2008) who conducted both field and laboratory experiments to determine the relationship between the size of mesh on fishing net and contributions in a public good experiment among a fishing community in Brazil. The study found that those who cooperated in the public good game used fishing nets with bigger mesh sizes. A smaller mesh size indicates a higher likelihood of catching smaller fish before they reach maturity thus imposing negative externality on other fishermen as well as themselves.

The analysis of the responses from the post-game questionnaire supports the results of the experiments. The subjects do not see harambee as the cause of corruption. Instead, they see corruption as the cause of abuse to the harambee spirit. If this is true, banning harambee based on the allegation that it causes corruption will not reduce corruption and this has proved to be true. Since the enactment of POEA in 2003, barring politicians

and public officials from actively participating in harambees, this move has not contributed to lowering the level corruption in Kenya.

The results show that an increase in the gender diversity in a group, measured by the proportion of women in a group leads to an increase in public good contributions but also an increase in common pool resource extractions. Gender diversity thus has a positive impact in enhancing cooperation in contributions but at the same time it seems to introduce competition in common pool resource extractions thereby reducing cooperation in the restraint from taking. This is in contrast to the findings by Cadsby and Maynes (1998) and Nowell and Tinkler (1994) who found higher cooperation in an all-female group which they attributed to the tendency of females to behave more like each other. This is a puzzle and it is not immediately clear why this result occurs.

Ethnic heterogeneity in a group reduces cooperation in both public good contributions and common pool resource maintenance. These results are similar to those obtained by other researchers (see for example Banerjee et al, 2005; Miguel and Gugerty, 2004; Goldin and Katz, 1997 and Habyarimana et al, 2007a). The low contributions and high extractions in an ethnically heterogeneous group is attributed to the inability of members of such groups to impose sanctions on non-cooperators (for example Miguel & Gugerty, 2004 and Habyarimana et al, 2007a). As a policy issue, policy makers need to be aware of the negative effects of a group's ethnic composition in the management of common resources. This is especially true in Kenya in the wake of the proposed devolution of government funds.

Consistent with the findings by Sell and Yeongi (1997) and Brewer and Kramer (1986), this paper finds more cooperation in the restraint from extraction than in contributions. The greater cooperation in common pool resource extraction than in public good contribution is attributed to loss aversion and endowment effects. This finding is of policy relevance. In part, it points to the fact that cooperation can be achieved in the sustenance of common resources and points to the fact that sustaining a common pool resource should be prioritized since creating one through initiatives such as harambee is difficult once one is destroyed. A case in point is the destruction of the largest water-catchment area in Kenya that is Mau forest. The government is currently finding it difficult in getting people to cooperate in its rehabilitation.

Finally, consistent with the findings documented in Henrich et al (2001) which showed that Kenyan subjects brought their everyday experience of harambee into the public good setting, this paper also documents the fact that participants in the games brought their real life experience of harambee to bear on their decisions. This highlights the important and potentially positive reinforcing role that social norms and institutions can have on individual decisions.

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Appendix A

A. Notes to subjects

A.1 Harambee and Common Pool Resource Game

- This game is played by a group of 10 people.
- The game consist of 2 sub-games; a public good (PG) and a common pool resource (CPR) game, the sub-games follow each other.
- Participants will randomly be assigned to groups and will be given time to interact and lay a strategy for the game.
- A member in any of the groups is not bound by the group strategy since the group's objective may be at variance with individual objective.

A1.1 Public Good game

- In the public good game each member will be given an initial endowment of 100 tokens from he makes a decision on how much to contribute to a common kitty.
- Each person's contribution is only known to himself.
- When every member has had a chance to contribute to the kitty, the experimenter will multiply the amount by 5.
- At the end of the game, the kitty is shared out equally among the group members regardless of individual member's contributions.
- A member benefits from his contribution and that of other members.
- At the end of this game a player gets:

$$P_{ij} = W - X_i + \frac{h(\sum_{i=1}^n X_{ij})}{n} \dots\dots\dots(7)$$

A.1.2 Common Pool Resource (CPR) game

- In the common pool resource game (CPR), we start off with 1000 tokens kitty available for the group.
- Each member will have a chance to anonymously extract an amount from the kitty.
- The amount that an individual extracts will only be known to the individual
- After everyone has had a chance to extract from the kitty, the experimenter will multiply the amount left by 5.
- At the end of the game, the kitty is shared out equally among the members regardless of what an individual member extracted from the common kitty.
- At the end of the game, a player gets

$$F_{ij} = R_i + \frac{g(\sum_{i=1}^n (G - R_i))}{n} \dots\dots\dots(8)$$

- Where R_i is what individual i extracts from the kitty, g is the factor by which the kitty grows, G is kitty available to the group, and n is number of people in the group.
- From the 2 games, the i^{th} player in group j final payoff is:

$$PF_{ij} = P_{ij} + F_{ij} \dots \dots \dots (9)$$
- Each player will be required to fill in a questionnaire before they get to know their final payoff.
- Read each question carefully and provide an honest answer.
- Note that each question must be answered before submission.

Table 10 shows the interactive panel of the game.

Table 10: The Interactive PG and CPR games panel

This game consists of 2 sub-games; harambee and common pool resource	
Indicate your gender	<input type="checkbox"/> Male
	<input type="checkbox"/> Female
Indicate your ethnic identity	<input type="checkbox"/> Kikuyu
	<input type="checkbox"/> Luhya
	<input type="checkbox"/> Luo
	<input type="checkbox"/> Kalenjin
	<input type="checkbox"/> Kisii
	<input type="checkbox"/> Kamba
	<input type="checkbox"/> Others
Harambee sub-game	
Each member of your group has an initial endowment of 100 tokens from which each one will be asked to individually and independently make a contribution to contribute to a common kitty. Each one's contribution can range between 0 and 100 tokens	
The experimenter will multiply the total sum of what your group contribute by 5 and then share the product equally among the group members regardless of individual member's contribution.	
Indicate the amount you would like to contribute Tokens
Common Pool Resource sub-game	
Your group has 1000 tokens and each of you will be given a chance to independently and anonymously draw any amount from the pool. Anyone is free to draw any amount between 0 and 1000 tokens.	
The experimenter will multiply whatever remains in the pool after each of you has drawn by 5 and then share the product equally among the members of the group regardless of the amount that an individual member drew out.	
Indicate the amount you would like to draw out from the common pool for yourself tokens
You will get to know your final payoff once every member of your group has had a chance to play the game. Kindly proceed to the questionnaire. Note that all questions must be answered. We pledge strict confidentiality.	

Appendix B: Subject pool

Table 11: Mean contributions and withdrawals by ethnic groups

Ethnic group	Mean contribution to PG	Mean withdrawal from CPR
Kikuyu	63.96	191.5
Luo	61.31	243.88
Luhya	54.49	246.96
Kalenjin	62.87	264.5
Kisii	59.3	259.6
Kamba	55.9	220
Others	63.8	192.12

Table 12: Mean contributions and extractions by centres

University	No. of subjects	Mean contribution PG	Mean CPR extraction
Kimathi	59	67.8	54.1
KEMU	78	52.8	57.7
Lower Kabete	47	71.4	455.4
Eldoret Polytechnic	69	52.2	305.9
Daystar Nairobi	57	53.2	126.3
Masinde Muliro	53	48.5	295.3
Daystar Athi River	37	79.9	286.5
Maseno	58	31	283.6
Mombasa Polytechnic	65	48.9	129.1
Garisa Institute	72	58.7	253
Egerton	73	91.2	300.6
Moi	93	64.9	336.5
MKU	94	72.5	156.2
Kabarak	86	62	167.4

Appendix C: Basic concept behind Hierarchical Linear Model (HLM)

The within-group model specifies the relationship among subject-level characteristics and the variable of interest such as PG contribution. For each group, the estimated PG contribution model is as follows:

$$pgcont_{ij} = \alpha_{j0} + \alpha_{j1} X_{ij1} + \alpha_{j2} X_{ij2} + \alpha_{jk-1} X_{ijk-1} + n_{ij} \dots\dots\dots (10)$$

for $i = 1, \dots, n$ subjects in group j ; $j = 1, \dots, J$ groups; and $k = 0, \dots, K - 1$ independent variables. $pgcont_{ij}$ is the PG contribution for subject i in group j , X_{ijk} are the values on the subject-level characteristics for subject i in group j , n_{ij} is the random error term and α_{jk} are the regression coefficients that characterize the

structural relationship of the subjects within group j. The regression coefficients α_{jk} are allowed to vary across groups.

The variability in the regression parameters are a function of the decisions that were reached in individual groups given that each group was given time to interact and lay common strategies. Allowing this variability yields a between-group model. For each of the K regression coefficients in equation 10, it is assumed that:

$$\alpha_{jk} = \varphi_{0k} + \varphi_{1k}Z_{1j} + \varphi_{2k}Z_{2j} + \dots + \varphi_{p-1k}Z_{p-1j} + v_{jk} \dots \dots \dots (11)$$

for $p = 0 \dots \dots \dots P - 1$ independent variables in the between-group model, where the φ_{pk} are regression coefficients that capture the effects group-level variables on the within-group structural relationships (α_{jk}), v_{jk} is the random error in this group-level equation and the Z_{pj} are values on the group-level variables for group j.

Substituting equation 11 into 10 yields:

$$pgcont_{ij} = \alpha_{00} + \sum_{k=1} \varphi_{0k} X_{ijk} + \sum_{p=1} \varphi_{pk} Z_{pj} + \sum_{k=1} \sum_{p=1} \varphi_{pk} X_{ijk} Z_{pj} + v_{j0} + \sum_{k=1} v_{jk} + n_{ij} \dots \dots \dots (12)$$

Equation 12 is the HLM where the last term ($v_{j0} + \sum_{k=1} v_{jk} + n_{ij}$) represent the error term. When there are no random effects in the between-group model ($v_{jk} = 0$ for all j,k), the HLM becomes equivalent to an OLS model that includes subject-level variables X_{ijk} , group-level variables Z_{pj} and their interaction terms $X_{ijk} Z_{pj}$. When the random effects remain (when one or more of the v_{jk} are not equal to zero), the application of OLS to equation 12 is inefficient and the estimated standard errors are too small. In our analysis, we report both OLS and HLM regression results.

Part IV:

Entrepreneurial Initiatives and Leadership

Chapter 8:

Entrepreneurial Orientation and Access to New Markets by
Earthware Manufacturers. *Margaret Otenyo-Matanda*

Chapter 9:

Value Addition in Coffee Industry in Kenya: Lessons from Cut
Flower Sector. *Jacob Chege*

Chapter Eight

Entrepreneurial Orientation and Access to New Markets by Earthenware Manufacturers

Margaret Otenyo-Matanda

8.0 Introductory Overview

Accessing new markets remains a major challenge to MSEs in Kenya. While factors that influence access to new markets continue to attract much literal attention, the role of entrepreneurial orientation is not clear. This chapter examines the effects of entrepreneurial orientation on access to new markets among small-scale earthenware manufacturers in Kenya. It uses an explanatory research design that adopted a survey approach. The study was conducted in three districts: Kakamega, Bungoma and Kisumu. A sampling list of small-scale earthenware manufacturers was constructed from lists provided by district cultural officers in the three study sites. From this sampling frame, a stratified random sampling procedure was used to select the study sample. Entrepreneurial orientation, the mindset of firms engaged in the pursuit of new ventures was assessed using a modified version of the Covin and Slevin (1989) scale. This scale is made up of 14 items that assess innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy. A pre-tested questionnaire was used to collect data. This questionnaire was personally administered by the researcher with the help of two trained research assistants. Three Focus Group Discussions (FGDs) were conducted to establish the process of entry into new markets. Descriptive statistics (frequencies, percent, mean, standard deviation and charts) were used to present and summarize data. Bivariate data analysis

such as contingency tables, correlation, χ^2 and t-tests were used to assess relationships between socio-demographic factors, entrepreneurial orientation and access to new markets. A logit model was used to identify the critical factors that influence access to new markets. Qualitative data were content analyzed. Three hundred and eighty four enterprises responded to this survey. Four percent of the study respondents had accessed new markets in the last twelve months, (53 percent) claimed that the opportunity to access new markets had just occurred. Bivariate data analysis indicated that young married males were more likely to access new markets. Entrepreneurial orientation was also found to be associated with the entry into new markets. The results of the Logit model indicated that training and innovation influence access into new markets. This innovation is recognized in vision 2030 which states that Kenyan's pool of talent is small and inadequately trained for integration and access into the job market. The FGDs established that the process of new market entry is complex and is made up of initiation and negotiation.

8.1 Background to the Study

Access to new markets by Micro and Small Enterprises (MSEs) continues to attract a lot of academic and policy interests globally, Kenya included. Access to new market outlets means different things to different people. Conventionally, the term refers to an enterprise's ability to sell its products in new markets (Romano & Ratnatunga, 1995). However, this definition fails to capture adequately the dynamics inherent in the process of new market entry. Another approach that has its roots in entrepreneurship, defines access to new markets as an enterprise's ability to identify and exploit new market outlets for its products (Venkataraman, 1997; Shane & Venkataraman, 2000). Scholars in entrepreneurship have for long recognized the entrepreneurial dimensions of new market entry, particularly for the small firm. Schumpeter (1934) identifies the opening of a new market as one of the entrepreneur's new combinations. Lumpkin and Dess (1996) clarify that access to markets is an essential act of entrepreneurship.

Access to new markets remains a major challenge to the performance of MSEs in Kenya (Republic of Kenya [RoK], 2005; Mbugua, 2000; International Centre for Economic Growth [ICEG] *et al.*, 1999). Most MSEs in Kenya largely rely on the local markets (Kinyanjui, 2008). This has the

advantage that MSEs know the needs, opportunities and standards required by local markets. However, heavy reliance on local markets is a key constraint to earnings since customers are poor and generally buy a limited range of products. Thus, concentration of MSEs in low-income markets is likely to impede the growth of MSEs. In contrast, access to new markets offers expanded opportunities for disposing off surplus products (Romano & Ratnatunga, 1995). It is also an important way that entrepreneurs use to gain access to critical resources since it encourages the adoption of technology and best business practices which underlie improved performance (Morris, Sexton & Lewis, 1995). Inappropriate policies and misallocation of investment resources could skew the distribution of such opportunities and benefits away from sections of MSEs that would potentially gain the most from participation in new markets. A search for policies designed to effect benefits to MSEs is therefore necessary.

Accessing new markets is probably the greatest challenge that small-scale earthenware manufacturers face (RoK, 2005; Carson *et al.*, 1995). Earthenware manufacturing is among the most common craft-based MSEs activity in Kenya. It is estimated that there are 10,922 small-scale earthenware-based enterprises in Kenya, which employ some 28, 785 people (ICEG *et al.*, 1999). Ninety-eight percent of these enterprises are located in the rural areas whereas the remaining 2 percent are found in urban areas. Small-scale earthenware manufacturers make up 0.8 percent of the estimated 1.3 million MSEs in Kenya. Small-scale earthenware manufacturing is an important source of cash income particularly in the rural areas of the country (Langenkamp, 2000). Enhancing the ability of small-scale earthenware manufacturers to reach new markets and actively engage in them, remains a pressing challenge in development. Therefore, policy options that can enhance the participation of small-scale earthenware manufacturers in new markets are necessary.

8.1.1 The MSE Policy Context in Kenya

MSEs are broadly defined as income-generating activities that employ less than fifty people (RoK, 2005). The colonial government largely discouraged the running of small enterprises by indigenous Kenyans (Ronge *et al.*, 2002). This did not change in the early years of Kenya's independence (King, 1996). The International Labour Organisation (ILO) report of 1972 (ILO, 1972) became a landmark for Kenya's MSEs as they attracted some

attention. This recognition however, never went beyond short descriptions in official government publications (Ronge *et al.*, 2002). A turnaround in government apathy towards MSEs is indicated in Sessional Paper Number 1 of 1986 on *Economical Management for Renewed Growth* (RoK, 1986). In the document, the government underscores the importance of the MSE sector in terms of its potential to bring about balanced rural-urban development and employment creation. Further, this document recognizes the many problems inherent in the MSE sector. For example, the problem of deficient demand for informal sector goods is identified. To address this problem, this document proposes that the RoK would among others avail information on market opportunities, raise firm productivity and incomes, and change the investment structure in order to encourage use of labour-intensive techniques predominantly used by small-scale firms.

The positive attitude towards the MSE sector was once again portrayed in the *Strategy Paper for the Development of the Jua Kali Enterprises in Kenya* (RoK, 1989). Moreover, the small enterprise development project which involved several partners from both the public and private sectors (King, 1993) was initiated. This project drew up three sets of strategies for the MSE sector namely: policies for providing an enabling environment, non-financial promotional policies and credit policies (King, 1996). These three strategies are incorporated in Sessional Paper Number 2 of 1992 on small enterprises and *Jua Kali* development in Kenya (RoK, 1992). In addition, gender-related policies are included. The issues of dissemination of information on domestic and export markets and the adjustment of public procurement policies in favour of MSEs are presented under an enabling environment.

Several market-enhancing policies are proposed in Sessional Paper Number 2 of 1992. The government undertook to conduct market surveys to identify new opportunities for product development and diversification in the MSE sector. It also proposed to identify new potential markets in the rural areas for MSEs and to establish a subcontracting exchange through the Ministry of Trade to promote inter-industry linkages. MSEs were also to be assisted to penetrate export markets through training programmes designed to improve product designs and packaging, skills on production management, technology and material procurement, costing and pricing.

Sessional Paper Number 2 of 1996 on *Industrial Transformation to the Year 2020* (RoK, 1996) underscores the importance of the MSE sector as a pillar

for Kenya's industrialization. Thus, it proposes several measures to alleviate the constraints of growth for the sector. Giving MSE products priority in government procurement and promoting linkages through the organization of "seller-meets-buyer" initiative are two market access policies cited in this document.

From the foregoing, it is clear that the government has over time increased its policy focus on the MSE sector. Issues of MSE access to new markets are also prominent. However, problems emanating from weak design and implementation (Mullei & Bokea, 1998) have made these policies to be of limited impact. To address these deficiencies, the government of Kenya drafted Sessional Paper Number 2 of 2005 on *Development of Micro and Small Enterprises for Wealth and Employment Creation for Poverty Reduction* (RoK, 2005) to enhance the performance and growth of MSEs.

Sessional Paper Number 2 of 2005 displayed a medium term effort by the government of Kenya to improve the MSE sector in the country. It defines MSEs as income-generating activities employing between 1-50 persons. In this policy document, the government of Kenya has not only shown its commitment to the sector as a pillar of development but has also attempted to rectify policy failure in the sector.

This policy paper identifies access to new market outlets and marketing information as among the most severe constraints to MSE development in the country. It further identifies low aggregate demand, saturated market due to dumping and over production, lack of information, high transaction cost, unfair competition and weak MSEs capacities as the major factors explaining the limited access to markets by MSEs in the country. Validation of these determinants among the small-scale earthenware manufacturers is necessary. Conducting studies on access to new markets by small-scale earthenware manufacturers might also identify other factors that are not mentioned in this sessional paper. In addition, need exists to determine the relative importance of these factors. Identifying the importance of the above is crucial for policy prioritization, given that different factors might be associated with particular policy measures. This study, therefore, attempted to provide a concrete input in the design of MSE policy in Kenya.

To address these constraints, the sessional paper identifies the following strategies: simplifying public tendering procedures, allocating at least 25% government procurement quota to MSEs, promoting sub-contracting

arrangements among enterprises, facilitating access to marketing information and developing mechanisms to restrict dumping as key to enhancing MSEs access to new markets. Other strategies in this sessional paper include promoting local products through sensitization campaigns, implementing measures to increase per capita incomes and improving product design. Commissioning market research, disseminating marketing information, developing mechanisms that will promote use of public facilities for marketing by MSEs, enhancing MSEs entry into international markets, intensifying exhibitions, trade fairs and developing websites for MSEs products are other strategies in this policy document.

Arriving at these strategies is a commendable effort. The implementation framework and institutions responsible for implementing these strategies are also clearly identified. However, the role of analysis to inform these strategies is neglected or not explicitly emphasized. This study, therefore, provides the basis for such an analytical framework using a sample of the small-scale earthenware industry.

8.1.2 Issues and Options

A major constraint to the development of the welfare of small-scale earthenware manufacturers is their inability to access new markets. Demand for functional and decorative earthenware products exists in Kenya and abroad (Langenkamp, 2000). Earthenware has the added potential of being promoted as an authentic cultural experience as suggested in the tourism enhancing strategies of Kenya Vision 2030 (RoK, 2007). Despite this potential, the participation of small-scale earthenware manufacturers in new markets has not been widespread (RoK, 2005; Carson, *et al.*, 1995). Small-scale earthenware manufacturers must, therefore, be encouraged to access new markets if they are to effectively respond to the challenges of creating employment and wealth, alleviating poverty and redistributing wealth. A search for policy options to enhance the participation of small-scale earthenware manufacturers into new markets seems appropriate.

A prerequisite for policy intervention is sound empirical information on issues where action is required. However, data on market access by small-scale earthenware manufacturers and the factors involved is limited. Entrepreneurial orientation, an important measure of the way a firm is organized (Wiklund & Shepherd, 2004) may be a critical factor in enhancing

entry into new markets (Ibeh, 2004). Entrepreneurial orientation refers to the extent to which firms that are engaged in the pursuit of new ventures innovate, take risks and act proactively. Generally, firms with such forward-looking perspectives capitalize on emerging opportunities (Rauch *et al.*, 2009). It follows then that firms that have an entrepreneurial orientation are more prone to focus attention and effort towards opportunities such as those found in new markets. This observation is yet to be validated empirically. It is, therefore, difficult to conclude that entrepreneurial orientation enhances access to new markets. Consequently, there is limited evidence to guide researchers, policy-makers and practitioners on the role of entrepreneurial orientation on access to new markets. This study attempted to address this gap by examining the role of entrepreneurial orientation in explaining access to new markets among small-scale earthenware manufacturers in Kenya.

8.1.3 Objectives of the Study

The following objectives were formulated for this study.

8.1.3.1 General Objective

The general objective of this study was to examine the effects of entrepreneurial orientation on access to new markets among small-scale earthenware manufacturers in Kenya.

8.1.3.2 Specific Objectives

The specific objectives of the study are:

- i. To examine the extent of access to new markets by small-scale earthenware manufacturers in Kenya.
- ii. To document the processes that are involved in the access of new markets by small-scale earthenware manufacturers in Kenya.
- iii. To establish the relationship between entrepreneurial orientation and access to new markets by small-scale earthenware manufacturers in Kenya.
- iv. To identify other factors that can influence access to new markets by small-scale earthenware manufacturers in Kenya.

8.1.4 Research Questions

- i. What is the extent of access to new markets by small-scale earthenware manufacturers in Kenya?
- ii. What processes are involved in the access of new markets by small-scale earthenware manufacturers in Kenya?
- iii. What is the role of entrepreneurial orientation in the access of new markets by small-scale earthenware manufacturers?
- iv. What other factors influence the participation of small-scale earthenware manufacturers into the access of new markets?

8.1.5 Significance of the Study

This study enhances understanding of the processes and critical factors involved in the access of small-scale earthenware manufacturers in Kenya to new markets. The study has theoretical, practical and policy implications. Regarding theoretical contributions, this study adds value to the existing entrepreneurship- based theories by empirically investigating their applicability in a developing economy. In addition, this study has some academic value in its attempts to apply entrepreneurship concepts in understanding access to new markets by MSEs.

The practical significance of this study lies in its provision of insights about the competencies and capabilities that entrepreneurs can develop if they wish to access new markets. The study will also help entrepreneurs to have a better understanding of their market access behaviour.

The policy relevance of this study includes its provision of data that can be used to devise policies and strategies to enhance access to new markets by MSEs. Moreover, the study will assist policy-makers to understand the impact that entrepreneurial orientation has on access to new markets. Entrepreneurial orientation has hitherto not been well-captured in the MSE market access policies and strategies in Kenya.

8.1.6 The Scope of the Study

This was an empirical study on the nature and extent of access to new markets by a sample of earthenware manufacturers in Kenya. The subjects of this study were entrepreneurs who manufacture clay products such as pots, flower vases, and other functional and decorative products. The study tested an entrepreneurship-based model of MSEs access to new markets

where entrepreneurs' orientation and prior knowledge, influence the way they recognize and exploit new market outlets.

This research was conducted in three districts of Western Kenya namely, Kakamega, Bungoma and Kisumu. A map of these regions is given in appendix 1. These three districts are re-knowned for their art and craft industries (Langenkamp, 2000). Preliminary estimates suggest that 60 percent of the earthenware manufacturers in Kenya are found in Western Kenya. Moreover, the Kakamega District Poverty Reduction Strategy Paper (RoK, 2001) cites enhancing access to markets for indigenous knowledge-based products as a major strategy towards alleviating poverty in the district.

8.1.7 Limitation of the Study

A limitation of this study relates to its use of a questionnaire as its primary data-gathering tool. Such a tool tends to gather recall-based information, which is open to bias. Nevertheless, it is widely used in gathering data in most studies on entrepreneurship with minimal bias. In addition, the inclusion of three Focus Group Discussions, one from each of the three study sites helped to countercheck any possible bias in the questionnaire and to supplement questionnaire data.

8.2.0 LITERATURE REVIEW

8.2.1 Introduction

This chapter begins by reviewing the nature of small-scale earthenware manufacturers. It goes further to examine the concept of entrepreneurship. Previous studies on access to new markets by MSEs are, thereafter, reviewed. This exercise is expected to offer insight into the processes and critical factors that influence access to new markets by MSEs. Next, a critical review of the role of entrepreneurial orientation on access to new markets by MSEs is offered. Finally, a summary and gaps in the literature being addressed by this study are offered.

8.2.2 The Nature of Small-Scale Earthenware Manufacturers

Earthenware manufacturing is amongst the most ancient of the traditional crafts and it takes an important place in Kenya's cultural heritage. Estimates

suggest that there are 10,922 small-scale earthenware enterprises in Kenya, which employ some 28, 785 people (ICEG *et al.*, 1999). Ninety-eight percent of these enterprises are located in the rural areas whereas the remaining 2 percent are found in urban areas. Small-scale earthenware manufacturers make up 0.8 percent of the estimated 1.3 million MSEs in Kenya.

Earthenware is one of the numerous branches under *ceramics*. Defining the term *ceramics* is not easy. The word *ceramics* has its roots in the Greek word "*keramos*", which means potters clay. Originally, *ceramics* was defined as the art of making pottery. Today, *ceramics* is a general term reserved for the science of manufacturing articles prepared from pliable, earthy materials that are made rigid by exposure to heat. Clay is the unique material that makes ceramics possible. Clay derived from the disintegration of granite and other feldspathic rocks, as they decompose, deposit alumina and silica particles (Glen, 1984; Flight, 1989). Clay is the only natural material, which can be directly shaped by hand or machine in its raw state. When plastic, clay can keep almost any shape into which it is formed and also retain the shape when the water content has evaporated.

Ceramics includes the manufacture of industrial and technical items, porcelain, stoneware, terra-cotta, tiles, bricks and earthenware. Earthenware is porous pottery usually fired at temperatures ranging from 983°C to 1148°C. For the technical side of pottery, Glen (1984) and Flight (1989) give detailed accounts of the manufacturing process. These include preparation of clay, moulding, firing and finishing. Glazing of earthenware makes it waterproof and adds to its beauty.

Broadly, earthenware products serve two purposes. The first is functional. Here, earthenware products include cooking, beer brewing, water and grain storage vessels, and planters (Ngari, 2004). In addition, earthenware products have some ceremonial and ritual functions. Ajayi (1987) for example, observes that earthenware products are also used for religious functions among some African communities.

The second purpose of earthenware products is decorative. This includes the making of beads and ornaments, palatial fixtures and fittings, wall decos, games (such as chess), sculptural items and figurines. Earthenware manufacturing has been a seasonal activity mainly done by women (Otenyo, 1984; Wagner, 1956).

Mankind has practised earthenware from time immemorial. Excellent reviews of the developments of earthenware are documented by Savage

(1963). Likewise, Ngari (2004) offers a detailed account of the evolution of pottery manufacturing among the Mbeere of Kenya. Similarly, Gombe (1982) investigated those factors considered to influence the artistic skills, competences and orientation in the total creation of the clay forms among the Luo of Kenya. Such studies indicate that pottery-making is a common indigenous craft in the country.

The manufacture of earthenware products in Kenya faces several challenges. Among them is the threat of extinction of the industry. This threat arises from two forces namely: the change of buyer behaviour away from the traditional ware (Ngari, 2004) and competition from cheaper alternative imports such as plastics and aluminium containers (ICEG *et al.*, 1999). More critical however, is the observation that pottery-makers are artisans of low status, producing ware in direct response to community needs. Glen (1984) observes that generally potters have conservative working habits or outlook. Thus, it can be interpreted that small-scale earthenware manufacturers have weak entrepreneurial inclinations. In contrast, Ngari (2004) notes that traditionally, the Mbeere potters in Kenya produced ware for trade rather than for domestic use. This latter observation appreciates some extent of entrepreneurship among small-scale earthenware manufacturers. Nonetheless, lack of adaptation among earthenware manufacturers to cultural dynamics suggests a compromised entrepreneurial inclination among them. This is a major challenge to the industry.

The small-scale earthenware manufacturers in Kenya have several opportunities. These range from emerging markets (Export Promotion Council, n.d.) to the re-awakening of the interest of the indigenous wares and practices. The “cultural nights” attest to this. Likewise, technological developments in ceramics such as the potter’s wheel, the Jigger and Jolly, offer opportunities of making superior clay products cost-effective. Moreover, the Kenya Government through the Export Promotion Council is showing a keener interest in the exporting of indigenous earthenware.

Reviving the small-scale earthenware industry in the country offers benefits beyond the usual employment and income-generation benefits. Such an industry may offer important linkages with other MSEs, diversify our cultural heritage, check the rural-urban migration problem, promote rural industrialization, encourage entrepreneurship and promote environmental equity. Above all, it may empower women since a majority

of potters are women. Thus, access to new markets by small-scale earthenware enterprises must be improved if this sub-sector is to effectively respond to the challenges of creating employment, alleviating poverty and diversifying our cultural heritage.

Access to new markets remains a major challenge to the small-scale earthenware industry (Carson *et al.*, 1995). Traditionally, potters used the barter system to trade off their ware (Ngari, 2004). In addition, pottery trade was largely influenced by conditions such as the relations between people, sources of conflict and complementary crafts and resources, which may have offered competition to pottery. In essence, the access to new markets was environment-driven. Thus, the role of the small-scale earthenware manufacturer in new market entry was not recognized. This is in contrast to the modern times where the entrepreneur plays a significant role in new market entry (Murphy *et al.*, 2006). Examining small-scale earthenware manufacturers from this perspective is largely neglected in literature.

8.2.3 Theoretical Framework

This study adopted an opportunity-based approach to examine access to new markets by small-scale earthenware manufacturers. This section begins by reviewing the definition of the term entrepreneurship. The next two parts of this section review two strands of literature namely, the resource-based theory and entrepreneurial orientation. These two strands of literature are used to isolate the drivers of access to new markets.

8.2.3.1 The Nature of Entrepreneurship

It is not easy to define the term entrepreneurship. This word is derived from the French word "*entreprendre*" which literally means "to undertake" (Bird, 1989). In the 14th century, the term undertaker was reserved for tax collectors- individuals who paid a fixed sum of money to a government for the license to collect taxes in their region. *Tax entrepreneurs* bore the risk of collecting individual taxes. Over time, the meaning of the term has continued to evolve and has received attention from both economics and the behavioural sciences.

Entrepreneurship has been a common topic in the economic literature. In economic writings, entrepreneurs are usually defined as the 'change agents' of progressive economies. Specific functions that are ascribed to entrepreneurs by economists include industrial manager, bearing risk,

providing capital, allocating resources, arbitrage and innovation among others (Murphy *et al.*, 2006). Economic-based definitions of the term entrepreneurship have been criticized for being highly undersocialised (Gaglio, 1997).

Another stream of knowledge with roots in psychology and sociology has attempted to define the term entrepreneurship by looking at the individual who goes against the odds and translates a vision into a successful business enterprise. Personal qualities and characteristics of individuals such as demographics (age, gender, family background and education), personality traits (need for achievement, locus of control, risk-taking, tolerance for ambiguity and values) and skills (leadership, creativity and decision-making) are often examined in this approach (Bird, 1989). Lack of theoretical focus, controversies, limited explanatory and predictive abilities in this approach have largely made it untenable as an explanation for entrepreneurship (Murphy *et al.*, 2006).

In their efforts to define a distinctive domain for the field of entrepreneurship, researchers have recently shifted attention from approaches that focus on identifying those people in society who prefer to become entrepreneurs towards understanding the nexus of enterprising individuals and valuable opportunities (Venkataraman, 1997; Shane & Venkataraman, 2000; Ekhardt & Shane, 2002). Approached this way, entrepreneurship can be defined as a scholarly field of study that seeks to understand how opportunities to bring into existence “future” goods and services are discovered, created and exploited by whom, and with what consequences (Venkataraman, 1997). This definition identifies three issues that are central to entrepreneurship namely; how opportunities arise in the economy, why some individuals are able to recognize them and finally, the economic, social and psychological consequences of identifying and exploiting opportunities to both the individual concerned and the society at large. These three issues offer both a distinctive voice and worldview that constitute the legitimate domain for entrepreneurship (Shane & Venkataraman, 2000). Literature is yet to empirically examine access to new markets from this approach.

Gaglio (1997) argues that it is the recognition of opportunities that sets entrepreneurs apart from other market actors. Thus, understanding the opportunity recognition process represents a core intellectual problem for scholars interested in developing the theory of entrepreneurship (Kirzner,

1997). The term opportunity refers to a conjunction of favourable circumstances that allow value addition to a beneficial activity with a view to reaping some benefit such as profit. Examples of external opportunities for earthenware are documented in Biggs *et al.*, (1994) and in the African Growth and Opportunity Act (AGOA) (US Congress, 2000). Ngari (2004) also documents that the opportunities for utilitarian earthenware (beer pots, cooking pots, water storage pots) in Kenya are yet to be fully exploited.

Entrepreneurship literature identifies four ways in which opportunities arise in the economy. Kirzner (1997) argues that it is entrepreneurial alertness that leads to opportunities. In contrast, Schumpeter (1934) posits that opportunities are a product of human creativity. Both writers acknowledge the centrality of human agency in the opportunity detection process but differ in the importance they ascribe to individuals. Alsos *et al.*, (2005) suggest that opportunities just happen to occur in the economy. Finally, Caplan (1999) adds that it is searching that leads to identification of opportunities. Both Alsos *et al.*, (2005) and Caplan (1999) posit that opportunities are objective and can be found in the environment. These four models of opportunity detection have been proposed with new products in mind; however, it is not clear whether they apply in the case of recognition of new market outlets. This study attempted to examine whether the four opportunity detection models are applicable in the process of accessing new markets by MSEs.

Venkataraman (1997) suggests that the recognition of opportunities is contingent upon the unique insights, skills and aptitudes of entrepreneurs. Consequently, two sets of individual factors are thought to influence the recognition of opportunities. These include prior knowledge (Shane, 2000) and cognitive abilities (Baron, 2006). Shane (2000) argues that prior knowledge of the market, industry and technology facilitates entrepreneurial discovery. This means that previous experience is critical in the discovery of opportunities. Ardichivilli and Cordozo (2000) model entrepreneurial discovery as a function of prior experience, education and networks. Therefore, in addition to experience, education attainment and networks also enhance entrepreneurial discovery.

A notable shortcoming associated with the above review literature on the nature of entrepreneurship is that it has been devised within developed economies and likewise is the empirical justification behind it. Its relevance

and applicability within the context of developing economies, especially in Africa, are not yet well established and justified.

8.2.3.2 The Resource-Based Theory and Access to New Markets

The resource-based theory has also been proposed to explain entrepreneurship (Alvarez & Busenitz, 2001). This theory holds that firms with valuable, rare and inimitable resources have the potential of achieving superior performance (Barney, 1996; Barney *et al.*, 2001). Resources are inputs into a firm's production process. Barney (1991) defines firm resources to include all assets, capabilities, organisational processes, firm attributes, information and knowledge controlled by a firm that enable the firm to conceive of and implement strategies that can improve its efficiency and effectiveness. This broad view of resources accommodates such related terms as capabilities and competencies, which are largely seen as more dynamic, knowledge/process-based aspects of resources (Ibeh, 2004).

Miller and Shamsie (1996) classify firm resources into property-based and knowledge-based resources. Property-based resources refer to tangible input resources, whereas knowledge-based resources are the ways in which firms combine and transform these tangible input resources. Knowledge-based resources may be particularly important for providing sustainable competitive advantage (Wiklund & Shepherd, 2003) and thus are the focus of this study. Knowledge-based resources may be derived from work experience, networks, education and personal background (Ibeh, 2004). Shane (2000) specifies that knowledge about markets, technology and industry have strong performance implications because they increase the ability to discover and exploit opportunities. The application of resource-based theory on access to new markets is beginning to take shape. Specifically, networking and building relations with buyers, suppliers and others along the supply chain has been identified as a critical competency for the entrepreneur (Collinson & Shaw 2001). However, there is need to validate and extend the resource-based view into the context of access to new markets.

Barney (1991) argues that a firm's resources should not only be valuable, rare and inimitable to facilitate superior performance, but the firm must also have an appropriate organization in place to take advantage of these resources. Eissenhardt and Martin (2000) further argue that in addition to resources, the organization and strategic processes of firms are important

because they facilitate the manipulation of resources into value-creating strategies. Entrepreneurial orientation could be an important measure of the way a firm is organized (Wiklund & Shepherd, 2003). The next section discusses the concept of entrepreneurial orientation.

8.2.3.3 Entrepreneurial Orientation and Access to New Markets

Entrepreneurial orientation is a term that addresses the mindset of firms engaged in the pursuit of new ventures. It provides a useful framework for researching entrepreneurial activity. Entrepreneurial orientation has been largely based on the work of Miller (1983) who suggests that a firm's degree of entrepreneurship could be seen as the extent to which it innovates, takes risk and acts proactively.

Innovativeness is the predisposition to engage in creativity and experimentation through introduction of new products/services as well as technological leadership via research and development in new processes. Risk-taking involves taking bold action by venturing into the unknown, borrowing heavily, and/or committing significant resources to venture into unknown environments. Proactiveness is an opportunity-seeking, forward-looking perspective characterized by introduction of new products and services ahead of the competition and acting in anticipation of future demand.

Lumpkin and Dess (1996) add competitive aggressiveness and autonomy as two other dimensions of entrepreneurial orientation. Competitive aggressiveness is the intensity of a firm's effort to outperform rivals and is characterized by a strong offensive posture or aggressive response to the actions of competitors. On the other hand, autonomy is the independent action undertaken by entrepreneurial leaders or teams directed at bringing about a new venture and seeing it to fruition.

There are conflicts on whether entrepreneurial orientation is a three or a five dimensional concept. Covin and Slevin (1989) argue that entrepreneurial orientation is a three dimensional concept involving risk taking, innovativeness and proactiveness. On the other hand, Lumpkin and Dess (1996) argue that entrepreneurial orientation is five dimensional concepts that include risk-taking, innovativeness, proactiveness, competitive aggressiveness and autonomy. The existing empirical evidence is yet to resolve this controversy (Rauch *et al.*, 2006). This debate was examined in this study.

Entrepreneurial orientation has been used to describe a fairly consistent set of related activities or processes. Such processes incorporate a wide variety of activities such as planning, analysis, decision-making and many aspects of a firm's culture, value-system and mission (Hart, 1991). Hence, entrepreneurial orientation may be viewed as firm-level strategy-making process that firms use to enact their organizational purpose, sustain their vision and create competitive advantages (Wiklund & Shepherd, 2004). Thus, it can be argued that entrepreneurial orientation is an important measure of the way a firm is organized.

There is some debate on whether or not the dimensions of entrepreneurial orientation are independent or covary under certain conditions. Covin and Slevin (1989) argue that entrepreneurial orientation is best viewed as a unidimensional concept. In contrast, Lumpkin and Dess (1996) argue that entrepreneurial orientation may occur in different combinations. Kreisser *et al.*, (2002) suggest that the dimensions of entrepreneurial orientation tend to vary independently. Therefore, the dimensions of entrepreneurial orientation should be expected to have different correlations with the dynamics of MSEs.

Due to the variations in the dimensions of entrepreneurial orientation, there are different measures for the entrepreneurial orientation concept. Rauch *et al.*, (2009) suggest that these are basically variants of the instrument used by Miller (1983). The nine-item modification by Covin and Slevin (1986) has been the most predominant. In this scale, entrepreneurial orientation is conceptualized as a unidimensional construct consisting of risk-taking, innovation and proactiveness. The internal consistency of the scale and its predictive validity has been demonstrated (Kemelgor, 2002) and this scale was adopted in this study.

In a meta-analysis of literature on entrepreneurial orientation, Rauch *et al.*, (2006) observe that previous studies have generally linked entrepreneurial orientation with performance. However, there are mixed findings on the relationship between entrepreneurial orientation and performance. For example, Wiklund (1999) found that the businesses that adopt a more entrepreneurial orientation perform better. In contrast, Auger *et al.*, (1999) were unable to find a significant relationship between entrepreneurial orientation and performance. Furthermore, Hart (1992) argues that entrepreneurial-type strategies may even be associated with poor performance. These differences in findings may be attributed to either

differences in research design, methodological idiosyncrasies, or omission of certain moderator variables (Rauch *et al.*, 2006; Lumpkin & Dess, 1996). Firm's, environmental and managerial factors have been examined in previous literature as moderators of the link between entrepreneurial orientation and performance (Wiklund & Shepherd, 2003; Kreiser *et al.*, 2002, Covin & Slevin, 1989). Despite these developments, the role of entrepreneurial orientation in access to new markets by MSEs is largely neglected in literature.

8.2.4 Previous Studies on Access to New Markets

The analyses of the factors that explain access to new markets have attracted a number of studies over the years. This first section offers a synopsis of previous studies on access to new markets by small enterprises. The next section offers a critical review of previous studies on new market entry by small enterprises. The last section summarizes and identifies gaps in existing studies on access to new markets by small enterprises.

8.2.4.1 Synopsis of Previous Studies on Access to New Markets by Small Enterprises

A number of studies have investigated the issue of access to new markets by MSEs. Omiti *et al.*, (2004) investigated factors that influence households' decision to engage in commercial vegetable production using a sample of 110 small-holder farmers in Kakamega District in Kenya. A survey research design was adopted to address this objective. In this study, a binomial logistic regression model was estimated. The dependent variable was defined as a households' production of vegetables for the market. Successful production for the market was labelled 1, otherwise 0. The results of the estimation exercise indicated that size of land under vegetable, keeping of farm records, participation of the farmers in membership associations, farmer training, adoption of irrigation techniques and access to credit were significantly associated with the production of vegetables for the market. Following these findings, this study suggested that investment in simple irrigation technologies, formation of farmer associations, improvement of transport and storage facilities, enhancing credit access to small-holders and development of appropriate market infrastructure such as shed and stalls are important policy options that can enhance production of vegetables for the market.

While this study enhances our understanding of the policy constraints that hinder market access by small holder vegetable markets, it has two limitations that set the stage for future studies. The first relates to its lack of a sound theoretical focus while the second concern is on its methodology. The study makes an attempt to test a conceptual framework that can guide it. However, this conceptual framework is not clearly discussed such that its usefulness in the selection of key variables is limited. Probably, this limitation underlies the observation in the logit estimation results that the constant is statistically insignificant. A statistically insignificant constant means that the model adds nothing to a model with a constant of zero (Hosmer & Lemeshow, 2004). Furthermore, the study fails to test for multicollinearity among the independent variables and thus, one cannot rule out biased estimates and inflated standard errors.

In the Philippines, Lapar and Halloway (2002) examined the factors that can enhance the participation of small-holders in livestock markets. This study presents a unique model of household entry into markets where small-holders make decisions about participation (whether to sell quantities of products) and supply (how much of the various quantities to sell). This model was implemented using probit and tobit techniques that exploit Gibbs-sampling and data-augmentation. Panel data that were collected in two rounds were utilized. The application of this model to a sample of 110 small-holders reveals that similar factors influence both the participation and supply decisions. The study showed that the number of household members, level of education, visits by extension agents, livestock assets and other sources of income are significantly associated with participation in livestock markets. An important finding of this study was that responses across single-equation probit and tobit specifications are improved by moving to multivariate specifications. Moreover, this study established that the participation and the sales decisions are strongly and positively correlated. This study, therefore, recommends that policy options concerning market access, provision of infrastructure and estimates of minimum resources required to affect entry should be based on the two-equation formulation. While this study extends our understanding on the two-step process of new market entry, it utilizes one sector (livestock production) and a small sample size and thus, generalizing its findings to other sectors or regions may not be appropriate.

Ibeh (2004) examines the role of managerial characteristics and entrepreneurial orientation on the decision to access export markets by small manufacturing firms in Nigeria. His study builds a strong case that access to export markets is essentially an entrepreneurial activity. Consequently, it builds on strategy literature and the resource-based theory to extract the key factors that influence the access of small firms to export markets. It utilizes a mixed research design that involves a survey and in-depth interviews of small manufacturing firms. This study utilized cluster analysis procedures to identify categories of firms that reflected different levels of export-entrepreneurial orientation. Discriminant analysis was used to explore which decision-maker characteristics discriminated between high and low export-entrepreneurial firm-clusters. This study found that the possession of appropriately experienced and internationally orientated and connected managerial staff was positively associated with exports. The study recommends that current and potential small business managers with requisite experience and entrepreneurial orientation should be targeted for competence-enhancing training. This study underscores the critical role of the entrepreneur in the process of access to export markets. It further points to the direction that it is both the possession of key resources and their organization that determine access to export markets. However, the interaction between managerial characteristics and entrepreneurial orientation in enhancing access to new markets remains to be uncovered.

Halloway and Ehui (2002) examined the resources that can promote the entry and sustain milk market development in Ethiopia. This study utilized a unique model of household access to markets where small-holders make decisions about participation (whether to sell milk) and supply (how much to sell). This model was implemented using probit and tobit techniques that exploit Gibbs-sampling and data-augmentation. Panel data that were collected from a sample of 204 small-holders over a period of three months were utilized. The study established that participation is promoted by education, cow ownership and the level of extension services, but mitigated by distance to the market. Sales, on the other hand, are increased by intellectual capital stock (education and visits by extension agents) and the animal stock (local and crossbreed animals) but reduced by distance to the market. Thus, similar factors influence both the participation and supply decisions. The study recommends that policy-makers interested in expanding the density of milk market participation should target on

improving intellectual capital stock of the small holders and provision of physical capital stock. While this study offers interesting insights on policy options to enhance new market entry, it is based on one sector and a limited sample and thus, generalizing into other sectors or regions may not be appropriate.

8.2.4.2 Critical Review of Previous Studies on New Market Entry

This section begins by offering a detailed review of measures of access to new markets that are used in previous studies. The section also discusses the factors that influence access to new markets in detail. The last part of this section critically examines the methods employed by previous studies to examine factors that influence the access of small enterprises to new markets.

8.2.4.2.1 Access to New Markets and Factors Involved

Generally, the existing studies focus on two measures of access to new markets. A majority of these studies consider access to new markets to be a binary variable with access to new markets being assigned a value of one and zero otherwise (Omiti *et al.*, 2004). Others such as Lapar *et al.*, (2002) use sales revenue as a measure of exploiting a new market. Of concern is that both approaches negate access to new markets into an activity. Hence, the processes involved in accessing new markets are not captured. Mainstream entrepreneurship literature (Schumpeter, 1934; Kirzner 1997) suggests that any new entry involves the detection and later exploitation of opportunities. This is a premise that calls for further examination.

Literature highlights three sets of variables that have the potential to influence access to new markets. These include environmental factors, firm factors and individual factors. A majority of such studies (Omiti *et al.*, 2004; Lapar *et al.*, 2002; Halloway & Ehui, 2002) describe access to new markets via the interaction between the person and the environment. Because of varying theoretical bases describing the individual versus the environmental factors, such studies take various forms and allow many types of individual, firm and environmental factors to interact. Consequently, there is a considerable plurality within this stream of research regarding which factors or interactions hold greater explanatory sway. Such plurality is detrimental to sound policy and practical guidance.

Other studies have investigated specific factors. Among these, the entrepreneurs' role seems to be of a particular importance in access to new markets by MSEs. For instance, Johanson (2006) has examined the role of networks in the access of new markets by small firms. Similarly, Ibeh (2004) has examined the role of managerial characteristics and entrepreneurial orientation on the decision to access export markets by Nigerian small manufacturing firms. Conjectures and refutations around individuals reveal that it is simplistic to employ mostly person-centric based models in examining entrepreneurship phenomena (Murphy *et al.*, 2006; Eckhardt & Shane, 2003). Therefore, need exists for a fuller integration of multiple kinds of factors. Focusing may be on resource distribution (such as on information and relationships) and its role on market access appears to be a promising avenue.

To explain patterns in the selected dependent variable, age, training, education, experience, networks (Lapar *et al.*, 2002; Halloway & Ehui, 2002) are normally examined. Similarly, entrepreneurial orientation has been linked to accessing external markets (Ibeh, 2004). Langenkamp (2000) shows that risk-taking propensity and innovation propel small-scale earthenware manufacturers into external markets.

Firm factors that are normally examined range from firm size, keeping of records, ownership of business site, access to technology and credit, to the existence of physical capital (Omiti *et al.*, 2004; Lapar *et al.*, 2002). Likewise, transaction costs have been associated with access to new markets (Omiti *et al.*, 2004; Halloway & Ehui, 2002). Overall, such determinants advance our understanding of the nature of access to new markets by MSEs. These studies show a divergence of opinions. For example, Lapar *et al.*, (2002) found that the level of education significantly explained market access. In contrast, Omiti *et al.*, (2004) found this relationship to be insignificant. Among others, this may be attributed to the use of inconsistent definitions and measures of variables. Again, it is possible that certain variables are omitted in such studies. Specifically, the existing studies tend to focus on readily available variables with important but difficult to quantify variables being neglected. In this vein, studies should rigorously test the role of other important variables such as entrepreneurial orientation on access to new markets. Studies on access to new markets should also demonstrate definitional rigour. This will not only facilitate useful comparison between studies but will be a first step towards

developing a clear and unifying theoretical and methodological direction on this popular topic.

8.2.4.2.2 Methods Used in Previous Studies on Access to New Markets

To capture the determinants of access to new markets, studies generally tend to use either quantitative or qualitative approaches. Studies employing quantitative approaches such as Omiti *et al.*, (2004), Lapar *et al.*, (2002) and Halloway and Ehui (2002) tend to dominate. Studies combining both approaches are largely neglected. Again, there is need to address this concern.

A wide range of methods with sophisticated analytical techniques are employed in studies that employ quantitative approaches. For example, Omiti *et al.*, (2004) used a logit model to examine the factors that explain access to new markets for traditional vegetable farmers in Kenya. Likewise, Lapar *et al.*, (2002) used probit-tobit models that utilize Gibbs-sampling and data augmentation to derive policy options that promote market participation of small-holder livestock producers in the Philippines. Similar techniques are used by Halloway and Ehui (2002) to examine identical issues in Ethiopia. On his part, Ibeh (2004) employs discriminant analysis to examine how managerial factors and entrepreneurial orientation influence access to external markets using a sample of small Nigerian manufacturing firms. The use of such a wide variety of techniques may be explained by the observation that most of these studies are either meant to test hypotheses or validate models. They also show the potential of using sophisticated statistical tools to investigate the issue of access to new markets.

A limited number of studies have also examined access to new markets using qualitative approaches. Case studies such as in Johanson (2006) appear to be the research design of choice in such studies. Methods such as Focus Group Discussions are yet to be utilized in previous studies on access to new markets.

Generally, studies on access to new markets tend to be cross-sectional in nature. Again, the dominant research design is the survey (Omiti *et al.*, 2004). A number of longitudinal studies and especially panel studies exist, for example, Halloway and Ehui (2002). Typically, these studies have tended to focus on the micro-unit of analysis, where the views of the leader are the only ones captured. This implies that such studies lack the rich perspective that can be offered by studying multi-parties.

The sampling procedures adopted by previous studies on access to markets appear robust enough. Generally, most apply probabilistic sampling procedures. There are concerns that these studies draw upon small samples, mainly within the range of 75 respondents (Halloway & Ehui, 2002) to 110 (Omiti *et al.*, 2004). Such limited sample sizes place the generalizability of findings from such studies into wider contexts into question.

Similarly, previous studies on access to new markets by MSEs have traditionally focused on access to export markets (such as Ibeh, 2004). Studies focusing on other potential markets such as government procurement and e-commerce are also emerging (Delisle *et al.*, 2003). Of concern, is that, such studies tend to focus only on one type of new markets, and so they fail to factor in the diversity inherent in new market entry. Most studies on access to new market have focused on the small modern manufacturing enterprise. A few studies have, however, focused on small-holder farmers (Halloway, 2002, Lapar *et al.*, 2002; Omiti *et al.*, 2004). Small enterprises that offer indigenous but important products such as earthenware are yet to receive adequate empirical attention. There is need to redress this situation.

8.2.5 Summary and Gaps in Existing Literature

This review of literature has adopted an entrepreneurship perspective to identify the processes and critical factors involved in the access of small businesses to new markets. A review of the nature of entrepreneurship indicated that access to new markets is essentially an entrepreneurial process (Schumpeter, 1934; Lumpkin & Dess, 1996; Ibeh, 2004). Despite these theoretical insights, existing empirical studies have treated access to new markets as an activity. So, the processes involved in access to new markets are yet to be clearly documented and understood. This study attempted to address this gap in knowledge by examining the processes involved in the access of small enterprises to new markets.

A review of the resource-based theory indicated that prior knowledge derived from education, personal background, experience and networks enhances access to new markets. A lot of empirical attention has been devoted towards establishing the direct link between individual strands or configurations of resources and access to new markets (Omiti *et al.*, 2004; Ibeh 2004; Halloway & Ehui, 2002; Lapar *et al.*, 2002). However, limited

attention has been devoted to understanding how entrepreneurs can utilize these resources more effectively. There is an emerging stream of literature that indicates that entrepreneurial orientation, an important measure of the way a firm is organized, may also be a critical factor in enhancing access to new markets (Ibeh, 2004). From the resource-based theory, the way a firm is organized, when combined with firm resources, can enhance the positive relationship between resources and access to new markets. There has been little consideration in literature on the inter-relationship between a firm's organization and its resources. This study also attempted to address this gap by examining the interactive relationship between entrepreneurial orientation and prior knowledge in explaining access to new markets using a sample of MSEs in Kenya. Figure 2.1 is a schematic representation of the central issues on access to new markets by small enterprises.

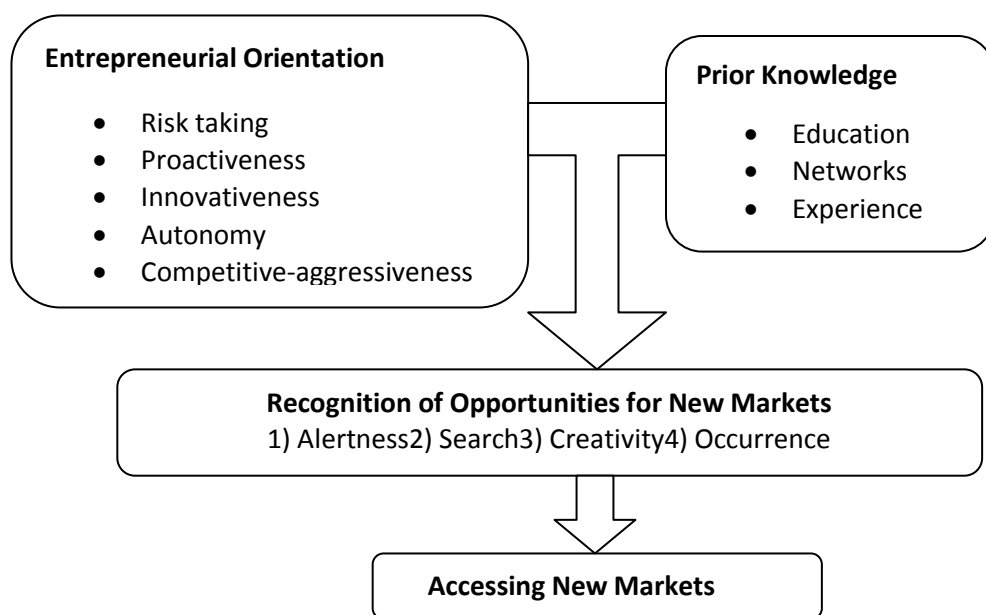


Figure 8.2.1: The process of new market entry

Source: Concept adopted from entrepreneurship theories by Lumpkin and Dess 1996, Miller 1983, Ibeh 2004.

In this figure, entrepreneurial orientation and prior knowledge are presented as important determinants of access into new markets by MSEs. Entrepreneurial orientation, the independent variable, comprises risk

taking, pro-activeness, innovativeness, autonomy and competitive aggressiveness (Lumpkin & Dess, 1996; Miller, 1983). It is an important measure of the way a firm is organized. Prior knowledge, a moderator variable is derived from education, networks and experience (Ibeh, 2004; Barney, 1991) influence the recognition of new markets (Gaglio, 1997). Further, the recognition of new markets opportunities leads to the exploitation of new market outlets through alertness (Kirzner, 1997), searching (Caplan, 1999; Handler *et al.*, 2002), creativity (Schumpeter, 1934) and occurrence (Alsos *et al.*, 2005). Access to new markets, the independent variable is, therefore, presented as a two-step process that involves first the identification of new market opportunities and later on their exploitation. These relationships were tested in this study, among small-scale earthenware manufacturers.

8.3.0 RESEARCH METHODOLOGY

This section outlines the research design adopted in this study. It then identifies the study population and sampling procedures before discussing the data collection methods. Next, it describes the methods used in analyzing the data in this study. Finally, the expected outputs of this study are offered.

8.3.2 Research Design

This was an explanatory study that adopted a survey approach to examine the effects of entrepreneurial orientation on access to new markets by small-scale earthenware manufacturers in Kenya. This design is appropriate in testing the relationship between the different components and variables of entrepreneurial phenomena such as access to new markets (Saunders *et al.*, 2003). It is also useful in deriving policy prescriptions (Halloway *et al.*, 2002).

To triangulate data collected in the survey, three Focus Group Discussions (FGDs) were also conducted, one in each of the three study sites. Six participants were selected for each FGD on the basis of whether they had accessed new markets or not. Inclusion of the FGDs also helped to meet concerns for methodological pluralism as advocated for in behaviour-orientated studies (Kamath *et al.*, 1987; Saunders *et al.*, 2003). The use of bi-methods in this study served different purposes. The FGDs showed the

processes involved in new market entry while the survey helped to identify the key factors involved. Moreover, the FGDs enabled triangulation of data collected in the survey.

8.3.3 Study Site

More than 60 percent of the small-scale earthenware manufacturers in Kenya are found in the western part of the country. Therefore, this region was selected as the study site. The specific sites for this study were randomly selected as Kakamega, Bungoma and Kisumu districts. These three districts cover some 4376.3 km² and are densely populated (RoK, 2002). The clay soils that are common in these three districts are suitable for earthenware production.

8.3.4 Study Population and Sampling Procedure

The population of this study included all small-scale earthenware manufacturers in the country. The national micro and small enterprise baseline survey estimates that there are 10,922 small-scale earthenware manufacturers in Kenya (ICEG *et al.*, 1999). The target population for this study included all the earthenware manufacturers in the western region of Kenya.

A sampling list of earthenware manufacturers in the study area was constructed from lists provided by the district cultural officers in the three study sites and respective county councils in Kakamega, Bungoma and Kisumu. From this sampling frame, the proportionate stratified random sampling procedure was used to select the study sample. Stratification was based on the three study sites. Following Saunders *et al.*, (2003), the minimum sample size for this study was calculated as:

$n = pq (z^2) / d^2 = (.5) (.5) (1.96)^2 / (0.05)^2 = 384$ small-scale earthenware manufacturers.

Where n is the desired sample size,

p is the proportion of earthenware manufactures who access new markets,

$q = 1 - p$,

z^2 is the standard normal deviate and

d is the error of margin allowed (0.05 in this study).

8.3.5 Definition and Measurement of Variables

Several variables were used in this study. The dependent variable for this study was access to new markets. This was measured as a dichotomous variable with successful access to new market outlets in the last twelve months labelled one, otherwise zero. Measuring access to new markets in this manner is consistent to the approach taken by Omiti *et al.*, (2004).

The processes involved in the recognition of new market opportunities were measured in two ways. In the first way, the respondents who had managed to access new markets were requested to describe the processes they used to identify the market opportunity. In the second way, the respondents were given a list of four methods one uses to identify market opportunities namely creativity, search, occurrence and alertness and asked to choose the one that best describes their case. Respondents were allowed to merge categories and suggest other methods if necessary. The measurement of this variable in this manner was adopted from Chandler *et al.*, (2002).

Entrepreneurial orientation was measured as the independent variable and prior knowledge as moderator variable in this study. The Covin and Slevin (1986) scale as modified by Lumpkin and Dess (1996) was used to measure the level of entrepreneurial orientation. This is a five-point (1= strongly disagree to 5 = strongly agree) and fourteen-item scale. It measures innovativeness, proactiveness, risk-taking propensity, autonomy and competitive aggressiveness.

Prior knowledge is made up of three items, namely level of education, networks and experience. Education was measured in two ways following Ibeh (2004). In the first, the highest level of formal education attained was sought while in the second, attending of trainings (workshops, seminars, conferences) in the last three years were solicited. This was measured as a binary variable with attendance labelled one, otherwise zero. Networks were measured using a dichotomous variable with membership into a business association labelled one, otherwise zero. A similar approach is used to measure networks in Omiti *et al.*, (2004). Experience was measured as the total number of years in the earthenware industry as advised by Bird (1989). It was also measured by asking the respondents to state whether

they had taken any previous formal employment. This measure was adopted from Langenkamp (2000).

Three socio-demographic variables namely age, gender and family background were assessed. Measures for these variables were adopted from Ibeh (2004). Age was measured using the number of years since birth. Gender of the earthenware manufacturer was taken as a dichotomous variable with males labelled one and females two. Family background was measured using two items namely, the type of family of the earthenware manufacturer and employment status of parents. For the family background, a nuclear family was labelled one, extended family two and other types of family three. The employment status of parents was taken as a dichotomous variable with key parent being a potter labelled one, otherwise zero.

8.3.6 Data Collection

A questionnaire was used to collect data. This research tool consisted of closed-ended questions based on items identified in the literature as the main components of access to new markets. Specifically, these questions focused on entrepreneurs' personal profile, the business profile and the extent and processes involved in accessing new market outlets. The Covin and Slevin (1986) as modified by Lumpkin and Dess (1996) entrepreneurial orientation scale was used to supplement the entrepreneurial profile. This research tool is offered as (Appendix 4).

For the FGDs, a topical guide was used. It included items capturing the processes, challenges and critical factors involved in accessing new market outlets. These questions were in an open-ended format. Probing questions were also utilized in this research tool (Appendix 3).

The research tools were tested for reliability and validity in two ways. First, the variables in this study were obtained from previous studies and tested for relevance. Second, experts in entrepreneurship were also used in the selection of variables. Responses from both the research tools of this study were cross-checked to examine any possible bias.

These research instruments were pre-tested on 40 earthenware manufactures in Western Kenya. The data collected in this exercise were used to improve the research tools and were not reported in this study.

The research tools for this study were administered by the researcher with the help of two research assistants. These research assistants were

trained on the handling of the research tools and the topic under study before being allowed to collect data. The research assistants were closely supervised by the researcher during the data collection. The questionnaire took approximately ten minutes to administer. Data collection took approximately 90 days.

8.3.7 Data Analysis

Several methods for analyzing data were adopted in this study. Survey data were summarized and presented using percentages, frequencies, means, standard deviations and pie charts. Differences between small-scale earthenware manufacturers who had accessed new markets and those who had not were examined using t test (for continuous data) and chi squares (for categorical data). To examine relationships among variables, cross tabulation, correlation coefficients and a logit model were utilized.

The logistic regression model is similar to the linear regression model but is suited to models where the dependent variable is dichotomous. Logistic regression coefficients are used to estimate odds ratios for each of the independent variables in the model (Mukras, 1993). One advantage of logit model is that it does not rely on rigid data distributional assumptions in the same sense that discriminant analysis does. The logit model is also useful for situations in which researchers want to predict the presence or absence of a characteristic or outcome based on values of a set of predictor variables. Therefore, the logit model is thought to be appropriate with entrepreneurship data (Murphy *et al.*, 2006).

The use of various statistical tools to examine relationships between data is in line with calls by entrepreneurship researchers on the need to test for the robustness of empirical results through the use of multiple data analysis procedures (Shane, 2000; Ibeh, 2004).

In the logit model used in this study, the dependent variable was a dichotomous variable with successful access to new market outlets in the last twelve months labelled one, otherwise zero. The independent variables were entrepreneurial orientation, prior knowledge and personal characteristics. This model took the following form:

Prob (access to new markets)

$$=1/(1+e^{-z}), \quad (1)$$

where $Z = f(X_i, C)$, that is the linear combination of independent variables (X_i) and a constant (C). X_i represents age, level of education, number of seminars attended, membership into a business association, previous formal employment history, number of businesses previously started by the respondent and entrepreneurial orientation.

Following Mukras (1993), this model can be written as:

$$\text{Ln}[P_{(i)}] = \text{Ln}[1/1 + e^{-z^{(i)}}] \quad (2)$$

Where $P_{(i)}$ is the probability that the i^{th} enterprise will access a new market and $z_{(i)}$ is a function of explanatory variables expressed as:

$$z_{(i)} = \beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_9x_9 + \mu_i \quad (3)$$

x_1 = Education level

x_2 = Entrepreneurial experience

x_3 = Innovation

x_4 = Competitiveness

x_5 = Autonomy

x_6 = Proactiveness

x_7 = Risk- taking

x_8 = Attending training

x_9 = Membership into business associations.

Where β_0 is the intercept and β_i are slope parameters in the model. The slope shows the odds ratio in favour of a firm accessing a new market as the independent variables change. To allow interpretation of the coefficients, the logit model can be re-written in terms of the odds and log of odds (Hosmer & Lemeshow, 2004).

Thus given

$$P_{(i)} / (1 - P_{(i)}) = e^{z^{(i)}}$$

and taking logarithms on both sides we obtain:

$$\text{Ln}[P_{(i)}/(1 - P_{(i)})] = \text{Ln}[e^{\beta_0 + \sum\beta_ix_i}] = z_{(i)} \quad (4)$$

If the disturbance term is taken into account, the logit model becomes:

$$z_{(i)} = \beta_0 + \sum \beta_i x_i + \mu_i \quad (5)$$

The confidence level for this study was taken as 95 percent. The analyses of survey data were conducted using the Statistical Package for the Social Sciences (SPSS) version 13.0.

Data from the FGDs were initially edited and pre-coded to enable analysis. These data were then subjected to content analysis. The recorded conversation was transcribed into a written form and compared with the moderator notes. The written texts were then classified into meaningful categories of data based on the purpose of this study. The units of the data were then manually attached to appropriate categories. This involved indexing categories by recording where they occur in the moderator notes and transcripts. A search for key themes, patterns and relationships in the re-arranged data followed. Here, the categories were either subdivided or integrated as a way of refining and focusing the analysis. Finally, propositions and conclusions were made based on the apparent patterns or relationship within the data.

8.4.0 RESULTS AND DISCUSSION

This chapter presents the results of this study. The chapter is made up of three sections. Quantitative results are presented in the first section. The second section presents the qualitative results of this study. The third section provides a discussion of the study results.

8.4.1 Quantitative Data Analysis

This section begins with an analysis of the characteristics of the study sample. The extent of access to new markets by the study sample is presented thereafter. The effects of firm characteristics, prior knowledge, personal characteristics, entrepreneurial orientation and access to new markets are presented in the subsequent sub-sections. The results of the logit estimation are presented in the last part of this section.

8.4.1.1 Characteristics of the Study Sample

A total of 384 small-scale earthenware manufacturers in Western Kenya were sampled for this study. The mean age of the respondents was 47.40 years (SD = 14.14). The gender distribution of the study respondents indicated that more females than males participated. Two hundred and ninety five (76%) of the respondents were female while eighty nine (24%) of the respondents were male (Figure 4.1).

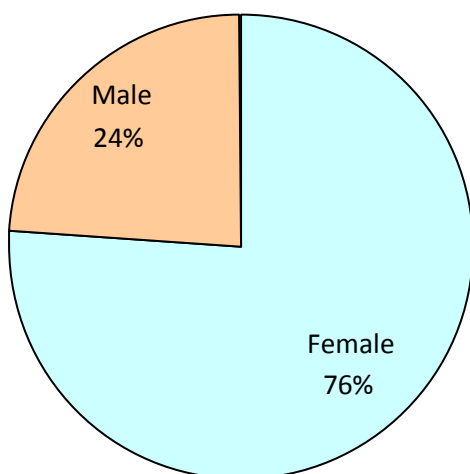


Figure 8.1: Gender Distribution of the Respondents

Two hundred and thirty three (60%) of the respondents operated as sole proprietors, 143 (38%) as a group and the remaining eight (2%) operated as registered companies. Table 8.1 shows the distribution of gender and legal status of the sampled respondents. A majority of the sampled men 69 (78%) were sole proprietors. Businesses registered as “Group ownership” were more popular among the women 126 (43%) than the males 17 (19%). There were significant differences between gender and legal status of small-scale earthenware manufacturing enterprises ($\chi^2 = 20.97$, $p < 0.05$) when chi-square test was applied.

Table 8.1: Legal Status of the Businesses by Gender

Gender	Legal Status			Total
	Sole Proprietorship	Group	Corporate	
Male	69 (78 %)	17 (19 %)	3 (3 %)	89
Female	164 (56 %)	126 (43 %)	5 (1 %)	295
Total	233 (60 %)	143 (38 %)	8 (2 %)	384

Fifty seven (15%) of the respondents indicated that their businesses were registered. Eleven percent of the men and 17% of the women had registered their businesses. There were statistically significant differences between gender and the registration of businesses ($p < 0.05$).

8.4.1.2 Access to New Markets

Only fifteen (4%) of the study respondents had accessed new markets in the last twelve months (Figure 4.2). The most common new market outlets for the respondents were exports (2%) followed by sub-contracts (1%), selling in new locations and government procurement (1%) in that order.

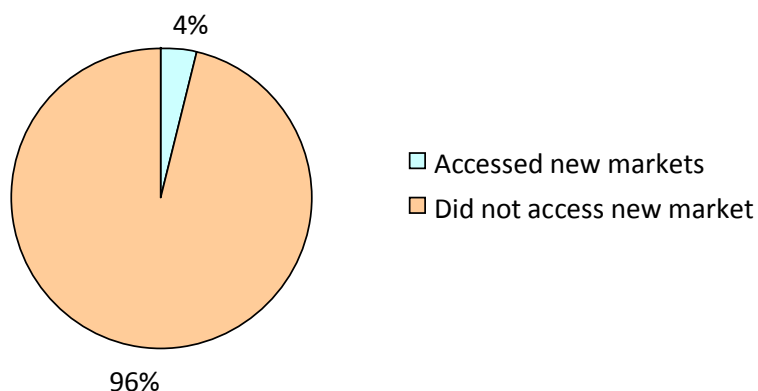


Figure 8.2: Respondents' Access to New Markets

Respondents who said that they had accessed new markets in the last twelve months indicated that they had used different methods for identifying the new market outlets. A majority of them 8 (53.3%) said that the opportunity to access new markets had just occurred (Table 8.2). Three of them (20%) claimed that they were alert to new markets. Two (13%) of the respondents said that they created a new product and started marketing

it. Similarly, 2 (13%) of the respondents said that they searched for new markets.

Table 8.2: Methods Used to Identify New Market Outlets

Method	Frequency	Percentage
Created	2	13.3
Occurred	8	53.3
Search	2	13.3
Alert	3	20.0
Total	15	100.0

8.4.1.3 Firm Characteristics and Access to New Markets

Firm characteristics that are examined in this section include the legal status of the business, registration status and level of production. The association of these firm characteristics with access to new markets is also analyzed statistically.

a. Legal Status

Table 8.3 shows the relationship between legal status and access to new markets. Thirteen (6%) of sole proprietors had accessed new markets. However, there were no significant differences between access to new markets and the legal status of a business ($\chi^2 = 3.80$, $q > 0.10$).

Table 8.3: Legal Status and Access to New Markets

Legal Status	New Markets		Total
	No	Yes	
Sole proprietorship	220 (94%)	13 (6 %)	233
Group	140 (98%)	3 (2 %)	143
Corporate	7 (86%)	1 (14%)	8
Total	367 (96%)	17 (4 %)	384

b. Business Registration

Table 8.4 shows the relationship between the registration of a business and access to new markets. Six (11%) of registered enterprises had accessed new markets. Eleven (3%) of the respondents who had not registered their businesses had accessed new markets. There were statistically significant differences between access to new markets and registration of a business ($\chi^2 = 6.63$, $q < 0.05$).

Table 8.4: Business Registration and Access to New Markets

Registration of business	Access to new markets		
	No	Yes	Total
Yes	51 (89%)	6 (11 %)	57
No	313 (97%)	11 (3 %)	324
Total	364 (96%)	17 (4 %)	381

c. Level of Production

The respondents who had accessed new markets produced an average of 262 pots per month while those who had not, produced an average of 91 pots. When using the t-test for the comparison of the mean differences, the result showed a significant difference in the means ($t = -4.11$, $q = 0.00$).

8.4.1.4 Personal Characteristics and Access to New Markets

This section presents the results of the association between personal characteristics of the study respondents with access to new markets. The characteristics examined include gender, age, marital status and the size of the respondent's family.

a. Gender

Eight (3%) of the women and 9 (11%) of the men indicated that they had accessed new markets (Table 4.5). Gender differences in accessing new markets were statistically significant ($\chi^2 = 8.85$, $q < 0.01$).

Table 8.5: Gender Differences and Access to New Markets

Gender	Access to new markets		
	Yes	No	Total
Male	9 (1%)	80 (99%)	89 (100%)
Female	8 (3%)	287 (97%)	295 (100%)
Total	17	367	384

b. Age

Respondents who accessed new markets had a mean age of 38.93 years (Standard Deviation 14.3 years) while those who had not accessed new markets had a mean age of 48.66 years (Standard Deviation 14.5 years). The differences in age were statistically significant ($t = 2.517$; $q = 0.0012$).

c. Marital Status

Ninety-four percent of the respondents were married. Table 8.6 shows the relationship between marital status and access to new markets. There were statistically significant differences between marital status and access to new markets ($\chi^2 = 5.19$; $p = 0.023$).

Table 8.6: Marital Status and Access to New Markets

Gender	Access to new market		
	Yes	No	Total
Married	347 (96%)	13 (4%)	360 (100%)
Not married	19 (86%)	3 (14%)	22 (100%)
Total	366 (94%)	16 (4%)	382

d. Number of Family Members

Fourteen (12%) of the respondents did not have family members aged between 16 and 65 years. The mean size of family members aged between 16 and 65 years was 4.76 years (Standard Deviation 4.17 years). The closeness of mean and standard deviation is an indicator of high variability of data on number of family members. Table 8.7 compares the mean sizes of family members aged between 16 and 65 years of small-scale earthenware manufacturers who had accessed new markets and those who had not. There were no significant differences between mean number of family members aged between 16 - 65 years and access to new markets ($t = 0.76$; $p = 0.448$).

Table 8.7: Size of Family Members and Access to New Markets

Accessed new markets	n	Mean number of family members	Standard deviation
No	344	4.79	4.19
Yes	14	3.93	3.69

8.4.1.5 Prior Knowledge and Access to New Markets

This section examines the role of prior knowledge on access to new markets. Specifically, the role of education, training attended in the last three years, membership into business associations, previous employment history, entrepreneurial experience and industry experience on access to new markets is examined.

a. Level of Education

Most of the respondents 281 (73%) had primary school level of education. Forty four (14%) of the women and 21 (25%) of the men had gone beyond primary school. Gender differences in educational attainment were statistically significant ($\chi^2 = 11.51$, $p = 0.009$).

One (8%) of college graduates and six (11%) of those with secondary school education indicated that they had accessed new markets (Table 8.8). Only nine (9%) of those with primary school education had accessed new markets while 2 (3.7%) of the respondents with no formal education had accessed new markets. There were statistically significant differences in education attainment and access to new markets ($\chi^2 = 13.01$, $p = 0.011$).

Table 8.8: Education and Access to New Markets

Level of Education	Females	Males	Total	Access to new markets
College	5	7	12	1 (8 %)
Secondary	39	14	53	6 (11 %)
Primary	218	63	281	9 (3 %)
None	29	8	37	2 (5 %)
Total	291	92	383	18 (4 %)

b. Training

Two hundred and seventeen (56%) of the respondents had not received any form of training. One hundred and thirty four (35%) of the respondents were trained in pottery and 15 (4%) had business-related training. Four per cent of the potters had attended more than one training course. Fifteen (10%) of those who had training in pottery indicated that they had accessed new markets (Table 8.9). Training was statistically associated with accessing new markets ($\chi^2 = 29.01$, $p = 0.000$).

Table 8.9: Types of Training and Access to New Markets

Type	Frequency	Percentage	Access to new market
Pottery	134	35	15
Business	15	4	1
None	217	56	2
No response	18	5	0
Total	384	100	18

c. Membership into Welfare Associations

A majority of the respondents (76%) were members of some welfare association. Twenty-three per cent of the respondents were not members of any group. Only two per cent of the respondents were members of a

business association. Twenty per cent of the respondents who had accessed new markets were members of a business association. There were statistically significant differences in membership into a business association and access to new markets ($\chi^2 = 27.00$, $q = 0.002$).

d. Previous Employment

Thirteen per cent of the respondents indicated that they had previous formal employment experience. Eighty-seven per cent of the respondents did not have any previous formal employment experience. There were no statistically significant differences in previous formal employment experience and access to new markets (Fishers Exact Test= 3.50, $q = 0.105$).

e. Entrepreneurial Experience

Ninety percent of the respondents indicated that they had no previous entrepreneurial experience. There were no statistically significant differences in entrepreneurial experience and access to new markets (Fishers Exact Test= 0.69, $q = 1.000$).

f. Industry Experience

The mean industry experience for the respondents was 20.67 years. Industry experience ranged from one year to sixty-eight years. Respondents who had accessed new markets had a mean industry experience of 22.75 years while those who had not accessed new markets had a mean industry experience of 20.50 years. There were no statistically significant differences in industry experience and access to new markets ($t = -0.254$, $q = 0.801$).

8.4.1.6 Entrepreneurial Orientation and Access to New Markets

Table 8.10 shows the differences in mean scores of entrepreneurial orientation for small-scale earthenware manufacturers who had accessed new markets and those who had not. Respondents who had accessed new markets had a mean of 16.87 on the entrepreneurial orientation while those who had not accessed new markets had a mean of 13.59 on this scale. There were statistically significant differences in the entrepreneurial orientation and access to new markets ($t = 2.372$, $q = 0.018$).

Table 8.10: Mean Scores for Entrepreneurial Orientation

	Accessed New Markets			
	Yes	No	t-test	p value
Risk taking	4.60	3.20	-3.37	0.01
Innovation	6.87	4.96	3.16	0.002
Proactiveness	5.44	5.40	0.59	0.953
Competitive Aggressiveness	5.37	5.80	- 0.78	0.437
Autonomy	4.91	5.93	- 1.84	0.066
3- Dimensional Entrepreneurial orientation	16.87	13.59	2.37	0.018
5- Dimensional Entrepreneurial orientation	28.60	23.92	2.20	0.028

Respondents who had accessed new markets had a mean of 28.60 on the entrepreneurial orientation while those who had not accessed new markets had a mean of 23.92 on this scale. There were statistically significant differences in entrepreneurial orientation and access to new markets ($t = 2.20$, $q = 0.028$).

Respondents who accessed new markets had a mean score of 3.20 on risk-taking while those who had not accessed new markets had a mean score of 4.60. There were significant differences in risk-taking and access to new markets ($t = -3.374$, $q = 0.01$).

Respondents who indicated that they had accessed new markets had a mean score of 6.87 on innovativeness while those who had not accessed new markets had a mean score of 4.96. There were significant differences in innovation and access to new markets ($t = 3.164$, $q = 0.002$).

Respondents who had accessed new markets on proactiveness had a mean of 5.44 while those who had not accessed new markets had a mean of 5.40. There were no statistically significant differences in proactiveness and access to new markets ($t = 0.59$, $q = 0.953$).

Respondents who had accessed new markets on competitive aggressiveness had a mean of 5.37 while those who had not accessed new markets had a mean of 5.80. There were no statistically significant differences in competitive aggressiveness and access to new markets ($t = -0.779$, $q = 0.437$).

Respondents who had accessed new markets on autonomy scale had a mean of 4.91 while those who had not accessed new markets had a mean of 5.93. Statistically, significant differences in autonomy and access to new markets were only at the 10% significance level ($t = -1.841$, $q = 0.066$).

8.4.1.7 Estimation Results Using the Logit Model

A logit regression model was used to predict access into new markets. The analysis used a dependent variable access to new markets which was dichotomous coded 0 = no, 1 = yes. The independent variables were education, entrepreneurial experience, trainings attended, innovation, risk-taking, proactiveness, aggressive competitiveness and autonomy. The correlation coefficients of continuous variables used in the logit estimation are presented in Table 8.11.

Table 8.11: Correlation Coefficients of Continuous Variables

	1	2	3	4	5	6	7
1. Age	1						
2. Risk Taking	-0.01	1					
3. Proactiveness	-0.08	0.25**	1				
4. Competitive aggressiveness	-0.06	0.42**	0.47**	1			
5. Innovation	-0.09	0.48**	0.52**	0.56**	1		
6. Autonomy	0.02	0.35**	0.22**	0.51**	0.49**	1	
7. Training	0.034	0.04	-0.27	0.01	-0.03	0.03	1

Key: ** Significant at the 0.05 level

The numbers 1-7 stand for the variables labeled 1-7 in the first column

The age of the respondents is not associated with any dimensions of entrepreneurial orientation. Likewise attendance of trainings is not associated with any dimension of entrepreneurial orientation. Risk-taking is significantly and positively associated with proactiveness, competitive aggressiveness, innovation and autonomy. Proactiveness is associated positively with innovation and autonomy. Innovation is positively and significantly associated with autonomy. The correlation coefficients of the selected independent variables are not so high. Mukras (1993) suggests that if the correlations among explanatory variables are not high, there are no significant difficulties associated with multicollinearity. Multicollinearity among the predictors can lead to biased estimates and inflated standard errors. Table 8.12 tallies correct and incorrect estimates to assess the model fit by comparing predicted and observed outcomes on logistical model.

Table 8.12: Classification Table

Observed		Predicted		
		Accessed new markets		Percentage correct
		No	Yes	
	No	302	12	99.0
	Yes	3	3	20.0
Overall percentage				95.3

This table compares the observed and predicted firms that access new markets when firms with a predicted probability of 0.5 or greater are classified as having accessed new markets. The columns are the two predicted values of the dependent, while the rows are the two observed (actual) values of the dependent. In a perfect model, all cases will be on the diagonal and the overall percent correct will be 100%. The off-diagonal entries show the number of small-scale earthenware manufacturers that were correctly classified. Overall, 95.3 percent of the firms were correctly classified, an indicator of the robustness of the logit model.

Table 8.13 provides the estimated coefficients (β), the standard errors (S.E.), the Wald Chi-Square statistic, df, odds ratio (Exp (β)) and the 95% confidence interval for the Exp (β) of the logit model. According to the table, only innovation, attending training and the constant term are statistically significant at the 0.05 level.

The table shows the estimated coefficients (β) of the logit model under column heading B. B are the values for the logistic regression equation for predicting the dependent variable from the independent variable. They are in log-odds units. The prediction equation is $\log(p/1-p) = b_0 + b_1*x_1 + b_2*x_2 + b_3*x_3 + b_4*x_4$ where p is the probability of accessing the market. The "Exp (B)" column is the label for the odds ratio indicating the estimated change in odds for a unit increase in the corresponding independent variable. These estimates tell the amount of increase (or decrease, if the sign of the coefficient is negative) in the predicted log odds of accessing the market = 1 that would be predicted by a 1 unit increase (or decrease) in the predictor, holding all other predictors constant. Odds ratios less than 1 correspond to decreases and odds ratios more than 1.0 correspond to increases in odds on the logit scale. Odds ratios close to 1.0 indicate that unit changes in that independent variable do not affect the dependent

variable. For the independent variables, which are not significant, the coefficients are not significantly different from 0.

The logit regression results show that innovation has a positive and statistically significant influence on the decision of small-scale earthenware manufacturing firms to access new markets. A β -value of 0.294 means in theory that an increase in innovation by one unit is associated with an increased chance ratio of $e^{0.294} = 1.342$ of accessing new markets. Many researchers prefer to exponentiate the coefficients and interpret them as odds-ratios. To exponentiate the coefficient we raise its odd ratios to the 10th power, for example $1.342^{10} = 13.42$. Accordingly, for every one unit increase in innovation, the odds of accessing new markets (versus non-access) increased by a factor of 13.42.

The logit estimation results suggest that attending trainings is also positively and statistically associated with accessing new markets. The estimated marginal effect for this parameter is 2.5274 which gives a chance ratio of $e^{2.5274} = 12.514$. The exponential of the coefficient ($\text{Exp}(\beta)$), which are odds ratios, are easier to interpret than the coefficient (which is in log-odds units). We take the odds ratio and raise it to the 10th power i.e. $12.514^{10} = 125.14$. The results indicate that for every one increase in attending training, the odds in favour of the entry of small-scale earthenware manufacturers into new markets increased by a factor of 125.14. This shows a very strong influence of attending training courses and access to new markets.

Table 8.13: Parameter Estimates of the Logit Model

	β	S.E.	Wald	df	Exp (β)	95% C.I for Exp (β)	
						Lower	Upper
Education	.966	1.435	.484	1	2.629	.158	43.776
Entrepreneurial experience	-15.254	4809.81	.000	1	.000	.000	.
Innovation	.294**	4.139	4.496	1	1.342	1.021	1.762
Competitiveness	.014	.208	.005	1	1.014	.674	1.525
Autonomy	.022	.138	.026	1	1.023	.780	1.340
Proactiveness	-.147	.212	.483	1	.863	.569	1.308
Risk taking	.109	.177	.380	1	1.116	.788	1.579
Attending Training	2.527**	1.124	5.057	1	12.51	1.383	113.203
Membership into business association	-2.008	1.236	2.637	1	.134	.012	1.515
Constant	-.385**	2.220	3.901	1	.012		

Key

** Significant at the 0.05 level

β - Beta, the coefficient for the constant (also called the "intercept")

S.E. - Standard Errors associated with the coefficients

df - degrees of freedom

Sig. - Significance Level

Exp (β) - Exponential β , the exponentiation of the β coefficient, which is an odds ratio.

C.I. - Confidence Interval

Constant - The expected value of the log-odds of accessing new markets when all of the predictor variables equal zero.

8.4.2 Qualitative Data Analysis

This section offers the results of three Focus Group Discussions (FGDs) with small-scale earthenware manufacturers. The first part presents data on the nature of small-scale earthenware manufactures, which is followed by the critical factors and challenges involved in accessing new markets. The process of entry into new markets is covered thereafter.

8.4.2.1 The Nature of Small-Scale Earthenware Manufacturers

Three descriptions of small-scale earthenware manufacturers emerged from the FGDs. In the first, the participants described small-scale earthenware

manufacturers as ordinary people. This means that they have needs and aspirations like any other human beings.

In the second, the participants described small-scale earthenware manufacturers as experts in pottery. In other words, small-scale earthenware manufacturers have skills and knowledge in making objects from clay. Finally, the participants suggested that small-scale earthenware manufacturers are businessmen and women. This implies that small-scale earthenware manufacturers commercialize their products. Typical phrases offered by the respondent to describe small-scale earthenware manufacturers are summarized in Table 8.14. These descriptions indicate that small-scale earthenware manufacturers have both specialist knowledge of making pots and general knowledge of identifying and exploiting opportunities. Therefore, they are entrepreneurs who combine both specialist knowledge (making pots) and generalized knowledge (commercializing ideas).

Table 8.14: Descriptions of Potters

Aspect	Description
Ordinary people	“They are just ordinary people.” “They have survival instincts like other people,”
Experts in pottery	“Some of the potters are not well-educated; however they have expertise in pottery.” “They are skilled potters,”
Businessmen	“They are also skilled in business especially customer care.” “Some potters attend seminars to improve their skills such as in marketing and budgeting.” “A potter is a person who is self-empowered and outstanding in the market place.”

The small-scale earthenware manufacturers make several types of pots and related items. These include pots for decoration, cooking, storage of cereals and brewing local liquor. Others are flower pots, special pots for beef, vegetables, and fish pots with ears and distilling pots. Traditionally, pots are used as specified. Some potters also make the *jiko* (stove). The potters make variations and decorations in pots. These variations mainly depend on what the customers want. Thus, the small-scale earthenware manufacturers make a variety of items from clay. They make both traditional items and modern items.

Small-scale earthenware manufacturing is a very important indigenous economic activity among the Kakamega, Bungoma and Kisumu communities. Pottery is usually done in the dry months. The starting point in making earthenware products is to dig up different types of clay from the river banks, which are then wedged into a homogenous body. The products are made using the coil technique. Potters generally start building their products such as pots from the bottom to the top. This process produces astoundingly symmetrical forms. The products are thereafter left to dry for about two days. The products are then decorated at this point using cord roulettes. The pots are let to dry further for approximately two weeks depending on the weather before they are fired.

The firing is done in the open using swamp grass, twigs and firewood. The products are later decorated by splashing hot sap from the wattle bark tree. Once ready similar items are usually packed using rope and banana leaves, ready for transportation to the market. The studied communities have made pots using this technique and processes for generations. When the demand for products is high the potters use a merry go round system of making pots. In other words, pots are made for one person in one day, the next person the following day until potters have enough pots. This is an interesting observation since the small-scale earthenware manufacturers share labour in order to increase production levels. This sharing of labour does not only help in offering cheap labour to increase levels of production, but it adds on the diversity and variety of the finished products. It also taps on the different expertise and experience of the potters. In summary, the process of making earthenware starts from gathering inputs, processing the inputs and finally selling the outputs.

Small-scale earthenware manufacturing appears to be conducted alongside other activities. All the participants said that they practise small-scale farming. Some potters also brew local liquor. This confirms that pottery-making is done alongside other income generating activities. There are two possible explanations for this observation. One is that the potters are cushioning themselves against risks since small-scale earthenware manufacturing is very competitive and is usually practised in the dry season. In fact, participants in the FGDs noted that pottery-making is a very competitive activity. A participant observed that the competition is caused by copying from each other. The other explanation is that doing the other activities alongside pottery making is dictated by either cultural attachment

or practice. It is debatable whether conducting other activities is for the good of small-scale earthenware manufacturing.

Generally, small-scale earthenware manufacturers sell their products to their immediate community members and local traders. The participants noted that most of the pots are sold to neighbours. Inter-ethnic trade in pots is also evident. For instance potters in Illesi make and send pots to Bungoma to sell. Illesi is a location in Kakamega where pottery is the main income-generating activity. The dominant sub-tribe in this area is the Idaho, while Bungoma District is inhabited mainly by the Bukusu. Pots are also sold in both urban and export markets. A potter from Illesi disclosed that he has exported pots to Europe. This implies that the major outlets for small-scale earthenware manufacturers range from immediate neighbours, other communities, far away towns to exports. Selling to other communities, far away towns and exports were identified by the participants in the FGDs as new market outlets for small-scale earthenware manufacturers.

Notable market pricing of the pots is that a pot is worth the grain it can contain. The value of a pot is the amount of grain it can carry. This may be an indicator of barter trade in earthenware. However, earthenware products have now emerged as fully fledged market commodities. A potter explained that they pay the local authority Kshs. 20 for each pot that they bring into the market. The selling of pots is dictated by weekly cycle of markets and seasonal demands. Trade in pottery is mainly done by women. A participant explained that the selling of pots is a woman's work.

8.4.2.2 Critical Success Factors for Accessing New Markets

The Focus Group Discussions identified four critical success factors. These included; prior knowledge, innovativeness, marketing and networks. The participants suggested that individuals and their experience were critical in accessing new markets. The participants noted that expertise in pottery was a necessary condition for entry into new markets. In addition, the participants noted that a thorough understanding of the business was needed in order to access new markets. This understanding should include bookkeeping and customer dynamics. One participant gave the example that hotels change pots like they do to upholstery, so one has to understand this in order to sell to them. Therefore, business experience and an understanding of customers are critical success factors.

The participants observed that innovativeness was a second critical success factor. They observed that variety and better shapes were appealing to new customers. One participant noted that new customers are usually attracted by new designs. Another suggested that even the potter needs to be adaptive. The participant gave the following example: "If you get an order in Mombasa, you need only to carry clay and then use the potters and kilns located there." A third participant said that one also needed to have a sound production method. The participants were unanimous that they use a merry-go-round system of making pots. In other words, they make pots for one person in the first day; go to the next person in the following day and so on. This adaptation was a critical success factor for access to new markets.

The participants noted that marketing enhanced access to new markets. The participants suggested that the use of the mass media was necessary for access into new markets. However, they noted that radio advertisements are expensive. The participants also added that trade fairs, exhibitions and trade shows helped to attract new customers. They observed that having good distribution channels was also critical in entering new markets. A participant noted that having business sheds and sellers in far off markets is important for new market entry. Another argued that being customer-focused was central to access to new markets. Therefore, having marketing skills is a critical success factor.

The participants considered networks as important to accessing new markets. One participant said that access to new markets was facilitated by friends and relatives. Another added that having a good reputation was critical to entering new markets. Access to new markets is, therefore, enhanced by networks.

8.4.2.3 Challenges Faced in Accessing New Markets

The participants identified several challenges that they faced in their attempts to enter new markets. These included lack of specialization, copying of designs by others, attitude towards pottery, inability to design, lack of access to key inputs such as firewood, clay and social challenges.

Lack of specialization was identified as a major hindrance to accessing new markets. The participants observed that the making of all types of earthenware products in an enterprise, makes a potter to loose finesse in the

art of pottery. They also agreed that spreading self thinly by engaging in other activities such as farming is detrimental to new market entry.

Another hindrance to accessing new markets was identified as low levels of entrepreneurship. Lack of innovation, copying from others and lack of customer focus were identified as a hindrance to accessing new markets. For example, copying from others was considered to create more competition. The attitude of the potters was also blamed. A participant noted that potters that say that customers can see for themselves, cannot access new markets. Therefore, low levels of entrepreneurship hinder access to new markets.

The participants agreed that the motive for making pots was also a factor in the failure to enter a new market. A participant noted that some potters made pots in order to survive. Potters that make pots as a way to eke out a living cannot access a new market. Pottery needs to be treated as a business.

The participants observed that accessing key inputs for pottery was a challenge that hinders access to new markets. Obtaining transport, firewood, clay, grass and money were considered to be challenges. A participant noted that radio advertisements are expensive but necessary for identifying new customers.

The participants noted that design challenges hindered the access to new markets. The making of identical shapes of pots does not attract new customers. Above this, the possibility of breakage of pots is a key challenge to selling in far-off markets.

Social challenges were also identified as key constraints in the access to new markets. A participant noted that men go to drink *changaa* and *busaa* (traditional alcoholic beverages) and do not help in selling pots. A female participant said that the husband cannot allow her to go into far away markets. However, some participants objected and said that their spouses allowed them to go to other towns to sell pots.

8.4.2.4 Processes Involving Access to New Markets

The participants identified the processes that they use to access new markets. Most noted that it is new customers that make orders. This means that advances by customers is an important element of the new market entry process.

Other participants said that they searched for new markets. A participant elaborated on the process: “You use a catalogue. You show it to the sales representative of a hotel who takes you to the manager. They ask you to make samples so you find potters from that area and then make your sample. Then you get the order. When the required price amounts to Kshs. 900,000, a deposit of Kshs. 200,000 is requested for.” Thus, access to new markets by earthenware manufacturers is a complex process that involves identifying a market, developing products and negotiating.

The above discussion suggests that the new market entry process is made of two major elements. The first one is advances made by the customers while the second one involves the efforts of the entrepreneur. Whichever element that starts in the new market entry process is then followed by negotiations between the customer and the entrepreneur. These negotiations are on the nature and price of the product. They may also involve the mode of payment. During the negotiations, the entrepreneur produces samples and catalogues for his products which are to be approved by the customer. Both the entrepreneur and customer play some distinct but collaborative roles in the process of new market entry.

8.4.3 Analysis

Fifteen percent of the respondents in this study indicated that their businesses were registered. This result is in agreement with that reported by ICEG *et al.*, (1999) that 11.7% of MSEs in Kenya are registered. This indicates that MSEs in Kenya shy away from formalizing their enterprises. Operating without proper registration is a well-known characteristic of MSEs and is usually a source of problems to them especially with the local authorities.

The registration of small-scale earthenware manufacturers was found to be associated with access of new markets. Comparative studies for this result are not readily available. This finding may be explained by appreciating that once an enterprise is registered, it is no longer a target of harassment from local authorities. This gives the entrepreneur peace, time and courage to pursue other worthwhile activities like searching for new customers. Moreover, registration allows the orderly and safe conduct of business. Thus, it is also possible that registration allows more visibility to a business and this may translate into confidence by new customers.

The distribution of the legal status of the sampled small-scale earthenware manufacturers showed that sixty percent of the respondents operated as sole proprietors, thirty-eight per cent as a group and the remaining two percent operated as registered companies. This distribution is different from that reported by LangenKamp (2000) that most small-scale earthenware manufacturers in Western Kenya operate in groups. Differences in these results most likely occur from the sampling procedures used in both studies. LangenKamp (2000) focused more on women potters through purposive sampling procedures. In this study, simple random procedures were used. Consequently, the distribution of the legal status obtained in this study may be a truer reflection of the state of affairs of small-scale earthenware manufacturers in the study site.

Males sampled in this study were sole proprietors while groups were popular with women. Comparative studies on this result are not readily available. The observation that men owned their businesses as sole proprietors is most likely a product of the individualistic nature of men coupled with the observation that the entry of men in small-scale earthenware manufacturing is a recent phenomenon (LangenKamp, 2000). The observation that women tend to own their enterprises as a group may be explained in two ways. One is that the Ministry of Culture and National Heritage has been quite busy in working with women who are organized in groups and thus, most women tend to register with this ministry. Second is the nature of the woman herself. It has been observed that women, particularly in the rural areas lack avenues for socializing. Running enterprises as a group opens opportunities for socializing and that most are willing to be recruited in groups.

This study has established that 96% of the study respondents had not accessed new markets. This result is higher than that reported in other studies in Kenya such as ICEG *et al.*, (1999) which demonstrated that 34.1% of MSEs cited access to new markets as a major challenge and Kinyanjui (2008) who reported that only 32% of MSEs in central Kenya have ventured into other markets. Differences in these studies occur probably due to differences in the definition and measurement of the concept of access to new markets. It may also be due to the study sample used. Previous studies have used MSEs from different sectors whereas this study has focused on one sector, earthenware manufacturers. If the latter case holds, then access to new markets is a more acute problem among small-scale earthenware

manufacturers than is reported. This may also suggest that the problem of access to new markets differs by geographical regions or even by sectors.

The legal status of the sampled small-scale earthenware manufacturers was not associated with access to new markets. This result was unexpected. Comparative studies for this result are not available. However, it might be expected that registering a business as either a partnership or limited company opens windows of opportunities to tap resources such as finances and advice from professionals. Such resources can help a registered business to access new markets.

An interesting result of this study is that small-scale earthenware manufacturers who make more pots are more likely to access new markets. This result is in agreement with the result reported in Halloway and Ehui (2002) that improved production is central to accessing new markets. A simple explanation is that with improved production, small-scale earthenware manufacturers have surplus pots to make for new customers. However, such an explanation is too simplistic since it negates the role of the entrepreneur into only furnishing an already existing demand. Opportunity recognition involves more complex processes (Gaglio, 1997). For instance, entrepreneurs are known to create new products and then educate customers about the new products (Chandler *et al.*, 2002). A more plausible explanation is that small-scale earthenware manufacturers recognize more opportunities in a variety of ways which prompt them to produce more. In short, the improved production is part of the complex process of entrepreneurship. This observation was also elaborated further by observations from the FGDs that improved production is attained through a merry-go-round production method. This method shows that the production of pots is flexible and calls for joint efforts sometimes even with competitors. This joint method of production corroborates evidence from Ghana that small-scale metalwork manufacturers share machinery and tools (Osei *et al.*, 1992). The unique evidence presented in this study is that small-scale earthenware manufacturers even share labour.

It has also been demonstrated in this study that relatively more men than women access new markets. The topic of gender differences in accessing new markets has not attracted empirical attention; however, extant literature is inconclusive on gender differences in entrepreneurship. Some reports, for instance, argue that men are predisposed to entrepreneurship (Bosma *et al.*, 2008). Others argue to the contrary that

women are also predisposed to entrepreneurship. Another stream of research suggests that the variable gender is not necessarily a key distinguishing mark of entrepreneurship (Bird, 1989). If it is true that there are gender differences in accessing new markets among the study respondents then, the differences may be explained by the different roles and privileges men and women play in the study community.

An interesting result of this study is that younger earthenware manufacturers are more likely to access new markets. This finding is consistent with previous reports (Ibeh *et al.*, 2004; Lapar, *et al.*, 2002; Halloway *et al.*, 2002) which show that younger people are predisposed towards accessing new markets. The explanation for this finding is that younger people are not conservative and have the energy and impetus to venture into new markets.

An interesting finding in this study is that small-scale earthenware manufacturers who are married are more likely to access new markets than those who are not married. This result is consistent with some extant literature in entrepreneurship that suggests that enterprising youth are most likely to be married (Chigunta, 2002). However, this result is in contrast to some other literature that casts doubts on the link between marriage and entrepreneurship (Bird, 1989). The result can be explained in several ways. The married have greater responsibilities which motivate them to search for more avenues to meet these responsibilities. Such avenues may include searching for new market outlets for those who are in business. It is also possible that by the time one marries, the small-scale earthenware manufacturer has accumulated enough resources and experience that are prerequisites to new market entry. It can also be speculated that by marrying, a small-scale earthenware manufacturer broadens his network density which is also a necessary condition for new market entry.

An unexpected result of this study is that the size of family members between 16 and 65 years is not associated with access to new markets. This finding is in contrast to Lapar, Halloway and Ehui (2002) who found that having more able-bodied family members was associated with access to new markets. The reason is that such family members can be used to ferry goods particularly which are delicate for disposal. They are a source of cheap labour that can be used to improve production levels. Therefore, explaining the lack of association between the size of able-bodied family

members and access to new markets is not very clear. However, one can speculate that such family members may not be involved with small-scale earthenware manufacturing. A possible reason is that small-scale earthenware manufacturing is losing its appeal among the members of the studied communities.

A statistically significant difference in education attained and access to new markets was obtained in this study. The higher the level of education attained, the more likely that one accesses new markets. This finding is consistent with that reported in Lapar *et al.*, (2002) but differs with Omiti *et al.* (2004) who did not find any significant relationship between education and access to new markets in Western Kenya. Differences in the findings of these studies are probably due to the samples used. This study used small-scale earthenware manufactures, Lapar, *et al.*, (2002) used small-holder dairy farmers whereas Omiti *et al.*, (2004) used small-scale traditional vegetable farmers. Overall, it can be claimed that the influences of education on access to new markets are sector specific.

This study established that one third of the small-scale earthenware manufacturers had received training. Training in pottery was the most popular among the respondents as every fourth potter had been trained in pottery. This finding is consistent with the finding that most MSEs in Kenya have received training on a technical area (ICEG *et al.*, 1999). Training was positively associated with accessing new markets. This finding is consistent with findings reported in Lapar, *et al.*, (2002) and Ibeh (2004) who report that training influences access to newer markets. Training improves the attitude, skills and knowledge of the entrepreneurs which makes them more likely to identify and exploit new market outlets.

Statistically significant differences in membership of business associations and access to new markets were obtained in this study. This is consistent with previous studies (Lapar, *et al.*, 2002 and Halloway *et al.*, 2002) which report that networks influence access to new markets. Membership of business associations may enhance an entrepreneur's access to new markets in two ways. First, networks provide information on existing opportunities and second, they may offer necessary resources to exploit new market opportunities. Business associations are also useful in that they bring entrepreneurs into possible contacts, protection and promotion of business interest.

Three types of experience were examined in this study namely; previous employment, entrepreneurial experience and industry experience. There was no statistically significant difference between previous employment experience and access to new markets. This study also found that there are no statistically significant differences in entrepreneurial experience and access to new markets. Likewise, this study did not find any statistically significant differences in industry experience and access to new markets. This is contrary to previous studies which show that previous experience significantly influences access to new markets (Lapar, *et al.*, 2002 and Halloway *et al.*, 2002). The explanations for these differences are not clear since theory suggests that founding team experience enhances the performance in new ventures. This is through three different ways (Shane, 2006). First, it provides information that facilitates the development of the organizing routines and skills in which new ventures are initially disadvantaged. Second, founding team experience provides role familiarity, which is important when founding team members adopt the roles that they play in new ventures. Third, founding team experience links the entrepreneur to a network of employees, suppliers, investors and customers.

An unexpected finding in this study is that there are no statistically significant differences in proactiveness and access to new markets. Empirical evidence on the relationship between proactiveness and access to new markets is not readily available. This finding is unexpected since by definition, proactiveness is a forward looking, opportunity-seeking perspective that is characterized by introduction of new products ahead of the competition and acting in anticipation of future demand.

This study found that there are statistically significant differences in risk-taking and access to new markets. Empirical evidence on the relationship between risk-taking and access to new markets is not readily available. Thus, small-scale earthenware manufacturers that take bold steps to venture into the unknown are likely to access new markets.

A key finding in this study is that there are statistically significant differences in innovation and access to new markets. Previous studies linking innovativeness and access to new markets are not available. This finding suggests that small-scale earthenware manufacturers who engage in creativity and experimentation through the introduction of new products are likely to access new markets.

It was established in this study that there are no statistically significant differences in competitive aggressiveness and access to new markets. Studies linking competitive aggressiveness and access to new markets are not available. The finding suggests that small-scale earthenware manufacturers who concentrate on efforts to outperform their competitors may not access new markets.

Statistically, significant differences in autonomy and access to new markets by the study respondents are only at the 10% significance level. This finding suggests that the independent actions taken by small-scale earthenware manufacturers are associated with accessing new markets.

There is debate on whether entrepreneurial orientation is a three or five dimensional concept. This study established that there were statistically significant differences in the three dimensional entrepreneurial orientation and access to new markets. This result is similar to that reported by Ibeh (2004) who demonstrated that there is a statistically significant association between entrepreneurial orientation and access to export markets. Therefore, small enterprises that adopt entrepreneurial orientation are more likely to access new markets. This finding suggests that both the three and five dimensional entrepreneurial orientation adopted by small-scale earthenware manufacturers is associated with accessing new markets. Thus, small-scale earthenware manufacturers who adopt an entrepreneurial posture are more likely to access new markets.

This study established that there were statistically significant differences in entrepreneurial orientation (three dimension) and access to new markets. Thus, small-scale earthenware manufacturers who take risks, are innovative, and adopt a proactive posture are likely to access new markets.

The debate on whether the dimensions of entrepreneurial orientation co-vary was also examined. When examined as a unidimensional concept statistically significant difference existed between entrepreneurial orientation and access to new markets. However, when the dimensions of entrepreneurial orientation were taken independently, there were statistically significant differences between risk-taking, innovation and competitive aggressiveness and access to new markets. There were also statistically significant differences between the square of risk-taking and access to new markets. Autonomy was only significant at the 90% confidence level. This is consistent with the existing literature that argues that the dimensions of entrepreneurial orientation occur in different

combinations with firm performance (Kreisser *et al.*, 2002) but disagrees with the position taken by Covin and Slevin (1989) that entrepreneurial orientation is a unidimensional concept.

A logit model was used to examine the relationship between, entrepreneurial orientation, prior knowledge and access to new markets. This model revealed that only two variables namely, training and innovation are significant at the 0.05 level. These findings are similar to other studies that show that training enhances access to new markets (Omiti *et al.*, 2004; Lapar, *et al.*, 2002 and Halloway *et al.*, 2002). The estimation results showed a very strong influence of attending training courses and access to new markets. This influence is so strong, especially in comparison to the other independent variables that one could argue that attending trainings is, in fact, deterministic in the entry of small-scale earthenware manufacturers' to new markets. Training improves one's attitude, skills, knowledge and abilities, factors that are critical in access to new markets. Training also enhances the ability to identify market opportunities and broadens one's network density. The net effect of training is the ability to access new markets. Therefore, some cumulative evidence is emerging on the role of training on access to new markets.

The logit model also showed that innovation enhances access to new markets. This result is in line with the findings reported by Ibeh (2004) that innovation influences access to export markets. This finding is also consistent with the position taken by Drucker (1986) and Schumpeter (1934) that there is a strong link between innovation and entrepreneurship. Innovativeness, a measure of one's cognitive abilities influences access to newer markets in a unique way. By definition, new markets are unfamiliar and thus, require creative abilities to exploit. It is, therefore, the small-scale earthenware manufacturers who engage in creativity and experimentation through the introduction of new products that are likely to access new markets.

Overall, these findings suggest that the debate on access to new markets should benefit from the inclusion of the notion of entrepreneurial orientation. However, not all the dimensions of entrepreneurial orientation matter in accessing new markets. The results of the logit model suggest that enhancing innovation (creativity and experimentation) through training may increase the likelihood of accessing new markets by small-scale earthenware manufacturers.

8.5.0 DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

This section presents a summary of the major findings, answers to research questions, conclusion, recommendations and suggestions for further research. Implications for policy are also provided.

8.5.1 Summary

The current study, "Entrepreneurial Orientation and Access to New Markets by Small-Scale Earthenware Manufacturers in Kenya," is an attempt to provide knowledge of important issues surrounding aspects of access to new markets. The study focused on the small-scale earthenware industry and addressed the effects of entrepreneurial orientation on access to new markets.

Conventional wisdom generally holds that MSEs have little inclination or capacity to access new markets. While several factors that may affect the likelihood of MSEs to access new markets have been identified in literature, their decision-making process is not well-understood. This study therefore presented an entrepreneurship-based model of access to new markets where entrepreneurs' orientation and prior knowledge influence the way they recognize and exploit new market outlets. This model was tested using a survey of small-scale earthenware manufacturers in Western Kenya. This sample was chosen because it is largely neglected in previous studies, yet it plays a key role in Kenya's cultural heritage.

A sampling list of small-scale earthenware manufacturers was constructed from lists provided by District Cultural Officers in the three study sites of Kakamega, Bungoma and Kisumu. From this sampling frame, stratified random sampling procedures were used to select the sample. A pre-tested questionnaire was used to collect data. This questionnaire was administered through interviews by the researcher with the help of two trained research assistants.

Frequencies, percentages, means, standard deviation and pie charts were used to summarize and present data. In addition, a logit model was used to examine the relationships between, entrepreneurial orientation, prior knowledge and the access to new markets. This logit model and the other quantitative analysis were conducted using the Statistical Package for the Social Sciences (SPSS) version 13. To obviate the need for longitudinal

data, three FGDs were also conducted. A pre-tested topical guide was used to collect these qualitative data. These data were content analyzed.

A sample of 384 small-scale earthenware manufacturers from Western Kenya responded to this survey. Four percent of the study respondents had accessed new markets in the last twelve months. These results suggest that the problem of accessing new market outlets is very acute among the sampled respondents. Bivariate data analysis indicated that two firm characteristics namely registration of business and higher levels of production are statistically associated with accessing new markets. The legal status of a business was not statistically associated with access to new markets. This analysis shows that age, gender and marital status influence the access to new markets. The data suggest that younger, married males are more likely to access new markets. Education, membership into business associations and attending trainings are also significantly associated with access to new markets. However, entrepreneurial, industry and previous employment experience were not statistically associated with access to new markets.

Entrepreneurial orientation was found to be statistically associated with entry of small-scale earthenware manufacturers to new markets. However, the dimensions of entrepreneurial orientation had mixed impacts on access to new markets by small-scale earthenware manufacturers. Innovation and risk-taking propensity were associated with new market entry. In contrast, proactiveness and competitive aggressiveness were not associated with the access to new markets. Autonomy had a weak association with new market entry.

The results of the logit model indicated that some variables that had significance when examined singly lose importance when examined together with others in influencing access to new markets. These include membership into business association, education, risk-taking and autonomy. Probably their effects are taken care of by both training and innovation.

Overall, the results of the logit model highlight the centrality of human agency in access to new markets. Specifically, innovativeness, a major dimension of entrepreneurial orientation and attending training are significant determinants of entry into new markets. Analysis of the FGDs gave insight into the nature of small-scale earthenware manufacturers. The results also gave insights into the challenges, key success factors and

processes involved in access to new markets. Small-scale earthenware manufacturers were described as people who have both specialist knowledge of making pots and general knowledge of identifying and exploiting opportunities. In other words, small-scale earthenware manufacturers are entrepreneurs.

Small-scale earthenware manufacturers make a variety of items from clay. They make both traditional items such as pots and modern items such as stoves. The earthenware products are made using the coil technique, a technique that has been used for very many generations. The FGDs also indicated that pottery-making is done alongside other income-generating activities such as farming and brewing of liquor. Sharing of labour in a merry-go-round system is one way that small-scale earthenware manufacturers use in order to increase production levels.

The major outlets for small-scale earthenware manufacturers range from immediate neighbours, other communities, far away towns to exports. Selling to other communities, far away towns and exports are new market outlets for small-scale earthenware manufacturers. The access to these new market outlets posed serious challenges for the potters. These included lack of specialization, copying of designs by others, attitude towards pottery, inability to design and accessing key inputs such as firewood and clay. Social challenges including alcoholism and objection by spouse were also identified as detrimental to access to new markets.

Four critical success factors were identified namely, expertise in pottery and business, innovativeness, networks and marketing. Business skills and an understanding of customers is a critical success factor in accessing new markets. Likewise, flexibility and creativity are other success factors. Friends, relatives and good reputation also emerged as another critical success factor. Advertisements in the mass media and trade fairs were also identified as critical in new market entry. The identification of business skills and creativity in the FGDs is in agreement with the results of the logit model, where training and innovation emerged as factors that enhance access to new markets. It appears that training is meant to enhance business skills.

The FGDs participants identified the processes involved in new market entry. Advances made by new customers emerged as an important element of new market entry. The other element included the search and negotiation activities of the entrepreneur. Thus, the process of new market entry is a

complex activity that may be initiated by either the customer or the entrepreneur. It also involves the preparation of catalogues and samples to be shown to prospective customers. Once the prospective customer approves the samples, negotiations on modes of payment follow. This indicates that the new market entry process involves different but collaborative roles of both the entrepreneur and customer. Hence, any attempts to model the process of entry into new markets should include the different roles for both the customer and the entrepreneur.

8.5.2 Answers to Research Questions

Four research questions were posed in this study. The answers to these research questions are given below.

The first research question was concerned with the extent of access to new markets by small-scale earthenware manufacturers in Kenya. The study established that 4 percent of the study respondents had accessed new markets in the last twelve months. The most common new markets for the respondents were exports (2 percent). Other new markets including sub-contracts, selling in new locations and government procurement were cited each by 1 percent of the respondents. None of the respondents indicated that they had used electronic markets. The results suggest that the participation of small-scale earthenware manufacturers in new markets is not widespread. The first research question was therefore answered.

The second research question aimed at identifying the processes involved in accessing small-scale earthenware manufacturers in Kenya. The survey results confirmed that different methods are used to identify new markets. A majority of the respondents who had accessed new markets said that the opportunity to access new markets had just occurred (53.3 percent), 20 percent claimed that they were alert to new markets, 13 percent said that they created a new product and started marketing it while the remaining 13 percent of the respondents saying they searched for new markets.

This study established that the process of new market entry is complex and involves two major elements namely, the entrepreneur and the customer. The process can be initiated by either the entrepreneur or the customer. After initiation, both the entrepreneur and the customer play distinct roles in the negotiation phase. In this phase, the entrepreneur makes samples and/or catalogues which are shown to the potential customer. The customer then approves the samples. The price and mode of

payment are then agreed upon before the entrepreneur makes the delivery and collects his payment. Therefore, this research question was answered.

The third research question sought to establish the role of entrepreneurial orientation in the access of new markets by small-scale earthenware manufacturers. Univariate analysis of the data established that entrepreneurial orientation is significantly associated with access to new markets. Both the three (Risk-taking, proactiveness, innovativeness) according to Covin and Slevin (1989) and five (Risk-taking, proactiveness, innovativeness, autonomy, competitive aggressiveness) according to Lumpkin and Dess (1996) conceptualizations of entrepreneurial orientation were associated significantly with access to new markets. Not all the components of entrepreneurial orientation influence new market entry. Risk-taking and innovation had significant associations with new market entry. Autonomy had a weak association with new market entry. Proactiveness and competitive aggressiveness were not associated with new market entry. This indicates that not all the dimensions of entrepreneurial orientation influence access to new markets.

In the multivariate analysis, only the innovation dimension of entrepreneurial orientation was statistically associated with access to new markets. Small-scale earthenware manufacturers who experiment and are creative were more likely to have accessed new markets. Therefore, entrepreneurial orientation plays some important role in enhancing new market entry through innovation. This research question was also answered.

The fourth and last research question was concerned with identification of factors that influence small-scale earthenware manufacturers into new markets. Univariate analysis of data indicated that prior knowledge influences new market entry. Specifically, education, training and membership into business associations influence new market entry. Contrary to expectations, industry, entrepreneurial and previous employment experiences were not associated with access to new markets. The logit model showed that attending training courses influences entry into new markets. In fact, the effects of training are so strong in the logit model that it can be argued that training is deterministic of access to new markets. In which case, prior knowledge obtained through training enhances access to new markets. This indicates that the fourth research question was answered.

8.5.3 Conclusions

Seven conclusions can be made from this study:

New market entry is a critical problem for small-scale earthenware manufacturers as only four percent of the sampled respondents had accessed new markets.

The process of new market entry is complex and is made up of two elements, the entrepreneur and the customer who interact by way of negotiations for the benefit of both. Thus, any attempts to model the new market entry process should include the different roles for both the customer and the entrepreneur.

Small-scale earthenware manufacturers use different methods to identify new markets. Some search for opportunities, others are alert to opportunities, others create new products and start marketing them while others claim that opportunities just occurred. Thus a variety of methods are used to recognize new market opportunities.

Entrepreneurial orientation influences new market entry. However, not all the components of entrepreneurial orientation influence new market entry. Risk-taking, innovation and autonomy had significant association with new market entry. Proactiveness and competitive aggressiveness were not associated with new market entry.

Prior knowledge influences participation in new markets. Specifically, education, training and membership into business associations influence new market entry. Contrary to expectations, industry, entrepreneurial and previous employment experience do not influence new market entry. Background personal factors such as gender, age, and marital status influence the access to new markets. The results show that younger, married males are more likely to access new markets.

Firm characteristics namely, registration of business and higher levels of production are associated with accessing new markets.

In a multivariate formulation, the critical factors involved in access to new markets are training and innovation.

8.5.4 Implications for policy

The above mentioned conclusions have implications for policy. Sessional Paper Number 2 of 2005 on *Development of Micro and Small Enterprises for Wealth and Employment Creation for Poverty Reduction* (RoK, 2005) identifies

access to new market outlets as among the most severe constraints to MSE development in the country. This study was able to quantify the magnitude of this problem using a sample of small-scale earthenware manufacturers in Western Kenya. The study established that only four percent of the study respondents had accessed new markets. Therefore, this study offers support for the recognition of access to new market outlets as among the most severe constraints to the development of MSEs in the above mentioned sessional paper.

This sessional paper further identifies low aggregate demand, saturated market due to dumping and overproduction, lack of information, high transaction cost, unfair competition and weak MSEs capacities as the major factors that explain the limited access to markets by MSEs in the country. Validation of these determinants among small-scale earthenware manufacturers in Western Kenya was done. The FGDs identified that advances made by the customers is an important element of the process of new market entry. The challenge of low aggregate demand was supported. This means that policy strategies that focus on increasing aggregate demand for MSE products are required.

Challenges to new market entry identified by the FGDs included lack of specialization, copying of designs by others, attitude towards pottery, inability to design and accessing key inputs such as firewood and clay. Social challenges including alcoholism and objection by spouse were also identified as detrimental to access to new markets in the FGDs. A comparison of the factors mentioned in the sessional paper and those identified through the FGDs indicates that unfair competition, saturated markets and weak MSEs capacities were partially validated. The other challenges appear not to have been supported. The results of the FGDs suggest that the list of challenges to accessing new markets by MSEs mentioned in the sessional paper should be broadened.

Conducting this study on access to new markets by small-scale earthenware manufacturers helped to identify other factors such as training that are not mentioned in the sessional paper. In addition, this study helped to determine the relative importance of these factors. Three aspects of prior knowledge namely education, training and membership into business associations were found to influence new market entry. Likewise, entrepreneurial orientation was associated with access to new markets. The logit model identified training and innovation as critical factors in

enhancing access to new markets. This offers support to the rather broad challenge 'weak MSEs capacities' mentioned in Sessional Paper Number 2 of 2005. In fact, training and innovation are the most important factors in enhancing access to new markets by small-scale earthenware manufacturers. The finding that entrepreneurs can also initiate access to new markets in the FGDs suggests that the focusing on enhancing the capacities of entrepreneurs is a useful policy strategy.

This study has not only deepened our understanding of the access of MSEs to new markets, but it has also offered an empirical basis for identifying policy options to increase the participation of MSEs in new markets. This study is therefore, of value to both those who seek to target MSEs with offerings (such as the government and other business service providers) and the small-scale earthenware manufactures who stand to benefit from a greater understanding of their own market entry behaviour.

The study established that only four percent of the sampled small-scale earthenware manufacturers had accessed new markets. Another study in Central Kenya had reported that only 32% of the sampled MSEs had ventured into new markets (Kinyanjui, 2008). Nationally, 34.1% of MSEs complain that accessing new markets is their most severe challenge (ICEG *et al.*, 1999). The regional variations in accessing new markets indicate that there is need to reconsider the omnibus approach taken by Sessional Paper Number 2 of 2005 on *Development of Micro and Small Enterprises for Wealth and Employment Creation for Poverty Reduction* (RoK, 2005). A suggested option is to segregate the problem of access to new markets by MSEs into regions and solve it from such a perspective.

More importantly, this finding offers support for the recognition of access to new market outlets as among the most severe constraints to the development of MSEs in Sessional Paper Number 2 of 2005. It is suggested, that the list of the factors that influence access to new markets by MSEs should be broadened, focused, and refined. Focusing on enhancing the capacities of entrepreneurs particularly on innovation through training and other policy interventions are useful policy strategies worth the attention of implementing government agencies. Briefly, the most salient policy recommendations can be extrapolated and outlined as follows.

8.5.5 Recommendations

Recommendations for practice, policy, and academic purposes are offered in light of the findings of this study. To the small-scale earthenware manufacturers, the following two recommendations are offered:

- i. Small-scale earthenware manufacturers who are keen on accessing new markets should enhance their entrepreneurial capacities. They should focus on sharpening their innovativeness and attending seminars, workshops, and training courses. This recommendation opens opportunities for business development service providers who may consider offering training courses to small-scale earthenware manufacturers.
- ii. Small-scale earthenware manufacturers who are interested in accessing new markets should become conversant with the process of access to new markets. The small-scale earthenware manufacturers should enhance their ability to recognize new market opportunities. They should also appreciate the role of the customer in the process of new market entry. These manufacturers should also understand the role of prototypes (samples) and catalogues in the new market entry process. They should also enhance their negotiation skills as these are critical entries to new markets.

To policy-makers, the following six recommendations are offered:

- i. This study established that only four percent of the sampled small-scale earthenware manufacturers had accessed new markets. This offers support for the recognition of access to new markets as among the most severe constraints to the development of MSEs in Sessional Paper Number 2 of 2005 on *Development of Micro and Small Enterprises for Wealth and Employment Creation for Poverty Reduction* (RoK, 2005). This study also offers support for some of the factors that hinder accessing new markets such as low aggregate demand. It is suggested, however, that the list of the factors that influence access to new markets by MSEs should be broadened, focused and refined. Focusing on enhancing the capacities of entrepreneurs particularly on innovation through trainings is a useful policy strategy.
- ii. Since customer initiatives are a key element of new market entry, policy strategies that focus on increasing aggregate demand for earthenware products are required. Mass media campaigns and trade

exhibitions can be useful avenues of increasing aggregate demand for earthenware products.

- iii. Gender specific education programmes need to be developed to enhance the ability of women to register their business concerns. Specifically, the study found that men were most likely to register their businesses- a fact that contributed to the ability to access more market opportunities for earthenware sales. Therefore, opportunities for enhancing business ownership are in order. Outreach and promotional programmes including issuance of marketing bulletins through the Ministry of Information and Commerce outlets as well as rural radio programmes can offer beneficial opportunities for business registration. As earlier stated in the text, greater market access is a function of the age of the entrepreneurs. This provides great opportunities for outreach programmes to younger computer savvy manufactures, especially support in internet technology-based marketing activities. In tandem with the above policy on e-commerce, there is need for the government to provide subsidies to manufactures to enable them to advertize in the expensive television environments.
- iv. This study also offers support for some of the factors that hinder accessing new markets such as low aggregate demand. The research found that increased production of a variety of earthenware had the tendency to create push factors for the more aggressive large producers. For example, the larger producers of pots were likely to desire to access more markets. Therefore, policies that encourage more production of ceramic ware whetted the appetites to access more markets. A policy that promotes this important cultural endeavor should therefore include elaborate marketing plans that identify potential demand markets including regional ones.
- v. In the long-term, policy on patents and copyright protections needs to include traditional ceramics products. This current research identified that there was widespread copying of designs thereby weakening potential for greater gains by the more entrepreneurial producers. Obviously, because of the relatively low level of education among the manufacturers, education on copyrights of all concerned parties must be a first approach toward developing a comprehensive strategy for enhancing market access. In other words, there is need to develop greater awareness of copyright issues in this art form.

- vi. This study established that only four percent of the sampled small-scale earthenware manufacturers have accessed new markets. As mentioned earlier, another study in central Kenya reported that only 32% of the sampled MSEs had ventured into new markets (Kinyanjui, 2008). Nationally, 34.1% of MSEs complain that accessing new markets is their most severe challenge (ICEG *et al.*, 1999). These regional variations in accessing new markets indicate that there is need to reconsider the omnibus approach taken by Sessional Paper Number 2 of 2005. A suggested option is to segregate the problem of access to new markets by MSEs to regions and solve it from such a perspective.

8.5.6 Suggestions for Further Research

From the standpoint of academic scholarship, at least four particular lessons stand out from the study and are the basis for the recommendations suggested here.

- i. Scholars are advised to continue examining the access to new markets from the entrepreneurship perspective. Future areas of focus need to sharpen the theoretical understanding of factors that hinder gender equity in access to markets. More importantly, good theory is a function of expanded empirical research. Therefore, wider studies to examine whether the results obtained in this study hold in other sectors and regions where MSEs operate are required.
- ii. Research should consider the role of the customer in the process of new market entry. Hitherto, access to new markets has been examined from the perspective of either the entrepreneur or the firm. Therefore, formulations of the market entry process should be extended to include the customer. Briefly, there is need to conduct other studies to refine and extend the process of new market entry documented in this study. Three elements of the model include the customer, the entrepreneur and negotiations have already been identified. However, some questions are yet to be answered: What steps are involved? Are these steps linear or interactive? What are the most appropriate methods to study the process of new market entry?
- iii. In addition, this study found that the process of new market entry is started either by the entrepreneur or the customer. Some interesting research questions can be answered to shed more light onto the roles

of the customer and entrepreneur in the process of new market entry. Which is the dominant role, the entrepreneurial push or customer pull in enhancing access to new markets? Do both forces have the same impacts on performance of enterprises?

- iv. There is need to consider entrepreneurial orientation as an important determinant of access to new markets. Future studies on new market entry will also benefit from innovation but it must first be understood and put into context. Innovation, it is suggested, has great potential for leading the small-scale manufactures into new markets. Small-scale manufacturers of earthenware must be continually made aware that although their trade is as old as civilization, today the success of their business is dependent upon building entirely new markets. Accessing these markets has to be based upon meeting specific customer needs through expanding knowledge base and tapping new creative ideas. Innovations in the area of small-scale business models and in marketing strategies will go a long way in increasing access to markets for locally manufactured earthenware.

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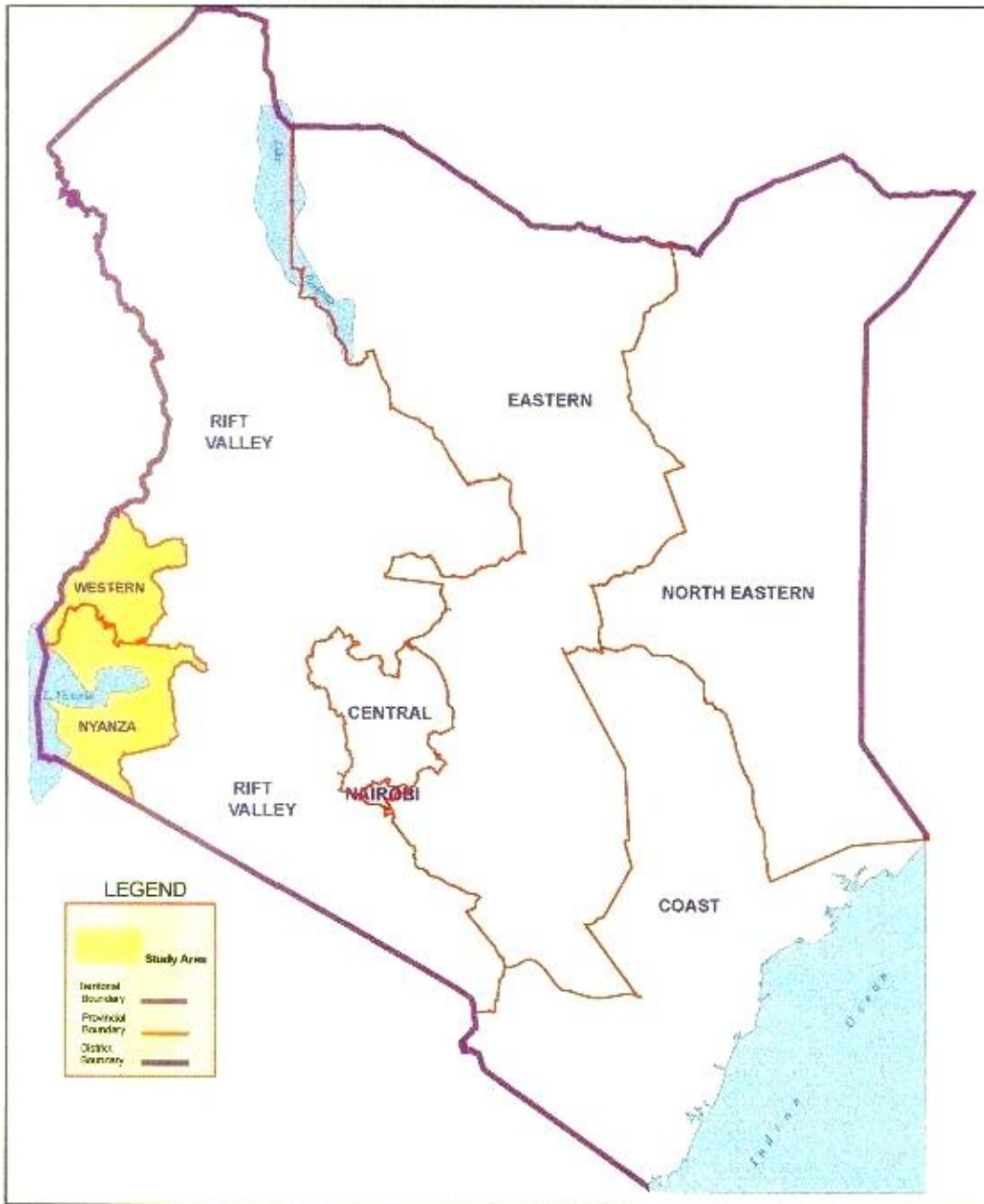
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APPENDICES

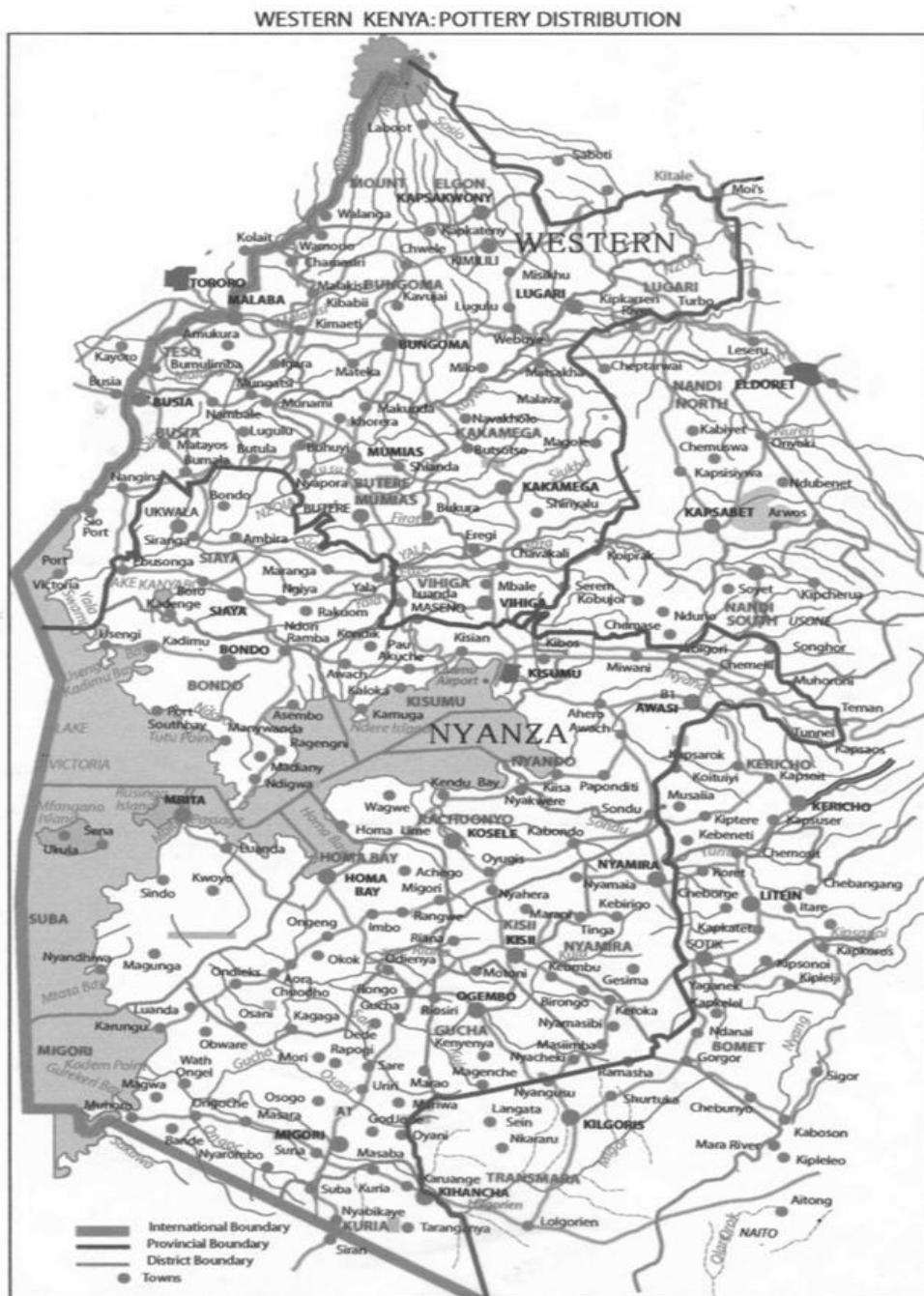
APPENDIX 1: MAP OF KENYA SHOWING THE STUDY SITE

KENYA: LOCATION OF POTTERY



Source: Survey of Kenya Maps

APPENDIX 2: MAP OF WESTERN KENYA SHOWING POTTERY DISTRIBUTION



Chapter Nine

Value Addition in Coffee Industry in Kenya: Lessons from Cut Flower Sector

Jacob Chege

9.1.0 INTRODUCTION AND OVERVIEW

This paper surveys the value addition in coffee and cut flower sectors across the value chains. The performance of the coffee sub-sector has been declining since late 1970s, a complete contrast from the way the cut flower industry which has grown to be second leading foreign exchange earner in the country. By comparing the value chains in coffee and cut flower sub-sectors, this paper highlights the constraints that hamper value addition in the coffee industry. There exist large differences in the role various actors play in coffee and cut flower value chains. Whereas farmers participate in almost all stages of the processing in cut flower sector, the processing and marketing structure in coffee industry is dominated by institutions that thrive on information asymmetry in the sector to maximize profits. In addition, there is excessive regulation in the coffee sub-sector which provides fertile ground for emerging of middlemen and extracting of rents through taxes and government licensing. To improve value addition in coffee sub-sector the study recommends (i) better governance structures in cooperatives, millers and Coffee Board of Kenya, (ii) regulation reforms to increase farmers' participation in all stages of value chain (iii) formation of networks and alliances among coffee farmers, and (iv) adaptation of coffee branding particularly through single-origin identification i.e. the Geographical Indication (GI) of coffee which offers opportunities for contract farming and joint venture-ship.

9.1.1 Background

The Kenya economic performance in 2000-2010 period has been largely lukewarm, depicting an oscillating trend but impressively resilient after a wave of shocks. The economy's growth was 0.5% in 2002, picked to reach 7.0% in 2007 but declined to 1.6% and 4.6% in 2008 and 2010 respectively. Part of the reason for the poor economic performance was dismal growth in manufacturing sector. Kenya exports are concentrated to narrow range of mostly semi-processed products that fetch low prices in the international market. Therefore, to revitalize the growth of Kenya economy this calls for promotion of industrial development, particularly diversifying the economy's industrial base towards more value-added manufactured products. Increasing value addition in agro-processing and mining industries is naturally the starting point towards improved manufacturing sector in the short run, with more concentration on export-oriented products. In the long run, manufacturing process may embark on production of machinery and high-technology based products. In addition, more efforts are required in products' branding, so that niche markets are focused in the highly competitive world and the Kenyan products to be well recognized in the international market.

In a natural resource-based production, the lowest economic value is generated if the resource is sold raw or semi-processed. It is important and economically plausible to add value close to the sites of harvest or production if a country is to get the most benefit from the products it exports. The production, harvesting, primary and secondary processing, packaging and shipment of agricultural produce (or minerals), constitute the value chain which a country may add value through adopting the best technologies and practices to reduce cost, preserve or increase quality and satisfy market requirements.

The agricultural sector contributes about 24 percent of Gross Domestic Product (GDP) and provides about 70 per cent of total employment in Kenya (KER 2009). About 85 per cent of Kenyan population relies on coffee, tea, dairy, maize, wheat, beef and horticulture for their livelihood. Coffee and tea provide 45 per cent of the wage employment in agriculture, underscoring the importance of these sub-sectors to the economy. Kenya's position in the global economy is declining across most of its export sectors. The country's export cluster map shows that most of her exports represent

less than 0.10 percent of the world export share and have lost world market share over the past decade (Condliffe et al 2008). Kenya's exports as a share of GDP declined from 40 percent in 1960 to 26 percent in 2009 (World Bank, 2010).

The performance of coffee sub-sector has been declining since late 1970s. By 1978, coffee accounted for 9.5 percent of GDP but this share reduced to 0.6 percent by 2005 (World Bank, 2005). Coffee production has been declining falling from 130,000 tonnes in 1987/88 to 54,340 tonnes in 2006/2007. Coffee accounts for only about 4 percent of Kenya's exports (World Bank, 2010). The dismal performance of the sector is largely been attributed to poor producer prices and mismanagement of institutions that deals with coffee⁴⁰.

The development in coffee sector is a complete contrast from the way the cut flower industry has performed in Kenya. With a relatively short history of commercialization in Kenya (mid 1980s), cut flower farming has grown to make the horticulture as the second leading foreign exchange earner in the country. The marketed production of cut flower in 2009 was valued at KSh 30815 million compared to that of coffee at KSh 9563.7 million (KNBS, 2010). The growth in cut flower has had a phenomenal growth; in 2001, it produced 10.7% of Kenya's total agricultural exports but by 2009, this share had grown to 26.3% (KNBS 2008, KNBS 2010).

9.1.2 Motivation of the Study

Kenya aims to raise increase her regional market share for manufactured products from current 7 to 15 per cent and develop and develop a robust, diversified and globally competitive manufacturing sector (Kenya Vision 2030). The government realizes that Kenya's competitiveness in manufacturing lies in agro-industrial exports and therefore targets to increase the capacity of value addition in agro-based industries. To achieve this, the country must first improve the quality of her products and brand them for specialty markets. Coffee and tea are among the main products that the country exports in relatively raw form and would substantially gain if more processing and refining of the products is achieved. This study

⁴⁰<http://www.africanagricultureblog.com/2008/02/kenya-coffee-earnings-up-in-2007.html>

therefore focuses on identifying potential areas of, and challenges that stifle, value addition in coffee sub-sector. The study results can inform policy choices in promoting the coffee sub-sector in Kenya.

The key question the study wants to answer is what determines allocation and remuneration of key players in the coffee value chain. Cut flower industry is relatively new in Kenya but is one of the leading foreign exchange earners for the country. Comparing the value chain of coffee with that of cut-flower industry will indicate constraints that hamper value addition in the coffee sub-sector.

9.1.3 Objectives

The main objective of the study is to identify the potential areas of value addition in coffee sub-sector. Specifically the study aims to:

1. Identify the value chain in coffee sub-sector in Kenya
2. Find out the differences in value addition between coffee and cut-flower sub-sector value chains
3. Find out the bottlenecks that stifle value addition in coffee sub-sector
4. Draw policy lessons from cut-flower industry.

9.2.0 Review of Relevant Literature

The dependence of natural resources, and indeed on semi-processed agricultural produce for Kenyan exports, traces its history back to 1884 scramble for Africa⁴¹. In integrating Africa in global trade, the continent was to produce raw materials and agricultural produce for industrial production and household consumption in European countries. For instance, Kenya would later become among the best producers of tea and coffee, Ghana would have cocoa as the main export earning commodity and Ivory Coast would be a player in international trade as supplier of fruits, particularly banana and pineapple. Nothing much has changed since then and today most African nations mainly depend on natural minerals and raw/semi-processed agricultural produce for their foreign exchange earnings

⁴¹www.AfricaEconomicAnalysis.org

9.2.1 The Coffee Industry in Kenya

9.2.1.1 Brief historical background of coffee

Coffee was first introduced in the country in 1893 by French missionaries. Thereafter, the British settlers invested heavily in coffee to the extent that it became a major Kenyan export. For farmers to collectively lobby the government, they formed Planters Union of Kenya in 1917 which was instrumental in making Kenya move up the value chain and export semi-processed coffee. The sharp declines in coffee production during the Great Depression saw the establishment of the Coffee Board of Kenya (CBK) in 1934 to help stabilize the local industry. The CBK was formed to regulate production and marketing of coffee. However, Kenyans were not allowed to own or manage coffee farms until 1934 when the British Colonial Board allowed Kenyans to manage small-scale coffee farms with limits on farm size, number of trees and farm location. In 1937, The Kenya Planters Cooperative Union (KPCU) was formed to represent the interests of small farmers. The mandate of KPCU went beyond lobbying when, in 1941, it purchased Nairobi Curing Company (Kinoti 2005; Condliffe et al 2008).

Even after independence, the CBK and KPCU continued to impact on the performance of coffee industry. In addition, the government established the Coffee Development Authority (CDA) in 1964 to support cooperatives and small farmers, providing farmers with technical assistance to provide loans to coffee cooperatives. The World Bank Structural Adjustment Programs in mid-1980s saw a number of changes in the sector. The government pulled out of cooperative management and ended financial support to cooperatives, the KPCU and the Coffee Research Foundation (CRF). In 1999, regulation of upstream processes was made more liberal, allowing growers to choose among pulping factories, millers, and marketing agents. Similarly the year 2001 saw the reduced role of the CBK as regulator. In 2006, the coffee auction was privatized with a portion of coffee allowed to bypass the auction process and be sold directly to exporters. In the same year, number of marketing licenses issued increased from three to twenty-five (Condliffe et al *ibid*).

9.2.1.2 Coffee production

Most coffee in Kenya is grown on small farms, organized into co-operatives and estates. By 2005, there were 700,000 smallholders organized into nearly 600 co-operatives, and nearly 3300 estates of 2 to 20 hectares (Kinoti, 2005). The acreage under coffee is 160 thousand hectares with cooperatives accounting for 75 percent of this acreage and producing 57 percent of total coffee production (KNBS, 2010). The main coffee-growing regions are Nyeri, Murang'a, Kirinyaga, Embu, Meru, Nakuru, Machakos, and Kiambu, Ruiru, Thika, Juja and Makuyu 42. Coffee is grown in highlands that are between 1400-2000 meters above sea level. Kenya produces Arabica coffee of basically three types (that adapt well to different altitudes), namely SL 28 & 34 (medium to high altitude), K7 (lower altitude) and Ruiru 11 (all altitudes).

9.2.1.3 Coffee processing in Kenya

Coffee processing within the country has two levels; primary processing and secondary processing (milling). The Coffee Act requires all smallholders to process their coffee through a cooperative. Coffee milling is managed by five mills. By 2008, the KPCU was running the largest mill, controlling 70% of milling capacity in the country (Condliffe et al, *ibid*). The other four mills are run by private estates but were only allowed to process coffee from cooperatives from 1999. The millers sell coffee at the coffee auction through marketing agents. Prior to 2002, the CBK acted as the sole marketing agent. After liberalization, it divorced itself from directly participating in marketing and limited its activities to licensing "marketing agents" to represent growers at the auction. KPCU is one of the agents licensed, implying more dominance among actors in the coffee value chain. Marketing agents are the only groups that are legally allowed to participate in the coffee auction, which is held weekly. While coffee from individual farms is processed separately, it is often mixed together with cherries from other farms at the milling stage and sold by lot to exporters. This reduces incentives for smallholders to produce quality coffee, because they are paid based on revenue generated from the lot and not for the quality of their own produce.

⁴²<http://www.coffeehabitat.com/2008/03/coffee-growing-in-kenya.html>

9.2.1.4 Coffee Roasting

Prior to roasting, coffee beans are commonly referred to as green coffee beans. The roasters first extract caffeine from green coffee beans before roasting. Decaffeination is a process where moistened green coffee beans are contacted with large quantities of carbon dioxide (CO₂) at a pressure of about 4,000 pounds force per square inch and temperatures between 90 and 100 °C (194 and 212 °F). This process removes about 97 percent of the caffeine from the beans.

Decaffeination is also achieved through solvent extraction using oil. In this process, a solvent is added to moistened green coffee beans and this extract most of the caffeine from the beans. After the beans are removed from the solvent, they are steam-stripped to remove any residual solvent.

After decaffeination, coffee is roasted, a process that produces the characteristic flavor of coffee by causing the green coffee beans to expand and to change in color, taste, smell, and density. Roasting involves heating the roasters (horizontal rotating drums) from below and tumbling the green coffee beans in a current of hot gases. Green coffee beans are roasted for a period of time ranging from 3 to 30 minutes at temperatures of between 370 and 540 °F (188 and 282 °C) by using natural gas, liquefied petroleum gas (LPG), electricity or even wood. Following roasting, the beans are cooled using a vacuum system and stabilized i.e. degassing. Following degassing, the roasted beans are packaged, usually in light-resistant foil bags fitted with small one-way valves to allow gasses to escape while protecting the beans from moisture and oxygen. Roasted whole beans can stay fresh for up to one month.

Good packaging is essential to extending the useful life of roasted coffee which relies on maintaining of an optimum environment for the beans. Vacuum packing is preservation technique that is normally used for large scale roasting. However, because coffee emits CO₂ after roasting, for coffee to be vacuum-packed, it must be allowed to degas for several days before it is sealed. To allow more immediate packaging, pressurized canisters or foil-lined bags with pressure-relief valves are used.

9.2.2 Cut flower industry in Kenya

9.2.2.1 Brief historical background of cut flower

Cut flower production in Kenya dates back to 1970's but its formal commercialization started in 1980s, mainly concentrated on rose flower cultivation. The sector picked up in 1990's, shifting to higher-value flowers grown in greenhouses (Hornberger et al,2007). By 2007, Kenya cut flower accounted for 6% of world market share. The large scale cut flower is mainly grown by foreign private companies and the product and is one of the newly emerging export crops that have developed a fairly integrated chain structure (Hoeffler, 2006).A number of factors account for meteoritic rise in performance of cut flower industry (Hasit Shah, 2007). The individual players in the sector cite political stability that guarantees land ownership & tenure, good infrastructure (airport, ports and cargo handling facilities, modern banking services, energy, roads, telecommunications; fair water resources management policy);market oriented economy and good export policies; multiracial and non-secular society that encourages foreign investors.

9.2.2.2 Cut flower production

Of the overall horticulture export earnings worth Ksh49.4billion in 2009, cut flower contributed 62.4 percent. The industry experienced an upward trend in production from Ksh2.9 billion in 2005 to KSh43.1 billion in 2007 (KNBS, 2010). However the post-election violence in 2008 impacted negatively on the industry with exports reducing to 30.8 billion in 2009. Cut flower farming in Kenya is mostly by large and medium scale growers⁴³ (numbering about 160) though there are several small scale growers with acreage of 0.16acres, on average, under cut flower farming. Large and medium scale growers are mainly concentrated around Lake Naivasha, Thika, Limuru/Kiambu, Athi river plains, Nakuru, Eldoret, Nanyuki/Nyahururu and fewer areas around Mt Kenya region. The small scale farms are located mainly in Limuru/Kiambu region, Nyandarua and pockets in Laikipia, Western and Eastern provinces (Bolo 2006).

⁴³ HCDA categorize small scale (under 4 hectares), medium scale (between 10-20 hectares) and large scale (more than 50 hectares).

9.2.2.3 *Cut flower processing in Kenya*

Cut flower processing is basically done in three integrated steps: sorting, packaging and cold storage. Transport logistics are central in these processes due to the perishable nature of cut flower. The post-harvest produce (after sorting and packing) from large scale growers follows a sophisticated cold-supply chain infrastructure that includes refrigerated trucks for transportation and cold rooms for storage at the airport. The produce from large scale growers is mainly handled by four air freight forwarders (mostly owned by farmers themselves). These forwarders also handle the produce from small scale farmers through informal merchants who act as middlemen, aggregating volume for transport to market. Small-scale growers also often use collective marketing agreements with bigger growers or exporters such as Nature grow Ltd. After export, the large scale exporters link up with their marketing arms (principally the sister companies) in Europe; ensuring a logistical infrastructure for direct distribution to the mass market retailers. Thus, these farmers are able to gather market information that improves their operations at farm level (Hornberger *et al.*, 2007; Boro 2006).

9.2.3 Overview of the Literature

The foregoing review of relevant literature highlights a contrast of developments in coffee and cut flower sectors in Kenya. By and large, the GDP contribution of coffee industry in mid 70s is generally in equal proportion with the contribution of horticulture in the 2010. The performance of coffee industry has nosedived but cut flower industry has experienced multiple-fold growth.

The most notable difference between the two sectors revealed by the literature is the extent of regulation existing in each industry. This possibly explains the difference between the two industries in terms of the growth path each has taken. Cut flower has a relatively short history in Kenya and has experienced phenomenal growth since late 1990s. Coincidentally, the industry has had minimal government regulation and its value chain is largely driven by the private sector. On the other hand, coffee industry remains a highly regulated industry, allowing emergence of non-core actors like middlemen.

9.3.0 Theoretical Framework and Methodology

9.3.1 Theoretical Foundation

A value chain consists of value-adding activities involved in production, processing, delivery (transportation and marketing) and retailing of a product. Value chain therefore consist of a range of activities that are required to bring a product from its conception, through its design, sourcing of raw materials and intermediate inputs, its production, marketing and distribution to the final consumer (Humphrey and Schmitz, 2001). In economic terms, the "value" in value chain constitutes the sum total of payments made by industries to workers, profits, dividends, capital gains and indirect business taxes paid to state and local governments. Value-added, then, is the money that remains in an economy that may be used for household spending, saving, or capital investment. It represents the income and wealth available to the rest of the economy(Adrian 1991).

At production level of an agricultural produce, value addition will involve enhancements or additions to a product that result in higher returns to the commodity seller, who is often the farmer (Eathington et al 2000). For instance, technological enhancements, labour-saving steps, or any other innovation that allows the producer to offer more of a commodity is a form of "input value-added" enhancements that reduce costs of production, thus returning value to the farmer. However, if the farmer grows specialty crops, engage in strategic marketing of commodities or she/he sells the product for a premium, this constitutes "output value-added" enhancements. In improving the gains from coffee production, the focus should be on identifying core activities related to production, processing and delivery so as to strategize how these functions can be performed far much better than what is done by the competitors. In addition, efforts should be put in identifying factors that determine the distribution of benefits among agents involved in product's value chain.

New classical thinking supposes that all transactions are completed through prices set by competitive and anonymous markets. However, lack of relevant information by some market players tilt the market power against them. Knowledge, including technical knowledge can move from one region (or country) to another but only at a price (Adrian ibid). This sets the stage for price setting through negotiations but the bargaining strength rests with those in possession of the knowledge. It is therefore reasonable to

assume that at the onset, a country experiences the problem of low value addition due to information asymmetry; countries/companies that possess the 'right knowledge' on input value-addition or output value-addition use it competitively to control price and reap the maximum benefits. The options then for the farmers/entrepreneurs with limited information access are either to purchase the information or negotiate for information transfer. In light of Kenya coffee sector, the relevant question is whether information constraints stifle value addition and if purchase of information is plausible? A related question is whether there are lessons the sector can learn from cut-flower industry in Kenya? Whereas it is theoretically reasonable to expect cases of information asymmetry both in coffee and cut flower industry, the latter seems to have had some form of adjustment that corrects the market failure without hampering its growth.

Information flow may be constrained by trade barriers (tariffs, laws, language, finance security etc) and limited clustering. For instance, the more chain networks a sector has, the easier it becomes to access information due to new opportunities derived from infrastructure supply. Indeed, infrastructure underpins connectivity necessary for market expansion since it reduces transaction costs, facilitates trade and promotes economies integration.

The basis of comparing value addition in coffee and cut flower is anchored on Daly and Cobb, (1994) observation that "to which value is added is therefore inert, undifferentiated, interchangeable, and superabundant". Land is the primary input in the two sectors and reflects basic uniformity to which value is added and the manner in which valued addition is effected dictates the distribution of added value among the actors in the value chain.

9.3.2 Methodology

The study compares the value chains of coffee and cut-flower for purposes of identifying potential areas of value addition in the coffee industry. The value chain analysis involves a framework that encompasses the production, processing, distribution and marketing of the commodity and identifies the main stakeholders that are involved at each stage. Further, the analysis focuses on the role of each stakeholder in determining market access and price. In mapping out the coffee value chain, the study uses the following generic value chain developed by Kaplinsky and Morris (2000).

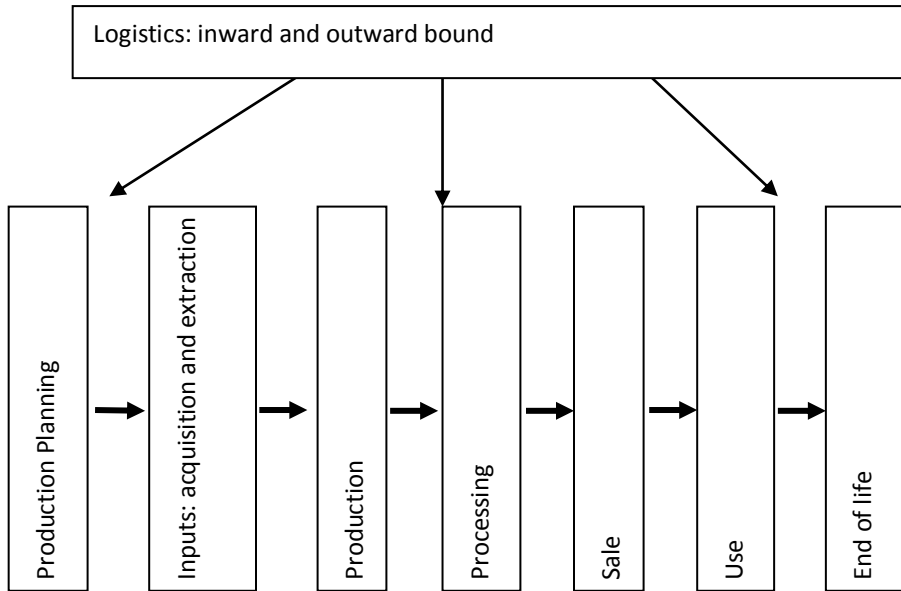


Figure 9.1: Generic Commodity Value Chain

Source: Adopted from Kaplinsky and Morris, 2000

9.3.2.1 Data Source

The study reviewed the existing documentation on production and processing of coffee and cut flower and identifies key differences in the value chains. The information from literature review was triangulated by survey data obtained through questionnaires administered to coffee and cut flower farmers. The survey covered two main areas, namely Nyeri South, Tetu, and Chinga districts were targeted for survey of coffee farmers whereas cut-flower farmers were sampled from Thika and Limuru districts. The two areas were chosen on the basis of relative high production levels in respective crops compared to other regions in Kenya and importance of capturing both small and large scale farmers in our analysis. The research team used the snowballing process to sample the farmers to be interviewed based on the fact that the said individual farmers were likely to make referrals to other farmers who share same institutional facilities in processing and delivery of the farm produce. The research team also conducted interviews with key informants in both sectors.

9.3.3 Analytical tools

This paper adopts the Global Value Chain approach to compare value chains of coffee and cut flower. This approach describes the full range of activities required to bring a product or service from conception through the intermediate phases of production to delivery to consumers and final disposal after use (Kaplinsky, 2000). The study also uses tabular analysis to compute the value addition at various stages of the value chain in the coffee sector.

9.4.0 Dynamics of Value Chains of Coffee and Cut Flower Sectors

A sample of 160 farmers, cooperatives, associations, institutions and private companies was targeted but the response rate was about 65%. In addition, some of responses missed data on price and costs that was important for purposes of computing the value addition. Consequently, the research team ended with only 45 questionnaires - 30 coffee farmers, 6 cut flower farmers and 9 institutions that were useful for analysis - out of 104 responses.

9.4.1 Characteristics of Coffee Industry in Kenya

One of the objectives of this study was to identify the value chain in coffee sub-sector in Kenya. From the study findings, there are five main players in the coffee value chain. These are the farmers, cooperatives, associations, regulatory institutions and private milling and marketing companies.

9.4.1.1 The Coffee Farmers

Small-scale coffee farmers in the sampled areas have an average acreage of 1½ acres whereas the large-scale farmers (the estates) have 15 acres of land under coffee. The small-scale farmers in some regions like Chinga in Central Kenya also grow tea as a cash crop and food crops (mainly potatoes, maize and beans) at subsistence level. Only about 10 percent of small scale farmers employ salaried employees. The rest use family members, particularly the head of the household and the spouse. All the large scale farmers (the estates) interviewed had at least 10 employees. All the small scale farmers interviewed engage in rain-fed production for all crops under-cultivation and are not connected to electricity. Though estates also use rainfall water for cultivation, they have piped water for processing.

Processing of produce from small scale farmers is carried at cooperatives premises.

Hand pump and sickle constitute the only machinery and equipment used in production by 85 percent of the small scale farmers. About 6 percent of small scale farmers own no machinery or equipments but usually get them from neighbors free of charge or on hire. The rest of small scale farmers use pressure pumps and protective gear. In the sampled estates, drum pulper, electric motors, pressure pump and protection gear are the main machinery and equipment used by employees

9.4.1.2 Cooperatives

All small scale farmers forward their produce to cooperatives to cater for processing and marketing of coffee produce. However the sampled large farmers sell coffee after primary processing to other relatively large farmers who do the milling and sell it. This line of value chain for large farmers enhances information flow to farmers as most of them (90 %) indicated that they are aware of changing dynamics in consumers' needs. Indeed dealing with the miller directly is cited as one the competitive advantage large farmers have over the small scale farmers.

The small-scale farmers' participation in coffee value chain does not extend beyond forwarding the coffee to cooperatives. Thus, no feedback mechanisms exist to assist small scale farmers to access information on markets or changing dynamics of consumers' needs.

9.4.1.3 The Millers

Farmers, particularly small-scale farmers, are not in any way involved in milling process. There are three major commercial millers currently operating in Kenya. These are: KPCU, Socfinaf and Thika Coffee Mills. The Coffee Act categorizes three types of millers: commercial, private and mini-mills. Private millers are licensed to process only their own harvest, while commercial millers are able to provide contract services to other farmers. The mini-mills include those that mill and roast coffee for direct consumption in coffee cafes.

The private companies (acting as marketing agents and dealers) sell coffee beans to foreign roasters through the Nairobi Coffee Exchange. These private companies include Ibero (K) Ltd, Diamond Coffee co. Ltd, Sangana Commodities Ltd, Africoff Trading Co. Ltd, SDV Transami (K) Ltd, Josra

Coffee Co Ltd, Sondhi Trading co. Ltd, Kofinaf Group and Thika Coffee Mills. These companies either mill coffee and carry out the marketing aspects or simply market coffee alone as middlemen. For this study, it was only Kofinaf Group that was positive for a request of granting us the interview. Kofinaf Group is the private company in Kenya that handles the milling and marketing of coffee at a fee to farmers. The company is a coffee grower, with a large plantation of coffee in Thika district. The research team was unable to secure an interview with KPCU.

9.4.1.4 Membership Associations in Coffee Industry

There are three coffee membership associations, namely Kenya Coffee Producers and Traders Association (KCPTA) and Kenya Coffee Producers Association (KCPA), the Kenya Coffee Traders Association (KCTA). On the basis of the institutions names, one would expect that KCPA focuses on producers, KCTA focuses on Traders, and KCPTA is an umbrella body for both.

The KCPA was founded in 1991 and was formed through the merging of the Kenya Coffee Growers Association (KCGA, 1991) and Kenya Coffee Growers and Employers Association (KCGEA). It indicates that its mission is to lobby for policy changes and helps in information sharing with respect to coffee producers. From discussions held by researchers with the organization's officers, it was not clear how the KCPA promotes policy changes and facilitates information sharing with the farmers.

The KCTA was established in 2002 to address concerns of its members that include all member companies engaged in the coffee industry, either in the export trade or its related services. The officials of the organization indicated that the current members' register also includes millers, marketing agents, warehousemen and coffee equipment suppliers and transporters.

KCPTA is relatively new, having been established in 2005. It identifies itself as a voluntary body that helps members in coffee marketing through determining coffee volumes for each auction; make trading rules and regulations in the Nairobi Coffee Exchange and other price discovery mechanism in accordance with Coffee Act, 2001. It draws its membership from cooperatives, estates, traders and millers of coffee. The other objective of KCPTA is to formulate sound standard forms of contract, conditions of

sale, code of conduct, arbitration procedures and any other instruments or regulations deemed necessary in achieving the objects of the Association.

From the foregoing, one notes that the difference between these three organizations in terms of mandate and operations is blurred. In addition, none of the sampled coffee farmers indicated that he/she is a member of KCPTA, KCPA or KCTA. Similarly, the existence of the three associations is not known to the farmers that were interviewed. This raises the issue of issue of ownership and relevance of the three institutions in addressing the challenges in coffee industry.

9.4.1.5 Coffee Board of Kenya

Coffee Board of Kenya was established in 1934 and was initially charged with the responsibility to carry out regulation and marketing of coffee. With various regulatory changes having been done to the sector since 2002, the CBK regard its overall mandate as that of policy development and licensing. The CBK mission is to provide a conducive environment for the growth of the industry through regulation, building partnerships, promoting competitiveness, value addition through branding thus enhance quality/production for producers and consumer satisfaction. However, the CBK feels that its effectiveness in achieving this mission is compromised by participation of many middlemen who fragment the market and make it difficult for farmers to have control of the market. The board also perceives the Coffee Act as a stumbling block in enabling the board address current challenges facing the sector. More importantly, the board feels that despite the emerging of good market for coffee, low production and poor quality of coffee are critical challenges facing the sector.

9.4.2 The Coffee Value Chain

The coffee chain map in Figure 9.2 below illustrates the various processes in terms of coffee production and processing that define value addition in coffee sector. Except in production stage, the farmer has a limited role in processing and marketing of coffee. Most of farmers' role in the value chain is limited to farm level activities that include land preparation, fertilizing, spraying, plant maintenance and harvesting.

The participation of farmers in processing of cherries only involves initial removal of the fruit covering the seeds. This processing of berries is done within the precincts of the cooperatives that farmers sell their produce

to and subsequently the processing is not independent of cooperatives operations. The cooperative owns the equipment used by farmers for the basic processing where coffee cherries are sorted by immersion in water, requiring use of substantial quantities of water. Beyond this level of processing, it is the cooperative itself that completes the wet process; the washed cherries undergo ferment-and-wash process or a through a machine-assisted wet processing, referred to as *aquapulping* or mechanical *demucilaging*. This involves removing any amount of the pulp clinging to the bean.

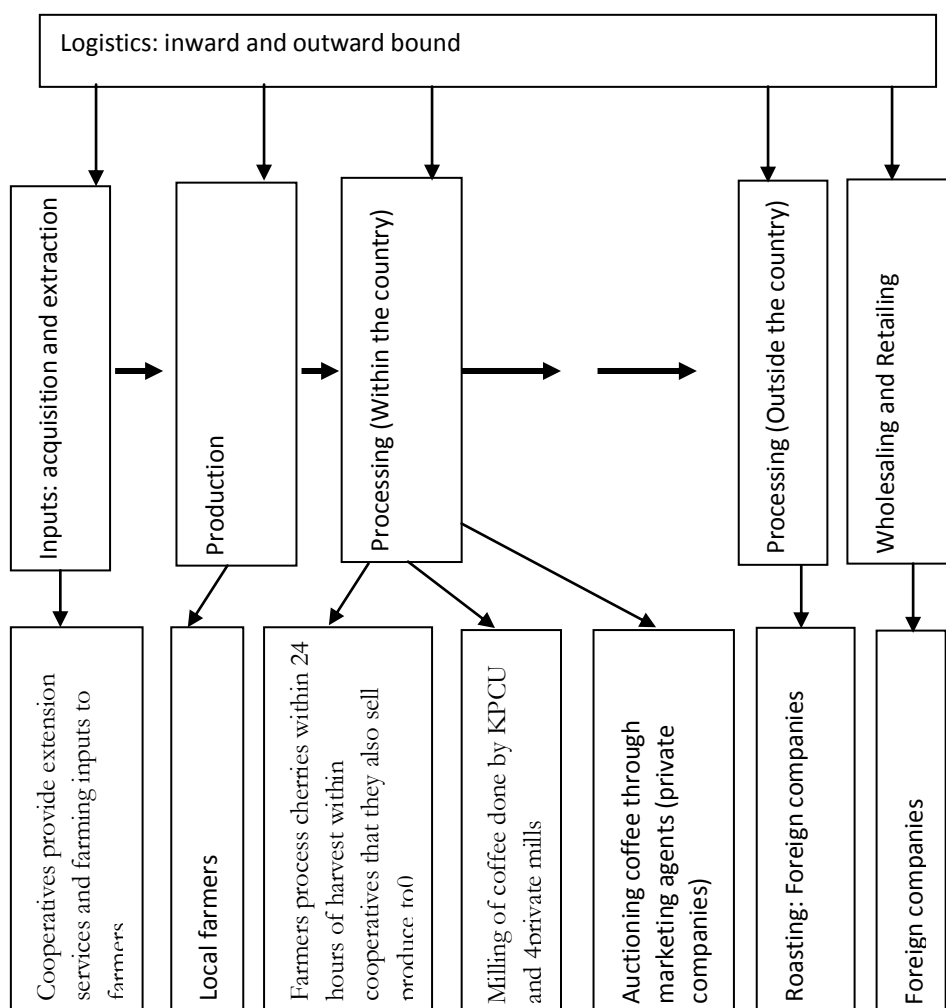


Figure 9.2: Coffee Value Chain

Source: Compiled by the author.

Coffee processing at cooperatives ends with wet processing. Thereafter, the cooperatives sell the produce to KPCU or private millers who carry out the final steps in coffee processing namely hulling, polishing, and sorting and grading. Hulling is the process of extracting the last layers of dry skin and remaining leathery fruit residue from the now dry coffee. After hulling, the coffee undergoes polishing process in which any silver skin that remains on the beans after hulling is removed in a polishing machine. Finally, the milling process ends by sorting which is done in three stages, namely, sorting by size and density, sorting by color and grading. In grading, coffee beans are categorized on the basis of various criteria such as size of the bean, where and at what altitude it was grown, how it was prepared and picked, and how good it tastes, or its cup quality.

9.4.3 Value addition in Coffee industry

9.4.3.1 Introduction

There are number of private companies that handle coffee marketing. Overall, the overhead charges include 4.1%⁴⁴ of revenue for auction commission, CBK levy, County Council Cess and research levy. Other processing charges are shown in the table below:

Table 9.1: Milling and Marketing Charges of Coffee

Item	Rate	Unit costs	Per kg
Marketing charges (auction and direct)	50 US\$	Per clean ton	0.05 US\$
Milling charges	60 US\$	Per parchment ton	0.06 US\$
Re-grading for Estate cured coffee	35 US\$	Per clean ton	0.035 US\$
Export bags		Per bag	0.025 US\$
Total costs			0.170 US\$

Data available from Nairobi Coffee Exchange show that the average price for main coffee grades is 378.10 US\$ per 50 kg which is equivalent to 7.562 US\$ per kg (KSH 604.96). This implies that the overhead charges,

⁴⁴ Computed from milling and marketing tariffs schedule (2010/11 coffee season) from Kofinaf Group

mentioned above, amount to 0.31US\$ per kg of coffee (4.1% of 7. 562). Adding the marketing and milling charges (Table 9.1), a kg of coffee is charged US\$0.48 (0.31+0.17), equivalent to KSH 38.4⁴⁵. This figure constitutes the value addition at marketing level.

The value addition at middlemen level is therefore more than 10 times compared to that at farmers' level which is 7% of the market value.

9.4.3.3 Factor that contributes to low value addition at Farmers level

During the field survey, a number of constraints and challenges were highlighted by farmers, associations and other stakeholders as follows:-

Climatic changes: Coffee production has been slowly affected by changes in climatic conditions, including global warming thereby leading to reduced yields as well as increased costs of production arising from need to enhance use of more inputs.

High costs of Production: Farmers face high costs of fertilizer and pesticides⁴⁶ yet coffee payments take long and are relatively low to fully cover the costs. Further, the cooperative factories lack the financial capacity to stock enough inputs to be readily available to farmers. Besides, farmers are only issued with inputs worth the value of coffee they have produced in order to recover costs; hence past poor performance strongly influence the planned investment. The high input prices have made some farmers to reduce application of fertilizer and pesticides which result in delivery of low quality cherries and substantial loss of small cherries during pulping stage in processing.

Lack of Access to Credit Facilities: Delays in processing loans and advances for the farmers imply that they can neither purchase required inputs in good time nor pay workers. As a result, even available credit facilities, Stabex fund and the Coffee Development Fund (CODEF), are not easily accessed by farmers. Further, the loans are issued at very high interest rates thus many farmers opt not go for them. The coffee societies charge heavily on advances on fertilizers but the farmer has no option as the fertilizer is given on credit even when they don't have money.

⁴⁵ Computed at exchange rate of 1 USA\$=KSH 80

⁴⁶For instance a 50kg bag of fertilizer retails at KSH 4200

Multiple middlemen: The existence of middlemen at marketing level reduces the possibilities of direct links between consumers and farmers. More importantly, the nature of market power that can make farmers influence the market price is eroded. Beyond forwarding the coffee to cooperatives, small scale farmers receive little information related to their produce market and have no knowledge on consumers needs. This stems from the fact that they have no feedback mechanism.

Delay in payments to farmers: There are inherent delays in payments to coffee farmers (payments normally paid after six months after produce delivery). This results from long payment cycle and mismanagement of cooperatives. The farmers get their earnings once a year, making it difficult for them to meet periodic expenses they incur and expenditure emergencies.

Regulatory and administrative restrictions: There is still tight regulation in today's Kenyan coffee market. The regulations not only all require smallholders to process their coffee through a cooperative, but prohibit direct purchase from farmers. Some provisions of the Coffee Act are outdated and should be overhauled. Similarly, registration of coffee mills is often time consuming and punitive to the applicant. A case of Othaya farmers' society illustrates this. The society applied for a milling license in 2003 and it was only approved in 2010. The society now mills and grades its coffee. In early 2011, the society applied for a license to brand its coffee to enable it sells directly to consumers or through supermarkets and other outlets.

Amidst these challenges, coffee production has gone down in recent years as farmers divest from the industry. In addition, coffees growing in peripheral area of major towns like Nairobi and Nyeri have slowly been transformed into real estate development.

9.4.4 Characteristics of Cut-flower Industry in Kenya

In Kenya, the cut flower value chain is characterized by four models of supply chains. First, we have large-scale farmers who grow cut-flower and export directly. Second, some of these large farmers buy produce from medium and small scale farmers and export as their produce. Third, there are those emerging middlemen who consolidate produce from medium and small scale farmers and handle the marketing on commission. Finally, there are farmers who form flower hubs and export as a group.

9.4.1.1 The Cut-flower Farmers

Data findings show that large and small scale farmers not only differ in distribution channels of their product but also on utilization of land. All sampled small sized farmers indicated that they also grow food crops on subsistence and commercial basis; mainly maize and vegetables. Large and medium sized farmers generally have specialized on growing specific types of cut-flower and mostly use irrigated water to grow flowers under green houses. In small scale farms, rain water is the major source of water for farming.

The use of fertilizer and pesticides, like is the case in coffee industry, is widespread among the cut-flower farmers. Inputs like greenhouse materials chemicals and fertilizer are imported. For seeds, some large scale farmers are also breeders who develop their own plant stock while others, together also with medium sized farms transact with foreign breeders. Thus farmers are involved in inputs acquisition and production of cut flowers.

9.4.4.2 Membership Associations in Cut flower Industry

There are two main membership associations in cut flower industry, namely the Kenya Flower Council (KFC) and Fresh Produce Exporters Association of Kenya (FPEAK). These associations have played active role in representing the interest of cut flower farmers by lobbying the government on business environment and co-partnering with it in various forums particularly through KEPLOTRADE in the Ministry of Trade, on the negotiation with EU on the Post Lome IV import tariff situation. Currently, cut flower exports to the EU enjoy preferential market access under the Cotonou Partnership Agreement and lately, the Interim Economic Partnership Agreement between the European Union (EU) and the East African Community (EAC).

The KFC also provides an avenue for self regulation and it has developed a Code of Practice that is fully bench marked to Global GAP. In addition to above, KFC groups membership according to information needs and introduces them to networks that are sources of information. Further, KFC has proactively increased consumption of cut flower, succeeded in working with vendors association in improving retailing of flowers and has made progress in branding Nairobi as home of unique flowers.

Similarly, the FPEAK has introduced Kenya GAP to be benchmarked against the Global GAP in its efforts to embed codes of practice for self

regulation among members. Unlike KFC, FPEAK covers the wider horticultural sector. In collaboration with these associations, the large and medium scale farmers interact through attending both local and international exhibitions like the HORTEC (Kenya), and HORTFAIR (Netherlands) where they share information on market information and new technologies.

9.4.5 The Cut flower Value Chain

As shown in figure 3, the cut flower, particularly larger and medium growers who contributes 90 percent of the production, are not only involved in production but also in processing stages of the value chain, within and outside the country. Some large scale growers also breed their own plant stock.

Processing of cut flower includes all those activities that are required to get the flowers ready for export. It starts by sorting, cleaning and grading of flowers. This is followed by inspection of the same to ensure that flowers meet the required standards. After inspection of flowers, packaging is done in consultation with the auction buyers or supermarkets. For instance some buyers may want the packaging that makes the flowers ready for the shelf. The farmers have invested in pre-cooling and cold storage facilities, making it possible to maintain the high standards of their produce for export as required by the market. These farmers use their own refrigerated trucks to deliver cut flowers to warehouses that house the cold storage facilities. The delivery to warehouses is usually done four hours prior to freight departure.

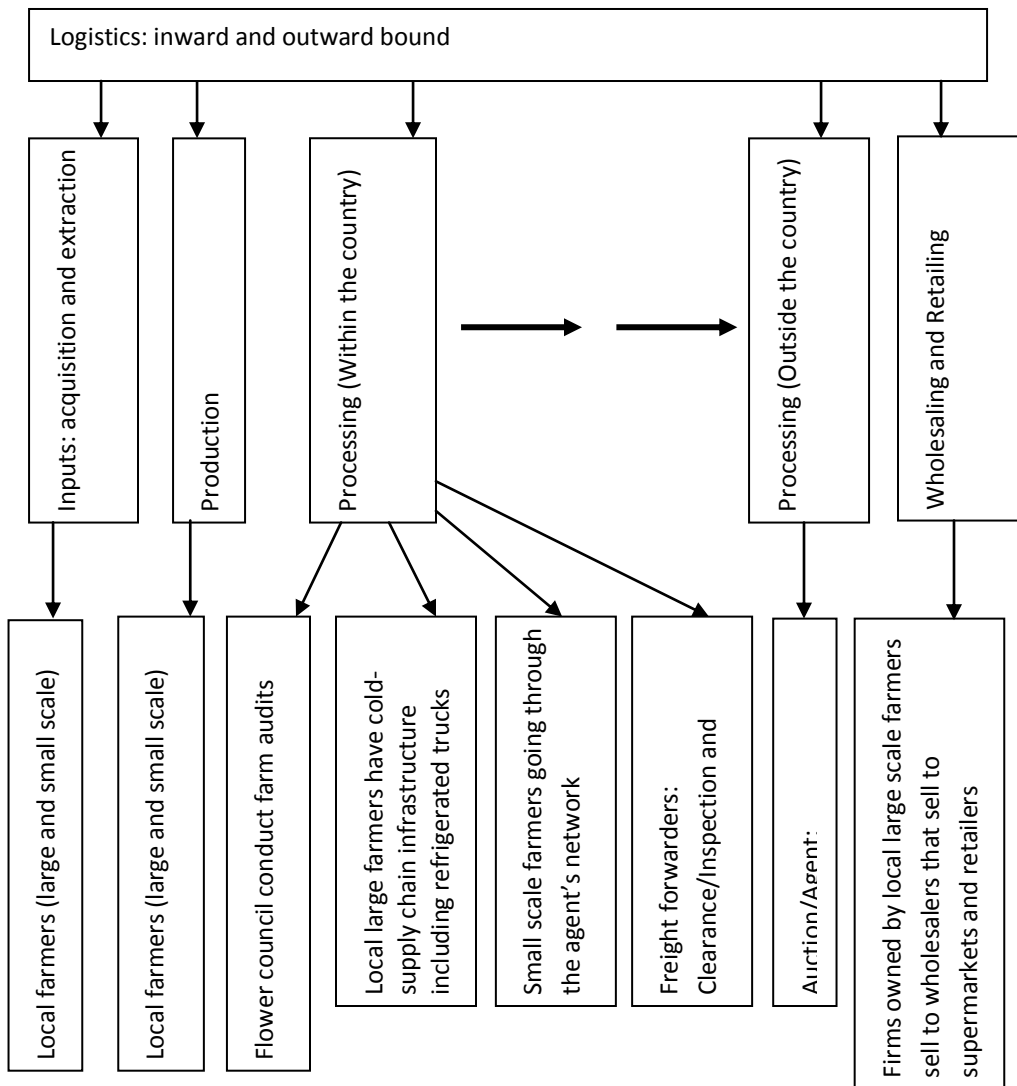


Figure 9.2: Cut Flower Value Chain

Source: Compiled by the author

From the warehouse the next stage in processing involves airlines bookings and custom clearance, inspection, cargo handling (from warehouses to cargo flights) and freight to destination. These activities are carried out by freight forwarders. Flower producers make advance booking with freight forwarder detailing destination, weight and number of boxes of flowers and details of consignee.

On arrival at destination points, the clearing agent, based in importing country, handles the distribution of flowers. The flowers are first inspected by custom and health officials after which they are released to the distribution outlets. The distribution channels are mainly the auction floors, wholesalers, supermarkets and florist shops. Some wholesalers, with produce also bought from auctions, re-export flowers to other parts of Europe US and Japan. The clearing agent handles the charges that covers all costs once the cargo arrives at its destination. Such costs include, clearing costs, airline handling charges, transport from airport to auction, warehousing charges and document and processing fees.

Vertical integration, where producer country firms establish a presence in consumer markets, is a recent phenomenon in cut flower industry that increases value addition within the chain. A case in point is Flamingo Flowers which initially started as an exporter in Kenya (Homegrown) but later expanded its business to the United Kingdom in order to manage and market its flowers. The company currently markets cut flowers in the UK sourced from its own farms in Kenya and South Africa.

The supply chain therefore reflects a vertically integrated value chain that has interwoven networks. At retail level, there exist a number of quality standardization institutions that include Fair Flowers Fair plants, Global GAP Ethical Trade Initiative and Max Havelaar, who are instrumental in advocating and enforcing standards. These institutions are largely informed by the quality requirements of the international markets like the TESCO Supermarket PLC, Flower Auctions in the EU, Japan and USA. Most of these auctions have excellent logistical and distribution networks.

9.4.5.1 The Regulatory Institutions

The regulatory role of the government is minimal and mainly rests with two bodies Horticultural Crops Development Authority (HCDA) and Kenya Plant Health Inspectorate Service (KEPHIS). HCDA was established in 1967 with a mandate to develop, co-ordinate and facilitate the horticultural industry but its role has largely remained to register farmers who wish to engage in horticultural exports. KEPHIS was formed in 1996 to regulate quality control of plant exports and imports including seeds, cuttings, fresh fruits and flowers.

9.4.6 Value addition in Cut flower industry

The price of cut flowers is a per stem price and normally differs depending on the type of cut flower and what point in distribution channel the sale is done. For sampled small scale farmers that sell to other farmers or middlemen, the price ranged from KSH 1 to 4 per stem. In 2010, the average price per stem (for cut flowers) in Euros was 0.22 equivalent of KSH 24.2. Taking an average of KSH 21 as the difference between auction price and the farmers' price, the value addition between the two levels requires that costs related to further processing, transportation; cooling, forwarding and freight transport are subtracted.

From information given on gross value added by farmers, it is difficult to compute the average value of the costs component associated with processing and marketing of cut flowers. Nonetheless, the value added between production and auction level is also shared by farmers because of their involvement in all stages of value chain.

9.4.6.1 Challenges facing value addition in cut flower industry

Despite the good performance of cut flower industry in since last one decade (2000-2010), its growth has resulted in new challenges to the sector. Given the perishability of the product, the sector is increasingly reliant on airlines. This predisposes the industry to risks associated with performance of airlines. For instance, in 2010 Airports in Europe were closed due to the volcanic ash clouds originating from the Icelandic volcano. This brought substantial losses to farmers. The effects of climate change have not been felt significantly by the cut flower industry due to its use of irrigation for farming. However, climate change effects take toll on any industry in the long run. For instance, excessive spell of dry weather ultimately affect the water table. Kenya Flower Council also notes that the continued dependence on foreign breeders is not healthy to the industry as the competitiveness of the industry will be dependent of developing specialty product.

9.4.7 Critical Differences in the value Chains of Coffee and Cut flower

The analysis in above section illustrates large differences in the roles farmers play in coffee and cut flower value chains, in relation to processing

within and outside Kenya. The largest portion of cut flower processing is done within the country and farmers are involved in almost all stages of the processing. However, farmers in coffee industry are only involved in primary production, fully missing out in the crucial processing of coffee, mainly milling and roasting. The latter is done in consumer markets outside the country. The structure of the coffee market is such that, beyond milling, it is dominated by a few global corporations in the processing and retail chains.

Another difference is inability of coffee farmers to sell directly to buyers and dealers. The Coffee Act stipulates the auction method as the only legalized mode of selling coffee, which must be done through a marketing agent. This significantly reduces value addition at farmers' level with middlemen earning more than ten times what farmers earn. Though most of cut flower produce is done through the auction outside the country, cut flower farmers have no restriction on whom to sell to and often sell to wholesalers and supermarkets in consumer countries and in individual retailers within the country. Thus, within the coffee value chain, there is lack of a clear mechanism that can facilitate the flow of information to farmers. There exists no forum for marketing agents to give feedback to farmers regarding quality and auction prices of coffee.

Finally comparing the two value chains, it is notable that there is too much government regulation in coffee sector. Notably, the tight regulation of coffee marketing and processing continues in Kenya. For instance, Coffee Board of Kenya continues to be the only licensing agent for millers and marketing agents. Existence of many middlemen and players result in long payment cycle for smallholder farmers. Further, the regulatory structure provided fertile ground for extracting of rents through taxes and licensing by government. As such, these regulations have stifled value additions along the coffee value chain. This is in contrast to minimal regulatory role of the government in cut flower through the Horticultural Crops Development Authority (HCDA) and Kenya Plant Health Inspectorate Service (KEPHIS). The Government has not been directly involved in the production, pricing or performance of physical functions of cut flower marketing. Its role has been minimal, mainly confined to regulatory and facilitative functions, fostering private sector initiatives and dynamism within the industry.

Despite the existence of at least three coffee membership associations, they are ineffective as mediums for self-regulation. A typical characteristic of these associations is clear lack of clarity and focus in their mandates. The history of regulation in coffee industry and the performance of the sector illustrate that the choice to use statutory agents to regulate growth of the industry has had a negative impact on the sector. This necessitates policy reforms that will address how specific regulation affects magnitude and distribution of the gains and losses created within the value chain.

9.4.8 Conclusions and Recommendations

The private sector in cut flower industry is dynamic, playing a critical role throughout the value chain. Thus, as supply factors and demand patterns change, the sector adjusts and responds quickly to changing consumer preferences and international competition. The sector has invested heavily into new technologies in greenhouses, irrigation systems and has put in place a robust cold storage chain which is crucial for fresh perishable products. At the production level, the cut flower sector has a strongly institutionalized supply of fertilizer, pesticides and seed breeders. The regulatory system plays a facilitative and largely supportive role, with the HCDA playing a very limited interventionist role in the value chain. The associations in cut flower are not only strong lobbies but have developed self regulating industry 'Codes of Practice' that are benchmarked to international codes. The Fresh Produce Exporters Association and the Kenya Flower Council work closely with government in ensuring there is an enabling environment conducive for development of the sector. These essential ingredients of private sector dynamisms are clearly lacking in coffee sector.

These developments in cut flower sector contrasts sharply with features that characterize coffee value chain. The coffee sector in Kenya is excessively regulated, limiting the role of small scale farmers to production level. Restrictive regulation permits opportunist behavior by middlemen, cooperatives and state agents to maximize rent seeking and operate inefficiently. Consequently value additions along the coffee value chain have been dismally low and skewed against the farmer who gets 7% of the market value, which is hardly tenth of what middlemen get. Further, whereas producer associations in cut flower sector have played a key role in

self regulation, information dissemination and lobbying for better business environment, associations in coffee sector lacks consistence in their mandates and hardly address the challenges facing the coffee industry.

From the foregoing, this study recommends reforming of the regulatory regime to promote the coffee sector. Most importantly, there is need to restructure the cooperatives and coffee marketing institutions and laws that govern the sector. In 2008, the government allowed a duo-market arrangement with a parallel market of direct sales and auction sales being adopted. However, given the historical arrangements that predispose small scale farmers to marketing the coffee produce through cooperatives, more reforms in these organizations are necessary to enable individual farmers to sell directly to consumer markets. This development will, for instance, assist farmers to access real-time market information.

Further the huge difference between coffee prices at farmer and consumer levels is a reflection of poor corporate governance in agencies that regulate the coffee industry. The coffee sector can borrow the vertical coordinated networks model from the cut flower chain where farmers are involved throughout the commodity value chain, from the input stage/distribution systems, to the farm level and then to agro-processing and output marketing/distribution systems.

A more recent phenomenon in improving value addition along the supply chain is branding of coffee through the Geographical Indication (GI) for single-origin coffee⁴⁷. This involves instituting tracking systems to identify farms along the different qualities of coffee they produce in order to adequately compensate these farmers for the quality of their produce. Such a tracking system, apart from identifying and appropriately reimbursing the farmers with the high quality coffee, serves to provide feedback to farmers on areas that require their attention on quality improvement. The GI associated with a given country's coffee means that there is a restriction on the use of the name to a specific place of origin and production method. Coffee branding according to the zones of origin widens the market through segmentation. The farmers could use this incentive and strategically position themselves, through partnership, to reduce price at producer and retail level. This may be achieved through

⁴⁷ Starbucks to Sell Exclusive Rwanda Coffee In Europe,' PLANETARK, 10 March 2008

joint ventures in investment that allows local roasting and packaging of the product before exportation. Further, the partnership can take the form of contract farming. Contract farming has ancillary benefits in form of credit arrangement for critical inputs and may also embrace insurance schemes. For such developments to be useful to farmers, the government may need to play a role in mediating and establishing the ground rules for these arrangements.

Cooperatives and farmers' associations need to be strengthened to adopt a proactive role in improving coffee quality and entrenching code of conduct that self audit the quality of coffee from farmers. Further, the institutions should network with institutions such as Techno serve and Coffee Research Foundation for assistance in improving coffee quality that is more attractive to specialty coffee manufacturers.

Coffee sector lacks very effective membership organizations. Every sector requires a self-regulating body that embraces a code of practice that commits all members on environmental preservation, labour law (Wages, Hygiene, health and safety), compliance to customer specifications, assurance of enabling business environment, integrity and responsibility with respect to all stakeholders. This helps to have certain levels of productivity, efficiency, use of inputs, uniform application of labor laws and enhanced quality of products. In addition, a successful self-regulating body is recognized by government and other agencies in either getting a hearing on issues it may raise and/or being involved in policy formulation, programs or projects that involve the sector. In addition, such an institution gets accredited as an audit agency, thus reducing the levels its membership undergoes in course of business. Further membership association can play a critical role in promoting local consumption of coffee in addition to making direct standardized exports to overseas consumers.

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