

**STRATEGIES OF SMALL AND MICRO ENTERPRISES AND THE KEY
SUCCESS FACTORS IN THE ENERGY INDUSTRY IN KENYA: A CASE STUDY
OF ENTERPRISES IN KISUMU**

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DECLARATION

I hereby certify this research project is my original work and has not been presented for examination in any other institution of higher learning.

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This project has been submitted for examination with my approval as university supervisor.

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DEDICATION

May the name of Almighty God be praised for the completion of this degree course because I always sensed His presence and guidance at every stage of the process?

My sincere regards goes to my dear wife Everlyn for her loving care, encouragement and support as I undertook the programme. My sincere gratitude also goes to my children; Robert, Allison, Kimberly and Phillip for the understanding they portrayed whenever I was absent from home attending evening classes, discussion groups or in the library studying for the degree. Their prayers and understanding were not in vain.

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LIST OF ABBREVIATIONS

CBOs	Community Based Organizations
CEOs	Chief Executive Officers
CNOOC	China National Offshore Oil Corporation
ERC	Energy Regulatory Commission
GTZ	Gesellschaft Technische Zusammenarbeit
IPPs	Independent Power Producers
IT	Information Technology
KAM	Kenya Association of Manufacturers
KSF	KEY Success FactorS
LPG	Liquefied petroleum gas
MDGs	Millennium Development Goals
PV	Photovoltaic
R&D	Research and Development
SMEs	Small and Medium Enterprises
TPM	Total Productive Maintenance

ABSTRACT

Small and Medium Enterprises are enterprises employing between 10 and 150 employees. In Kenya SMEs are mainly found in the informal sector, known as "Jua Kali". The sector is considered to be a crucial factor in the nation's competitive development, particularly in recognition of its contribution to economic renewal which is primarily witnessed through employment generation, innovation and wealth creation. In Kenya the Small Scale energy sector lacks access to modern energy that is reliable and affordable may act in concert with and/or contribute to the occurrence of additional barriers to micro-enterprise development. This study was motivated by the need to establish the strategies of small and micro enterprises and the key success factors of energy enterprises in Kenya. To achieve the objective of this study, the study a case of Kisumu. The study collected data from the SMEs at Kisumu using questionnaires. The data was then coded and analysed using descriptive statistics such as mean and standard deviation. Pearson correlation was used to indicate the extent of relation of the variables. The study found that SMEs operators lacked professional qualifications. The SMEs lack long term policies and communication channels. The government rarely supports small scale energy sectors and little research is done on the small scale energy enterprises. The study has established that some of the success factors include lying of competition strategies such as customer relation strategies, measures to evaluate financial strength, vertical integration strategies, good cost structure and evaluation of product capability and trainings. The study recommended that government supports the SMEs through the ministry of energy, the SMEs be trained on the availability of the development funds, organizational communication channels and systems

CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

Small and micro-enterprises (SMEs), also known as the informal sector, has become an integral player in the African economy. In Kenya, for instance, this sector accounted for 20% of the GDP in 1999 (CBS *et al*, 1999) and 64% of the urban employment by 2002 (Karekezi and Majoro, 2002). Studies in India have also shown that SMEs enable rural households to generate non-farm income which can largely contribute to poverty reduction (Lanjouw and Shariff, 2002). In general, SMEs purchase (rather than harvest or collect) their energy, including electricity, LPG, kerosene, firewood, charcoal, etc. This is true even in rural areas. Moreover, despite energy being one of the significant factors for most microenterprises. there is knowledge gap on how much energy is being consumed; neither is it systematically documented what role energy plays in diversifying production and expanding employment opportunities by microenterprises, both in urban and rural areas (Clany and Dutta, 2005).

1.1.1 Concept of Strategy

Strategy is a multi dimensional concept and various authors have defined strategy in different ways. Strategy, as explained by Johnson and Scholes (2003) is the direction and scope of the organization over the long term that enables an organization to utilize its resources effectively within a changing environment and to fulfill stakeholder's expectations. Mintzberg and Quinn (1993) perceive strategy as a pattern or a plan that

integrates organization's major goals, policies and action into a cohesive whole. Porter (1996) argued that strategy is the creation of a unique and vulnerable position of tradeoffs **in competing**, involving a set of activities that neatly fit together, that are simply consistent, **reinforce** each other and ensure optimization of effort. Pearce and Robinson (2007) stated that strategy results in future oriented plans interacting with the competitive environment to **achieve** the company's objectives.

Strategy is meant to provide guidance and direction for the activities of the organization. Since strategic decisions influence the way organizations respond to their environment, it is very important for a firm to make strategic plans and define strategy in terms of its function to the environment. Strategies enable organizations to achieve their long term goals and objectives hence enabling the firms to survive in the turbulent environment. The purpose of strategy is to provide directional cues to the organization that permit it to achieve its objectives while responding to the opportunities and threats in the environment (Pearce and Robinson, 2001).

1.1.2 Key Success Factors

Success factors have been used significantly to present or identify factors that organizations focus on to be successful. As a definition, critical success factors refer to "the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department, or organization" (Rockart and Bullen, 1981). Identifying success factors is important as it guides firms in building strategies for success, or even allow firms to decide if they have the capability to build the requirements necessary to meet industry success factors.

Success factors were already being used as a term in management when Rockart and Bullen reintroduced the concept to provide greater understanding of the concept and, at the same time, give greater clarity of how success factors can be identified. Success factors are tailored to a firm's or managers' particular situation as different situations (e.g. industry, division, individual) lead to different critical success factors. Rockart and Bullen presented five key sources of success factors: the industry, competitive strategy and industry position, environmental factors, temporal factors, and managerial positions.

1.1.3 Energy Industry in Kenya

Energy Regulatory Commission (ERC) was established as an energy industry regulator in Kenya under the Energy Act, 2006 in July 2007. ERC is a single sector regulatory agency, with responsibility for economic and technical regulation of electric power, renewable energy, and downstream petroleum sub-sectors, including tariff setting and review, licensing, enforcement, dispute settlement and approval of power purchase and network service contracts. The goal of the Government is to ensure adequate, quality, cost-effective and affordable supply of energy to meet development needs, while protecting and conserving the environment (Ngigi and Macharia, 2002).

Three key legislations that have been addressing the commercial energy sub sector; electrical Power Act of 1997 currently under review, Petroleum Act Cap 116 - regulates importation, transportation and storage, Petroleum Exploration and Production Act - prior to the deregulation of the petroleum sub-sector this was the legislation that would enable the government to control pricing of petroleum products (GTZ, 2010). The most significant achievement by government of Kenya in the year 2009 was in the upstream petroleum

when CNOOC embarked on drilling for hydrocarbons at Isiolo (George, 2003). In the downstream petroleum sub-sector the newly established Energy Regulatory Commission (ERC) did commence publishing a number of regulations, especially in the area of LPG and ethanol blends in gasoline (Ngigi and Macharia, 2002).

1.1.4 Small and Micro Enterprises in Kisumu

Small and Medium Enterprises are enterprises employing between 10 and 150 employees (GOK, 1999). In Kenya SMEs are mainly found in the informal sector, known as "Jua Kali". The sector is considered to be a crucial factor in the nation's competitive development, particularly in recognition of its contribution to economic renewal which is primarily witnessed through employment generation, innovation and wealth creation (OECD, 2000). Small sized enterprises (SMEs) contribute to economic development, increase household income and create jobs (Steer and Taussig, 2003). Some of the constraints facing SMEs in Kenya include unfavorable regulations, poor work sites, poor infrastructure, access to markets, technology, poor coordination and inadequate access to finance (GOK, 2002).

The City Development Strategy for Kisumu (2005) identified energy access for the poor as one of the city's key urban management challenges. There was also support for enforcement of laws and regulations governing nature reserves and green spaces. Majority of people (89%) in Kisumu continue to use biomass (firewood and charcoal) as part of their fuel mix. However, fuel sellers highlighted the difficulties they are now facing in sourcing supplies of wood and charcoal (Practical Action, 2008). Charcoal farming in Kisumu could be a viable option, and there is potential to exploit solar energy and pico-hydro in the

Kajulu Hills. At a more industrial scale there is potential for producing ethanol using by-products from the sugar factories in the region.

1.1.5 SME Energy Industry

In discussing the technological capability of micro-enterprises in Kenya's informal sector, Kabecha (1999) identifies and then classifies the constraints into two categories: (i) internal constraints (e.g., lack of entrepreneurial ability, historical underdevelopment of the micro-enterprise sector, entrenchment of expensive private foreign capital, lack of organization), and (ii) external constraints (e.g., technological gaps, dependence on foreign sources of equipment, low levels of education and training, limited markets for products, lack of working space and infrastructure to expand operations, lack of suitable premises, lack of electricity and water - found to impose a severe constraint on the level of technology that can be adopted, and uncertainty in the informal sector not conducive to private investment).

Lack of access to modern energy that is reliable and affordable may act in concert with and/or contribute to the occurrence of additional barriers to micro-enterprise development. For example, the benefits of ICT such as computers and the internet for obtaining information and reaching markets are restricted to users with access to an effective electricity supply (Duncombe and Heeks, 2001; Heeks and Duncombe, 2001). Similarly, getting the goods or services to the markets requires transport, which in turn requires energy. Thus, Rogerson (1997) suggests that the effect of technological constraints and inadequate infrastructure in limiting modern energy services for microenterprise is but one of the "myriad constraints" that confront micro-enterprises.

Access to modern energy per se is also not the only significant issue in considering the effect of modern energy on micro-enterprises. The energy, as well as the electric tools and equipment, need to be reliable and affordable to be effective enabling factors for micro-enterprise (Kittelsohn, 1998). Osunbitan *et al* (2000) illustrate the importance of energy supply reliability in their examination of the energy used to power machinery in agro-allied micro-enterprises, in this case cassava and palm oil processing. They found that despite the availability of electricity via grid connection in urban and semi-urban areas of Nigeria, the processing centers studied did not depend on or use electric engines because of unstable power supplies, preferring instead to rely on diesel engines. An unreliable energy service was cited by micro-entrepreneurs in Uganda as one of a number of common energy-related problems that they encountered (Meadows, *et al*, 2003).

1.2 Statement of the Problem

Factors such as global competition, technological advances and changing needs of consumers lead to continuous change in competitive paradigms of firms (Denton, 2006). Firms can use success factors to improve their performance for example, enterprise security management utilizes the success factors method to develop and deploy an effective approach to their business (Caralli, 2004). Organizations must continuously review their strategies to identify the aspects of market priority, product structure, manufacturing configuration, and investment (Errin 2004; Silveira, 2005). Improvement programs should match operational goals and objectives (Muda and Hendry, 2003; Sum 2004; Raymond and St-Pierre, 2005).

Previous studies done on SMEs in Kenya have not focussed on strategies and the key **success** factors in the energy industry in Kenya. Literature available indicates that the **studies** have basically targeted large organizations. For example Ondabu (2007) studied **responses** of SMEs in Athi River town to insecurity. Obiero (2008) studied competitive **strategies** applied by cement manufacturing firms in Kenya, Midwa (2008) researched on **intensive** growth strategies adopted by Total Kenya Limited in response to competition in **the oil** industry in Kenya, Njoroge (2006) investigated competitive strategies adopted by LPG marketers in Kenya to cope with competition by and Chepkwony (2001) studied **strategic** responses of petroleum firms in Kenya to challenges of increased competition in **the** industry.

There is need to conduct studies targeting SMEs and document findings to enable future researchers have literature for reference in this important sector. This study, therefore, sought to fill the knowledge gap in the energy industry in Kenya by investigating strategies being applied by energy entrepreneurs around Kisumu and how the strategies fit with industry key success factors. The study sought to find solutions to the following research questions: Do energy entrepreneurs use strategies and industry success factors in managing energy enterprises?

1.3 Research Objectives

This study was guided by the following research objectives so as to achieve the project objectives.

- i). To identify the strategies being used by energy enterprises in Kisumu - Kenya.

- ii). To establish the Key Success Factors of energy SMEs in Kenya.
- iii). To determine the extent to which energy enterprises in Kisumu leverage strategies on industry key success factors.

1.4 Value of the study

This study therefore seeks to fill the knowledge gap among the entrepreneurs by investigating strategies and the key success factors in the energy industry in Kenya. The findings of the study will help energy enterprises in Kenya develop business strategies within the realms of industry key success factors for the success of businesses. It has been noted that this sector faces policy related constraint. The government will find this study useful in formulating policies that will improve the working environment for energy SMEs in the country. Development stakeholders in the industry will find this study valuable in informing their decisions for interventions. The study will also be of particular interest to researchers in academic institutions as it will be used as reference piece for future studies in this important sector in Kenya. The findings of the study might also open up opportunities for researchers to carry out further studies of the same or related topics in the industry.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review of the study. The chapter has reviewed literature on the concept of strategy, differentiation of technology, cost structure and vertical integration, key success factors and firm strategy which include the competitive priorities, management practice, organization culture, development of alliances, clean production and total productive maintenance, innovation and knowledge management, research and development, technology management, Information technology applications, measurements of performance and competitiveness and bench marking of processes and performance.

2.2 The Concept of Strategy

Strategy refers to a plan of action designed to achieve a particular goal. The word is of military origin. In military terms, strategy is distinct from tactics, which are concerned with the conduct of an engagement, while strategy is concerned with how different engagements are linked. How a battle is fought is a matter of tactics: the terms and conditions that it is fought on and whether it should be fought at all is a matter of strategy, which is part of the four levels of warfare: political goals or grand strategy, strategy, operations, and tactics. Strategic decisions determine the grand direction upon which an entity will embark. Always, strategy precedes action. The object of strategy is to bring about advantageous conditions within which action will occur. In the military context, this means

positioning forces for best advantage and judging precisely the right moment to attack or withdraw.

The strategy concept has developed as an important aspect of management as the dynamics and complexity of the world and business environment have increased. The term strategy is used to explain both the processes (e.g. organizational restructuring) and the outcomes (market position) of chosen long-term directions. It can either be a consciously planned activity or series of events, which lead to a desirable objective. It necessarily involves an evaluation of the likely impacts of both the external and internal organizational environment, the long-term goals of the organization (Nankervis, Compton & Baird, 2000).

Strategic management is the art, science and craft of formulating, implementing and evaluating cross-functional decisions that will enable an organization to achieve its long-term objectives. It is also defined as a process whereby organization missions, vision and objectives, developing policies and plans, often in terms of projects and programs, which are designed to achieve these objectives and then allocating resources for the implementation of policies, plans, projects and programs. Strategic management seeks to coordinate and integrate the activities of the various functional areas of a business in order to achieve long-term organizational objectives. A balanced scorecard is often used to evaluate the overall performance of an organization and its progress towards objectives. This does not only attest to an organization's health at present but also help to forecast future events.

2.3 Industry Key Success Factors

The **fundamental** tenet **in** strategy states that, **in** order to perform well, a firm **must** achieve **a certain** degree of alignment between environmentally driven imperatives and its **competencies** and capabilities. At a micro level, such alignment **is** achieved by matching the firm strengths to the critical success factors specific to the existing structure of the industry and segment it is competing in. Early literature on Success factors (Freund 1988, **Rockart**, 1979) focuses on reporting systems and data gathering, and **is** essentially driven by executives' need for more relevant information. In this initial attempt to prioritize business issues, scholars and practitioners delved into those few areas in which results need to be satisfactory for the organization to ensure successful competitive performance. What emerged from these inquiries are lists of Success factors, organized by industries or functions.

Several frameworks have been provided by strategy management scholars and consultants to assist managers in their scanning duties. At the task level, Rockart (1979) suggested that companies could more effectively scan their environment by concentrating their information needs on those "limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization " (p. 85). These key areas in which success is necessary are industry-wide Success factors. Together, they characterize the structure of the industry and how firms compete in it and respond to environmental forces. Rockart (1979) provided examples of Success factors for varying industries. For instance, styling, quality dealer system, cost control and meeting energy standards are typical Success factors shared by all automobile manufacturers. Rockart

(1979) also posited that Success factors evolve over time and shape the boundaries of the industry.

Other authors have emphasized the importance of defining those areas that are critical to the long-term success of firms. Freund (1988) stressed the importance of monitoring Success factors to avoid business failure rather than to gain competitive advantage. To him, Success factors need to be defined for the overall organization, as well as for each business unit and function. Freund (1988) also pointed out that Success factors need to be generic enough to include means required to achieve strategic goals as opposed to specific and related only to performance indicators. He suggested that firms should identify Success factors using a top-down approach that would ensure the alignment of business units with the overall goals and objectives of the corporation.

The alternative energy industry displays all the hallmarks of a relatively young industry. This includes a notoriously fickle supply chain for the all-important poly-silicon, a large number of different technologies and the distinct absence of companies that cover the whole value chain. As the industry becomes more mature, it will no doubt see significant consolidation and fewer technologies. Though different segments of the value chain have different logistics, there are common drivers that are critical to the success of individual businesses (Agbemabiese, 2007).

2.4 Technology Differentiation

To avoid having to compete just on price, firms must offer a product that is technologically differentiated. Whilst there are many distinguishing features, the number one to beat is "efficiency" followed closely by the module efficiency measured. This is so important

because a 1% P^{oint} efficiency increase in the cell, results in an additional energy yield of 6%. In addition, it brings down requirements for area and electrical components (Hall and Bain, 2008).

The technologies that are installed today may not be the technologies of tomorrow. For instance, with the sharp drop in poly-silicon prices, some of the thin-film technologies no longer look as appealing as they did a year ago. As a mitigation strategy, we would expect alternative technologies to be present in any company's product portfolio (Driver, 2008).

2.5 Cost Structure and Vertical Integration.

How well a company can control costs is one of the most important factors, especially in an industry that sees an ever-growing number of new entrants. Silicon manufacturers with access to cheap energy, for instance, have a distinct competitive advantage, as 85% of the energy needed to build a module, is used in producing silicon. Other cost advantages come from economies of scale and supply contracts at low pricing level. In order to be able to capture more value and to mitigate the inherent risks of the supply chain, it is crucial to either integrate vertically or build strong partnerships with others in the value chain (Hall and Bain, 2008).

2.6 Key Success Factors and Firm Strategy

A firm's competitive strategy specifies the potential products and markets, long-term objectives, and policies for achieving the objectives. Organizations must continuously review their strategies to identify the aspects of market priority, product structure, manufacturing configuration, and investment (Errin 2004, Silveira, 2005). Improvement

programs should match operational goals and objectives (Muda and Hendry, 2003, Sum 7q04, Raymond and St-Pierre, 2005).

Main task of corporate strategy is not to describe the current state-of-art, but to identify and **explore** core competencies that must be added. Otherwise the current competencies can become obsolete and begin to function as core rigidities. Building core competencies becomes essential for long-term competitive advantage because advantages emanating from the product-price-performance-tradeoffs are almost short-term (Kak and Sushil, **2002**).

SMEs, which link operations to their business strategies, outperform the competition. O'Regan *et al.* (2006) have observed that high-growth firms place a greater emphasis on external drivers such as strategic orientation, their operating environment and the use of e-commerce compared with firms having static or declining sales. As SMEs are faced with unfamiliar products and processes on a fairly regular basis, they must develop programs for improving their skills and competencies (Fuller-Love, 2006). They can get competitive advantage by developing internal and external capabilities (Lai-Yu, 2001). According to Corbett and Campbell-Hunt (2002), companies should focus their energy and resources on innovative product and its niche. Singh *et al.* (2006) have observed that SMEs should be flexible in developing their strategies. Chou and Hsu (2005) have suggested that by developing industry portals, SMEs can aggregate flexibility and agility, despite their lack of resources.

For the SME to grow from local to world class status, entrepreneurial actions need to be undertaken. This includes recognizing and exploiting market opportunities through the use of advanced technology, creating new distribution channels, products, services and

customer segments (Sambamurthy *et al.*, 2003). World class SMEs develop themselves through diversification and extended networks (Cagliano *et al.*, 2001). They can outperform local and transition SMEs with regards to the development of networks and markets (Raymond and Croteau, 2006).

2.6.1 Competitive Priorities

Competitiveness of a **company is mostly** dependent on **its ability to** perform well in dimensions such as cost, quality, delivery, dependability and speed, innovation and flexibility to adapt itself to variations in demand (Carpinetti *et al.*, 2000). Four widely accepted competitive priorities are cost, delivery, quality and flexibility. Competitive priorities might be used as measures of competitiveness (external) and competence (internal). According to Fleury and Fleury (2003), organizations should optimize the quality/price ratio for operational excellence. Dangayach and Deshmukh (2005) observed that SMEs give highest priority to quality and the least priority to flexibility. Therefore, competitive priorities will have to be decided very carefully because it will set the direction for adoption of different processes or management practices by the organization. Quality and lower cost are the top ranking competitive factors among US electronics and computer industries (Lau, 2002).

2.6.2 Management Practices

Organizations need competence to organize and manage work processes in new and efficient ways to compete in the market. These practices may be related with top management commitment, development of alliances, organization culture, clean production, innovation and knowledge management, research and development, supplier

development, quality management, technology management, information technology (IT) **applications**, measurement of performance and competitiveness.

The top management of any successful organization is directly responsible for determining **an appropriate** organization culture, vision and quality policy. In order **to** enhance net profit **and** revenue as well as to reduce cost of quality, managers must convey their priorities and **expectations to** their employees. In SMEs, major problem **is** that owner of the company usually does not delegate adequate power and responsibility to top managers of the company. O'Regan *et al* (2005) have observed that leading firms tend to have higher levels of empowerment with greater involvement by top management in key issues such as staff advancement and disciplinary matters. The success of small firms is generally attributed to **the** managerial skills, training and education, and the personal background of the company's leader(s). Managers must develop a system that motivates workers to think and **act** flexibly and productively **to** meet company goal.

Researchers have found that the drive to invest in new improvement programs is influenced mainly by senior management, regardless of firm size (Schroder and Sohal, 1999). Leadership plays a significant role in framing organization strategy (Egbu *et al.*, 2005), benchmarking of performance (Deros *et al*, 2006) and in shaping the quality focus of companies (Sila and Ebrahimpour, 2005). Firms whose managers have been able to make shift in their business paradigms and are open to create change and to incorporate new business practices have been able to match multinational competitors (Vargas and Rangel, 2007).

3 Organization Culture

The challenge before managers is to cultivate an organizational culture that supports innovation. In high-performing firms, organization culture is more associated with innovation (O'Regan *et al*2006a, b). Problems of small firms in developing a quality **culture** are resistance to change, lack of experience in quality management, lack of **resources**. Managing organizational culture effectively requires clarity in the minds of **managers** about the type of culture and specific norms and values that will help the organizations reach its strategic objectives. Support for taking risks, change and tolerance for mistakes stimulates creativity. It has been found that those employees with high-job satisfaction exhibited the highest creativity when commitment to company was high and when support for creativity was available from the organization and coworkers (Zhou and George 2001).

Culture and cultural fit are more important in SMEs than other organizations because an SME is likely to be entirely enveloped in a culture, rather than large organizations, where several cultures may be present. It is easier to attain cultural change in SMEs than in larger organizations. However, it is probably more difficult for SMEs management to recognize the need for change (Ghobadian and Gallear, 1996). McAdam and McClelland (2002) have observed a strong correlation between the culture of continuous improvement and innovation in SMEs. Quality culture is a key enabler in the development of innovation management. Flat structure of SMEs and fewer departmental interfaces normally result in a more flexible work environment.

2 6.4 Development of Alliances

Since scope for improvement within the organization is decreasing; organizations have to **think** for newer alternatives of integrating the business activities beyond the organizations **boundary**. Cagliano *et al.* (2006) have advocated for integration of information flows and **integration** of physical flows. Even the most vulnerable newly established SMEs have potential of joining international value chains and even developing their own marketing strategies (Chen and Huang, 2004). By aligning and coordinating the business processes and activities, overall performance and effectiveness of value chain can be improved (Sarmah *et al.*, 2006). Alliances provide sharing of product, technology, marketing and R&D know how and resources. It also reduces the uncertainty and vulnerability associated with the design and introduction of new products (Magnan *et al.*, 1999). In addition, through alliances and collaborations, new product design and development and capabilities are internalized (Banerjee, 2000). It also helps in tracking of customer expectations and reduction of product and process development cycle times (Perry, 2001).

Learning how to build stronger relationships with customers is often recommended as a way of ensuring the survival of firms in the face of turbulent and highly competitive market conditions. Organizations should have thorough analysis about their own strengths and weaknesses before thinking of getting into partnering relations (Varis *et al.*, 2004). Firm's competitiveness may be determined more by its external network than its own size.

2.6.5 Clean Production and Total Productive Maintenance (TPM)

Clean production and safety measures for environment have become essential criteria for organizations to compete in the market. Worthington and Patton (2005) have observed that

companies that voluntarily embrace environmental friendly practices can simultaneously improve their business performance. Rao and Holt (2005) have advocated for green supply chains to improve competitiveness of organization. Competitive advantage can arise from integrating environmentalism with organizational strategy. SMEs see the environment as an important business issue but are often unaware of environmental legislation affecting their business (Petts *et al.*, 1999). One way to enhance understanding among SMEs is to consider environmental responsibility as part of the quality attributes which customers may expect from suppliers.

Laugen *et al.* (2005) have observed that increasing equipment productivity and environmental compatibility are the best practices for improving performance of organization in present scenario. For improving equipment productivity and environmental compatibility, TPM can be an important strategy. Machine productivity can be improved by using properly trained personnel and by using appropriate IT controlled processes, thereby providing better proactive servicing (Eti *et al.*, 2006). It is observed that business performance of TPM firms is significantly superior to the non-TPM firms (Brah and Chong 2004, Chan *et al.*, 2005).

2.6.6 Innovation and Knowledge Management

To keep in pace with international competition, firms of all size are challenged to improve and innovate their products and processes constantly (Ernesto *et al.*, 2005). The foundation of organizational competitiveness has shifted from physical and tangible resources to knowledge (Wong and Aspinwall, 2005). SMEs can improve their responsiveness by developing capabilities in external knowledge acquisition (Liao *et al.*, 2003). Learning-by-

doing is the most effective mode of knowledge acquisition (Oyeyinka and Lai, 2006). Knowledge-based resources are positively linked to performance of SMEs (Wiklund and **Shepard**, 2003, Liu *et al.*, 2004). Innovation, firm's knowledge accumulation and the development of internal technical capabilities help SMEs in achieving better competitive **position** in international and national market (Vargas and Rangel, 2007). Nunes *et al.* (2006) have observed that by adequately capturing, storing, sharing and disseminating knowledge, SMEs could achieve greater innovation and productivity.

When compared with large-sized firms, the innovative process in small units is more informal and less structured, the base of managerial competencies is limited, availability of financial resources is lower and the attraction towards skilled labor is weaker (Toni and Nassimbeni 2003, Scozzi *et al.*, 2005). Levy *et al.* (2003) have observed that SMEs are knowledge creators but are poor at knowledge retention. The ability of a firm to respond to identified changes in market or customer behavior is an important feature exhibited by successful firms (Chaston *et al.*, 2001). For innovative products and processes, management of employees' knowledge and skills is essential. Lei *et al.* (1999) have expressed the view that in tomorrow's business world, success will be critically influenced by the degree to which firms utilize new knowledge to support innovation. Innovation implementation requires ongoing effort, commitment and understanding beyond that of continuous improvement (Humphreys *et al.*, 2005). Effective innovation must involve all areas of an SME with the potential to affect every discipline and process (McAdam, 2000).

2 6.7 Research and Development

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To meet rapidly changing product features and customer needs, SMEs should build a **dynamic** capability to develop new market products (Eisenhardt and Martin, 2000). According to Mosey (2005), SMEs can compete with their larger rivals by developing new-to-market products. Investment in product research and development will also help in improving quality and in reducing cost. According to Chorda *et al.* (2002), cost of product development and uncertainty of the market were found to be the major determinants that confront the product development.

Most of the SMEs research focuses on factors that contribute to their survival such as financing, rather than a greater understanding of the growth process and the achievement of sustainable competitive advantage. However, according to Karlsson and Olsson (1998), small firms not only spend more on fundamental research but also account for a high proportion of innovations in products and services. For higher growth small firms should focus on research and innovation in the longer term. However, many SMEs have some difficulty in converting research and development into effective innovation that leads to positive return/high growth (O'Regan *et al.*, 2006).

2.6.8 Technology Management

Majority of SMEs rely on outdated technology, labor intensive and traditional management practices. This in many cases led to inefficient, lack of information and inadequate in-house expertise (Hashim and Wafa, 2002). Increased uncertainty in the SMEs' environment has lead to increased levels of critical success factors for advanced technologies applications

(Raymond, 2005). According to Mosey (2005), SMEs can compete with their larger rivals by developing new to market products using novel and often simpler technologies.

According to Chanaron and Jolly (1999), global competitive strategies are increasingly becoming technology driven in the context of extremely dynamic and turbulent environments. There should be links between the capabilities of the technologies and the firm's business. More importantly, if a competitor's technology is accepted as the industry standard, it can threaten the existence of the firm (Narula, 2004).

Technology operates on competitiveness in two ways. First by altering the price structure through the development of more efficient and flexible processes and second by enabling the creation of better products of greater quality, better design, after sales service and short delivery periods (Vinas *et al*, 2001). New technologies available for SMEs provide them with the possibility of accessing international markets and facilitate the process of introducing products to these markets (Aspelund and Moen, 2004).

2.6.9 Information Technology Applications

Information and communication technologies are indispensable to the operation of the core routines of organizations (Hicks *et al.*, 2006). SMEs generally have an *ad hoc* approach to IT management, and therefore seldom have a defined IT budget or an explicit IT plan or strategy (Sadowski *et al.*, 2002, Barry and Milner, 2002). Investments in technology are often driven by the owner, rather than by any formal cost-benefit or strategic analysis. For making investment in information and communication technologies, SMEs should seek accredited advisors to ensure success (Morgan *et al*, 2006). Business executives of SMEs must regard IT as a strategic resource (Beheshti 2004; Floyd and McManus, 2005). SMEs

can get Competitive advantage by having integrated information systems (Koh and Simpson 2005, Blackwell *et al*, 2006).

2.6.10 Measurements of Performance and Competitiveness

For sustainable growth in highly competitive global market, performance measurement has become an essential component of strategy development by SMEs. Effective performance measurement system plays an important role in supporting managerial development in the organizations (Garengo *et al.*, 2005). Performance measurement is defined as the process of quantifying the efficiency and effectiveness of a system. Performance of an enterprise is often measured as a ratio of output to input. The outputs constitute the products of the enterprise and the inputs are the resources used by the enterprise (Choudhary, 2001). It is highly essential that all the factors, both tangible and intangible, should be included in analyzing organizations performance.

Traditionally, organizational performance has been measured by using only financial indicators such as profit, market share, sales, and growth rate. Financial indicators measure only past performance. Garg *et al.* (2003) suggest that as most small firms are privately held, it is unlikely that their CEOs will be willing to provide detailed accounting data on the firms' performance. Therefore, they suggest the use of "subjective and self-reporting measures of performance. Performance of an organization relative to its industry standards is termed as its competitiveness. Vastag and Montabon (2001) have measured competitive advantage by using five point Likert scales, which compared the firm's unit cost of manufacturing, delivery speed, etc. with its competitors. Many excellence models and performance measurement frameworks, like the Kanji's business scorecard (Kanji and Sa,

2002), the performance prism (Neely *et al.*, 2002), balanced scorecard (Kaplan and Norton, 1992) and assets, processes and performance model (Momaya, 2000) have proposed ways for analyzing performance but gaps have been observed between strategy and performance **measures** (Frigo, 2002). Hudson *et al.* (2001) have also recommended for taking steps to redesign the current performance measurement systems.

2.6.11. Benchmarking of Processes and Performance

For having continuous improvements on different processes and performance, SMEs have to set some benchmark standards as their target. Benchmarking will have positive impact on competitiveness (Cassell *et al.*, 2001, Carpinetti and Melo, 2002). Identification and transfer of best practices is considered a difficult task for SMEs due to severe resource constraints and limited knowledge of benchmarking methodologies. They often have difficulty in identifying their reference group. The selection of most appropriate reference group plays a key role in benchmarking since it greatly influences the performance indicators that will be used by enterprises throughout the exercise (Sousa *et al.*, 2006).

Benchmarking starts with a deep understanding of the internal processes. Then, competitors, dissimilar organizations or different units of the same organization are comparatively analyzed. Practices and performance change frequently. Therefore, organizations should adopt benchmarking as an on-going process. Benchmarking involves lot of processes and activities, which are complex. Basic steps of benchmarking are planning, information gathering, analysis of the gaps between the enterprise and its partner and adoption or implementation of changes (Ribeiro and Cabral, 2006).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter addresses the research design to be employed by this study to achieve its objectives. It has also given description of target population who were under this study project. Sampling and sample size of the target population who responded to questionnaires and participated in interviews are highlighted in this chapter. The chapter ends with data collection and data analysis methods used.

3.2 Research Design

According to Babbie (2002), research design refers to the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in the procedure. The research design adopted for this study was a case study design which was deemed suitable when a detailed analysis of a single unit of study was desired as it provides focused and detailed insight to phenomenon that may otherwise be unclear. In this study the focus was on key success factors and strategies adopted by small and micro enterprises in the energy industry in Kisumu, Kenya. A case study is a powerful form of qualitative analysis that involves a careful and complete observation of a social unit, irrespective of what type of unit is under study (Young, 2000). Unlike other methods, a case study will give an in-depth analysis of the study objectives.

3.3 Target Population

Ngechu (2004) referred to target population as a well defined or set of people, services, elements, events, group of things or households that are being investigated. The target population of this research study will be Small and Medium Energy Enterprises within Kisumu city. These populations were chosen for study because of their long term experience in the industry, creativity and innovation in adopting new technologies. Their involvement in this study generated valuable information that was of help in understanding the sector. Stakeholders (Ministry of Energy, energy related companies and NGOs in the industry were approached to give their opinions on the matter.

3.4 Sample size

Sample random sampling procedure was used to select a representative sample of entrepreneurs from the energy industry in Kisumu. The researcher got a list of energy entrepreneurs from Kibuye Jua Kali Association. A Random sampling method was done where only even numbers were picked from population of 100 energy members listed. 45 respondents managed to participate and a response rate of 61.3% was realized. According to Mugenda & Mugenda (2003), a response rate of 50% is sufficient for analysis, 60% is good and 70% and above is excellent. This response rate was considered appropriate for the study.

Energy Managers were purposively sampled from the institutions picked for the study as they are single positions. Therefore, 1 renewable energy officer from the ministry of energy; 1 technical officer from Kenya bureau of standards; 3 managers from energy related companies; and 1 manager from and NGO supporting the entrepreneurs from the region.

3.5 Data Collection

The study used semi-structured questionnaires to collect quantitative and qualitative data from the energy entrepreneurs. The questionnaires were administered through drop and pick method to the key respondents. Appointments were made and suitable time fixed to conduct the interviews using interview guides.

3.6 Data Analysis

A mixture of content analysis and quantitative data analysis methods was used in this study. Quantitative data was analyzed using descriptive statistics by employing the help of Statistical Package for Social Sciences (SPSS). The SPSS was used to analyse the data due to its flexibility in presenting complex data and for the sake of uniformity in data presentation. This involved computation of frequencies and percentages on closed ended questions. The measures of central tendencies (mean and standard deviation) on Likert scale questions were also computed using the SPSS. The findings were presented in bar graphs, histograms, tables and pie charts while interpretations were given in prose after each figure and table. Correlation coefficient generated from SPSS was used to analyse correlation among key success factors adopted by SMEs in energy industry in Kenya.

CHAPTER FOUR

DATA ANALYSIS INTERPRETATION DISCUSSION

4.1 Introduction

This chapter provides data on the findings of the study as set out in the project objectives: To identify strategies being used by energy entrepreneurs in Kisumu - Kenya; establish the energy industry key success factors in Kenya and investigate the extent to which the energy enterprises in Kisumu can leverage the strategies on the industry success factors. A total of forty five respondents participated in the survey. The findings are presented in pictorials using pie charts, graphs and tables. The findings are briefly explained to make the findings better understood.

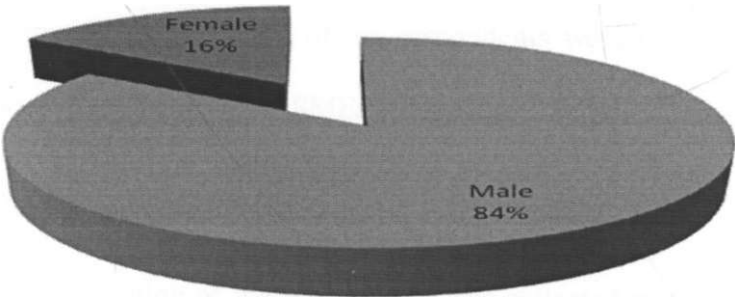
4.2 Demographic information

The study wanted to know the demographic information of the respondents and so data was collected on gender, age, education level, professional experience, work duration and designation.

4.2.1 Gender of respondents

The study collected data on the gender of the respondents. The findings are shown in figure 4.1.

Figure 4. 1 Gender of respondents

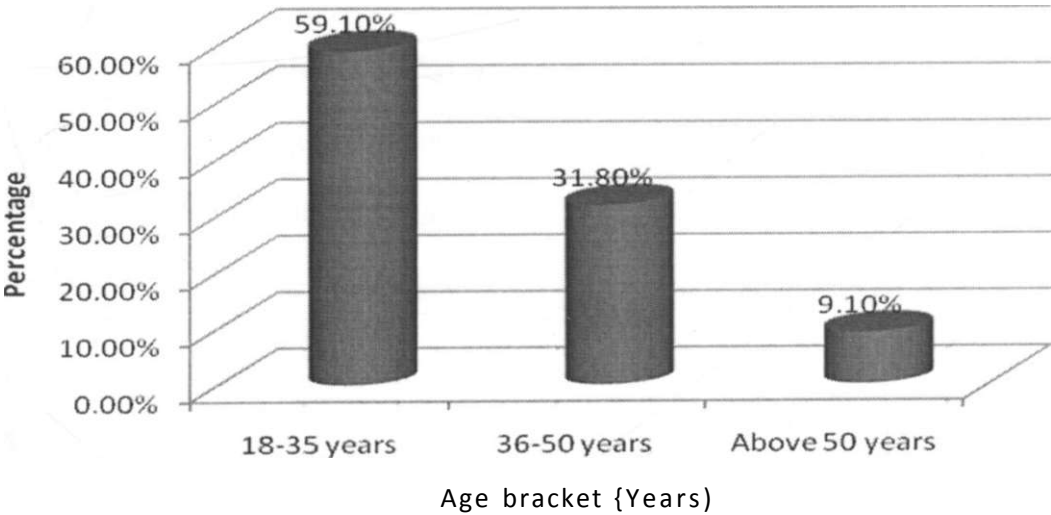


This area of study was aimed at establishing the participation in energy enterprises by gender. From 45 respondents, the study established that majority of the respondents were males (84%). This shows that most of SMEs in energy industry are males.

4.2.2 Age of respondents

The age of the respondents who took part in this study was as shown in figure 4.2.

Figure 4. 2 Age of respondents



SMEs established in the informal sector in Kenya are dominated by the youths. According to Figure 4.2, majority of the respondents who took part in this study were of the age bracket 18-35 years (59.10%). 31.8% of the respondents were of the age bracket 36-50 years. This shows that majority of the SMEs are managed by young people.

4.2.3 Level of education of the respondents

Data on the level of education of the respondents was collected and analyzed as shown in figure 4.3.

Figure 4. 3 Level of education

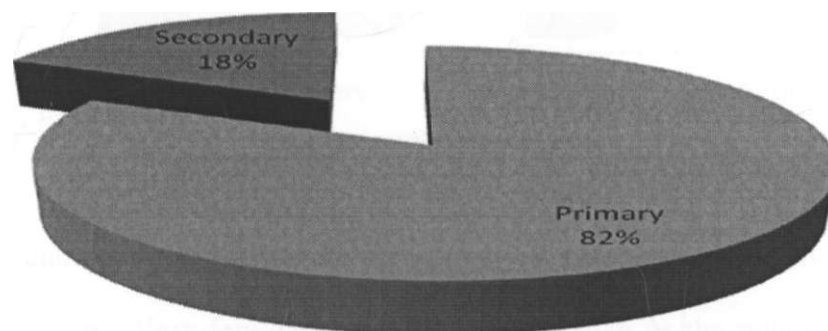


Figure 4.3 shows that majority (82%) of the respondents had attained primary school education. The rest had acquired secondary education (18%). The study noted none of the respondents had gone to college or university. This shows that most of the SMEs in the rural areas and informal sector are established and run by secondary and primary school leavers.

4.2.4 Professional experience of the respondents

The study collected data on the special skills and experience acquired by the respondents in the work related areas. The results of the finding are shown in figure 4.4 below.

Figure 4. 4 Professional experience

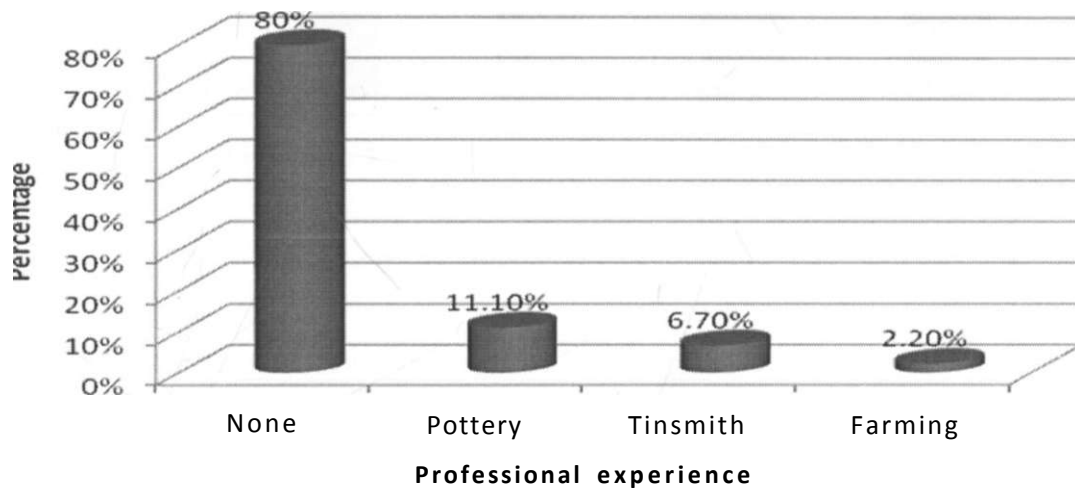
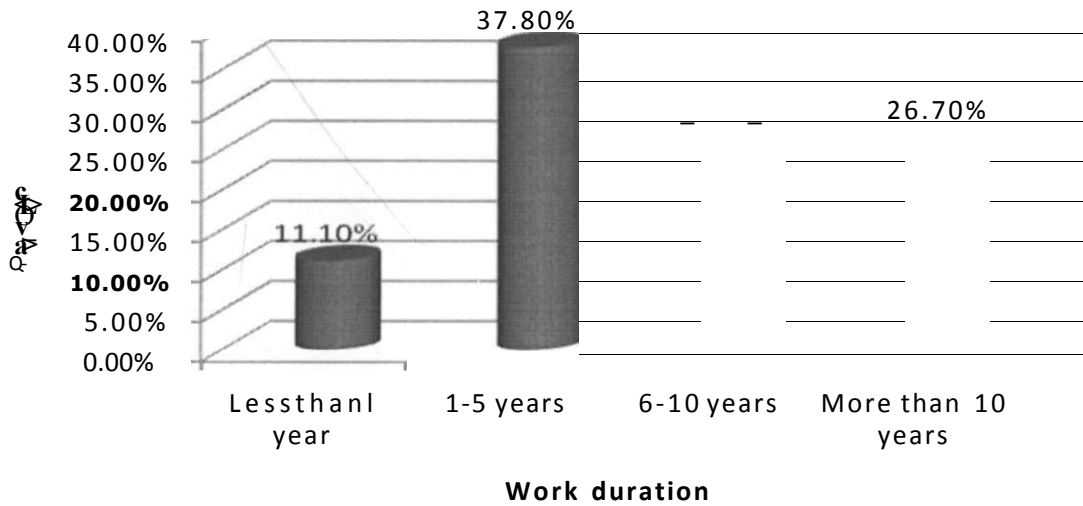


Figure 4.4 shows that majority (80%) of the SMEs are run by people who had no professional qualifications. Very few had some experiences such as the pottery (11.1%) and tinsmith (6.7%). This shows that the SMEs owners lack the right professional experience.

4.2.5 Work duration of respondents

The study established that the respondents had worked in their SMEs energy sector for different periods as shown in figure 4.5.

Figure 4. 5 Work duration



The study collected data on duration in which the respondents have worked in their respective enterprises. Figure 4.5 shows that most of the SMEs owners (37.8%) had worked in their respective SMEs for a period of about 1-5 years. Some had worked for 6-10 years (24.4%) and others for more than 10 years (26.7%). This shows that majority of the SMEs respondents had working experience of more than 5 years.

4.2.6 Designation of respondents

The respondents provided information about their designation. The results are shown in figure 4.6.

Figure 4. 6 Designation of respondents

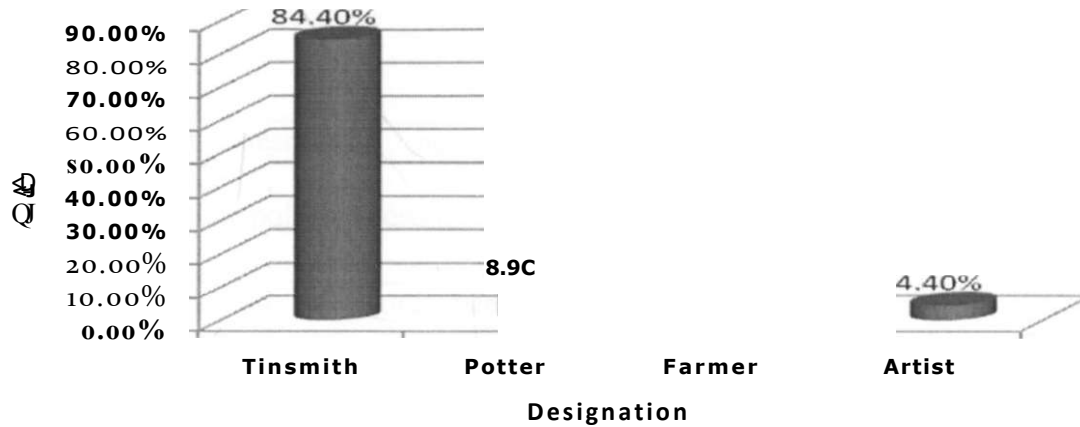


Figure 4.6 shows that majority of the respondents (84.4%) were tinsmiths. Some were porters (8.9%) while others were farmers (2.20%) and artists (4.40). This shows that most of the SMEs in the informal sector around Kisumu are involved in tinsmith related work.

4.3. Strategies of SMEs

One of the objectives of this study was to identify strategies being used by energy entrepreneurs in Kisumu. This section of the study presents the findings of the strategies identified among the enterprises operating in the energy sector in Kisumu.

4.3.1 Strategies being used in the enterprise

The study collected data from the respondents on strategies they use in running the enterprises. The findings are provided in table 4.1. Respondents expressed adoption levels of strategies as shown in the table below.

Table 4.1 Strategies in the enterprise

Strategy related area	Mean	Std. Dev
Adopted policies and/or procedures that promote its continuity	2.4	1.0
Have sufficient resources been allocated for implementation of the policy/procedure	1.9	0.6
Have the policies and procedures been communicated across the organization, for instance e.g through internal trainings, internal memos, making a copy of the sustainability policy available to all staff	1.8	0.8
Do you regularly review the policies to assess efficiency	1.7	0.9
Is the enterprise aware of the compliance of its clients and their projects with the relevant environmental, health and safety regulations of the country	2.2	1.3
Is the enterprise collaborating with any other institutions to meet production or product standards	2.2	1.2
Does the senior management fully support the implementation of the policy and procedure	1.7	0.8
Is the enterprise aware of the Environmental Management Authority requirements	1.8	1.0

Table 4.1 shows the findings on the strategies adopted by the energy enterprises. The data was collected using a five-point likert scale between 1 representing "no extent at all" and 5 "very great extent". In the continuum 2 represented "less extent", 3 "moderate extent" and 4 "great extent". The data was analyzed using descriptive statistics such as mean and standard deviation.

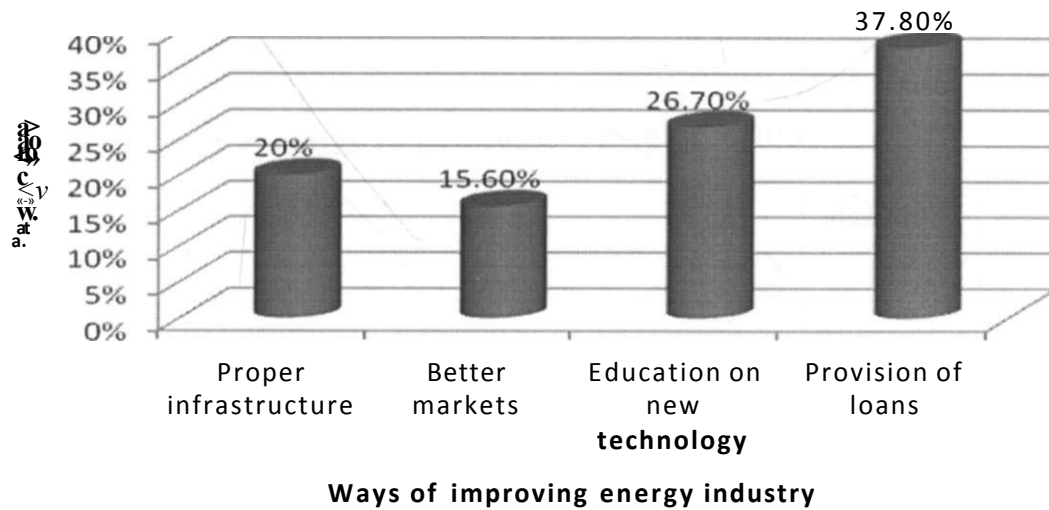
According to the scale those variables which had a mean close to 4.0 were rated to a greater extent, those with a mean close to 3.0 were rated moderate extent, those with a mean close to 2.0 were rated to low extent while those with a mean below 1.7 were not considered at all. At the same time standard deviation was used to indicate the extent of dispersion among the responses.

From the findings of this study, the SMEs had adopted the policies and procedures that ensure the survival of their enterprises to a low extent (M=2.4). Most of the SMEs which had survival policies had allocated resources to implement them to a low extent (M=1.9). Also the study established that the policies and procedures had been communicated across the organization to a low extent (M=1.8). The enterprises found to be operating oblivious of compliance requirements in environmental, health and safety regulations of the country (M=2.2). From the findings the study, it was established that most of the enterprises do not collaborate with relevant institutions to meet production or product standard (M=2.2).

4.3.2 Recommendations to improve the energy industry

Some of the suggestions made by the SMEs operators in energy sector are shown in figure 4.7.

Figure 4. 7 Recommendations to improve the energy industry



According to the findings in figure 4.7, most of the SMEs should be provided with loans (37.8%), 26.7% indicate that the SMEs should be trained on education on new technology. Some indicated that they be provided with proper infrastrucutre (20%) and better markets (15.6%).

4.4 Key success Factors

Under this study area, the study sought to establish whether the energy entrepreneurs are aware of the industry key success factors in Kenya. The study collected data on energy products/services distribution in Kenya, government involving all stakeholders in the development of the sector, research development and dissemination of research information in the sector and the availability of development funds to the sector.

4.4.1 Availability of energy services in rural areas in Kenya

The study collected data on the availability of energy services in rural areas in Kenya. The findings are shown in table 4.2.

Table 4. 2 Availability of energy services in rural areas in Kenya

	Mean	Std.dev
Are your energy products/services well distributed in rural Kenya	3.0	1.2
Does the Kenyan government encourage private sector to participate in the management of its energy projects in the country	2.1	0.8
Does the government support the existing and emerging associations that promote accessibility of clean energy in rural areas	1.8	0.8
Is sufficient and comprehensive research and information dissemination done in the energy industry in the country	1.9	1.0
Is there increase in the trading of energy services and products in the rural areas of Kenya?	1.9	1.0
Are there well developed products, markets, and services for decentralized energy technologies?	1.7	0.7
Is innovation, institutionalization, and sustainable implementation of models for energy distribution well conducted in the energy industry?	1.6	0.9
Would manufacturing of imported products locally reduce high costs and increase employment?	1.5	0.9
Does your enterprise make regular visits to financial institutions for development fund?	1.9	1.0
Are the locals trained to become technicians to support productions and maintain energy equipment?	1.3	0.6

Table 4.2 shows the findings on the availability of the energy services in the rural set ups in Kenya. The data was collected using a five-point likert scale between 1 representing "no extent at all" and 5 "very great extent". In the continuum 2 represented "less extent", 3 "moderate extent" and 4 "great extent". The data was analyzed using descriptive statistics such as mean and standard deviation.

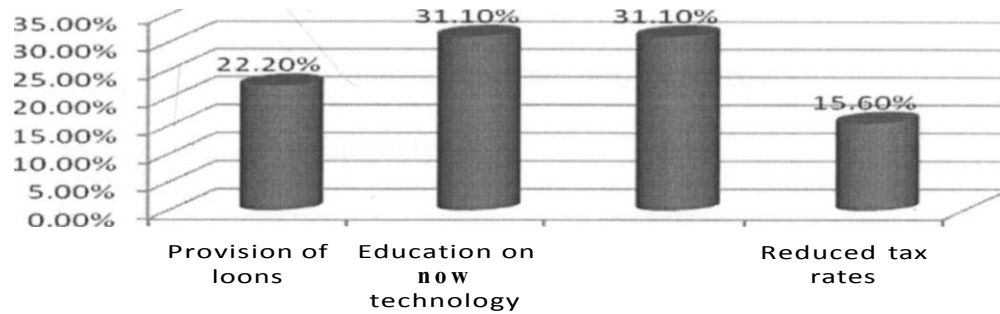
According to the scale those variables which had a mean close to 4.0 were rated to a great extent, those with a mean close to 3.0 were rated moderate extent, those with a mean close to 2.0 were rated to low extent while those with a mean below 1.7 were not considered at all. At the same time standard deviation was used to indicate the extent of dispersion among the responses.

From the findings, energy products/services are distributed moderately in rural set ups (M=3.0). The study established that Kenyan government encourage private sector to participate in the management of energy projects in the country to a low extent (M=2.1) and supports the emerging and existing associations that promote accessibility of clean energy in rural areas to a low extent (M=1.8). Research development and information dissemination in the energy sectors is low (M=1.9) while trading of energy services and products in the rural areas of Kenya is also low (M=1.9). The study has established that SMEs in the energy sector in Kisumu rarely (M=1.9) visit financial institutions for development funds.

4.4.2 Suggestions to be adopted by private and government in enhancing access to energy services in Kenya.

Some of the suggestions made by the SMEs owners are shown in figure 4.8.

Figure 4. 8 The role of private and government in enhancing access to energy services in Kenya.



The role of private and government in enhancing access to energy services in Kenya.

Figure 4.8 shows some of the recommendations made by the SMEs on how the private and government can enhance the energy products and services. These include education on new technology (31.1%), better markets (31.1%), provision of loans (22.2%) and reduction of tax rates (15.6%).

4.5 Strategies and key success factors in the energy industry

The third objective of the study sought to investigate the extent to which energy enterprises can leverage the strategies on the industry key success factors to run successful enterprises. The study collected information on whether the entrepreneurs have identified and are aware of the relevant success factors in the industry. The findings below present information on how energy enterprises in Kisumu develop strategies based on industry key success factors.

Table 4. 3 Strategies and key success factors in the energy industry

*	Mean	Std.dev
Identification of success factors	2.5	1.0
Does your firm have good customer relation strategies, measures to evaluate financial strength, vertical integration strategies, good cost structure and evaluation of product capability	2.6	1.0
Adequacy of funds	1.6	0.8
Availability of energy offices/departments	1.8	0.6
Availability of regular training schedule	1.9	0.9
Making of regular financial and non-financial reports	1.7	0.8
Availability of internal process	1.5	0.7

Table 4.3 shows the findings on the availability of the energy services in the rural set ups in Kenya. The data was collected using a five-point likert scale between 1 representing "no extent at all" and 5 "very great extent". In the continuum 2 represented "less extent", 3 "moderate extent" and 4 "great extent". The data was analyzed using descriptive statistics such as mean and standard deviation.

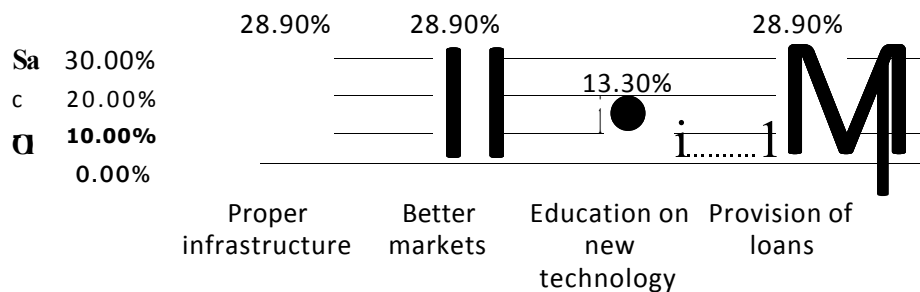
According to the scale those variables which had a mean close to 4.0 were rated to a great extent, those with a mean close to 3.0 were rated moderate extent, those with a mean close to 2.0 were rated to low extent while those with a mean below 1.7 were not considered at all. At the same time standard deviation was used to indicate the extent of dispersion among the responses.

The findings in table 4.3 established that SMEs have moderately (M=2.5) identified success factors in the industry and are capitalizing on them. The SMEs are moderately (M=2.6) applying competitive strategies such as good customer relations, financial evaluation, vertical integration, good cost structure and evaluation of product quality. The study found SMEs to be weak in availing adequate funds (1.6) for the business, offer staff regular training programs (1.9), production of regular financial reports (1.7) and internal controls (1.5). The absence or low (M=1.8) activities in the energy offices/departments in the area was found not to be supportive of the enterprises.

4.5.1 Suggestions to improve productivity and growth of energy industry

The SMEs suggested the following on how to improve productivity and growth of energy industry in Kenya, the findings are shown in figure 4.9.

Figure 4. 9 Suggestions to improve productivity and growth of energy industry



Suggestions to improve productivity and growth of energy enterprises

Figure 4.9 shows some of the suggestions to improve the productivity and growth of the energy enterprises in Kenya. From the findings, the SMEs proposed provision of loans, education and training, proper infrastructural facilities and improvement of markets as some of the things which could improve the productivity of the SMEs in energy sector.

4.6 Relationship of the strategies and factors in the energy industry

To establish the relationship between the different strategies in the market. The study performed a Pearson correlation. The results are shown in table 4.5.

Table 4. 4 Relationship of the strategies and factors in the energy industry

	Identification of success factors	Competitive strategies	Adequacy of funds	Availability of energy offices/departments	Availability of regular training schedule	Regulation financial and non-financial reports	Availability of internal process
Identification of success factors	1						
Competitive strategies	.021	1					
Adequacy of funds	.344*	.320*	1				
Availability of energy offices/departments	-.205	.232	-.110	1			
Availability of regular training schedule	.277	.293	.177	.259	1		

Making of regular financial and non-financial reports	.357*	.248*	.083	-.028	.375*	1	
Availability of internal process	.165	.054	.050	-.189	.178	.452"	1

Table 4.4 shows the relationship of the **strategies** and success factors in **energy** industry in **Kenya**. The study used Pearson correlation. A positive value indicates a positive relationship while a negative value indicates an inverse relationship. A value of 0.0 indicates no relationship between the given variables.

From table 4.4, identifying success factors was directly related with other variables except availability of offices (-0.205). Competitive strategies adopted were positive related with other variables. The level of funds was directly related with other factors with exception of its relationship with availability of offices (-0.110). Availability of training, making of financial statements and availability of internal controls were all directly related with other strategies. However, the availability of energy offices was inversely related with most of the strategies. This shows that the existence of the offices had relationship with the progress of the SMEs in the region. This could be due to the fact that the offices could be dormant and thus ineffective in improving the productivity of the SMEs.

4.7. Discussion of findings

This study collected data from SMEs. Majority of the respondents were males (84%) of the age bracket 18-35 years (59.1%). The SMEs operators are mostly run by secondary and primary

school leavers. Majority of the SMEs lack professional qualification (80%). Notably most of the SMEs owners had operated their enterprises for more than 5 years thus they had good working experienting. Majority of the SMEs in the region are Tinsmiths.

The study findings indicate that SMEs had adopted the policies and procedures that ensure the survival of their enterprises to a low extent (M=2.4). Also the study established that the policies and procedures had been communicated across the organization to a low extent (M=1.8). The enterprises were not very much aware of the aware of the compliance of its clients and their projects with the relevant environmental, health and safety regulations of the country (M=2.2). Other weaknesses established include the lack of collaborations among the enterprises and institutions to meet production or product standard (M=2.2) and lack of knowledge on the guidelines of the National environmental Management Authority (NEMA).

The study established that energy products/services are distributed moderately in rural set ups (M=3.0). Kenyan government encourage private sector to participate in the management of its energy projects in the country to a low extent (M=2.1) and rarely supports the existing and emerging associations that promote accessibility of clean energy in rural areas (M=1.8). Also there is low research and dissemination of information on the energy sectors (M=1.9), low trading of energy services and products in the rural areas of Kenya (M=1.9). The SMEs visit financial institutions for development fund to a low extent (M=1.9).

The findings of the study suggest that SMEs have adopted some competitive strategies such as customer relation strategies, measures to evaluate financial strength, vertical integration strategies, good cost structure and evaluation of product capability to a low extent (M=2.6). There were few available energy offices/departments (M=1.8) and training schedules (M=1.9).

CHAPTER FIVE

✽ SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the demographic information of the respondents, the discussion of the study, conclusions of the study, the recommendations of the study and suggestions for further studies.

5.2 Summary of findings

This study collected data from different respondents. Majority of the respondents were males (84%). Majority (59%) of the respondents were of the age bracket 18-35 years indicating that majority of the SMEs are young people. The findings indicate that majority of the SMEs had attained primary school education (82%) and the rest secondary education (18%). Majority of the SMEs operators (80%) confessed that they had no professional qualification though some (11.1%) had pottery and tinsmith (6.7%) skills indicating that most of the SMEs owners lack the right professional skills and experience to manage the enterprises. Notably, most of the SMEs owners (37.8%) had worked in their respective SMEs for a period of between 1-5 years. Some had worked for 6-10 years (24.4%) and others for more than 10 years (26.7%). This shows that majority of the SMEs respondents had working experience of more than 5 years. The respondents were mainly tinsmiths (84.4%).

The study established that energy SMEs have inadequate policies and procedures which could sustain them (M=2.4). Of those who have managed to establish policies and procedures, resources allocation was found to be inadequate (M=1.9) thus narrowing SMEs survival. The study further established that energy SMEs have weak (M=1.8) internal communication systems.

On compliance to regulations, the study revealed that SMEs rarely bother to find out follow compliance requirements. This was evident in the responses received concerning environmental, health and safety regulations of the country where the score was (2.2). The study also wanted to establish the respondents knowledge about NEMA and the response was that their knowledge about (NEMA) is low (M=2.2). When asked about collaboration with other institutions, the response was low (M=2.2) indicating that energy SMEs rarely network or collaborate with other relevant institutions to enhance growth of the enterprises.

When asked about key success factors that should be improved to enhance growth of the businesses, the responses were that SMEs should be provided with loans (37.8%), be trained on new technology. (26.7%), provided with proper infrastructure (M=20%) and better markets (15.6%).

The study noted that there is moderate distribution of energy products and services in the rural set ups (M=3.0). The government rarely (M=2.1) encourages private sector to participate in management of its energy projects in the country. The government also does not support the existing and emerging associations which promote distribution of energy in rural areas (M=1.8). Research and dissemination of information on the energy sectors is low (M=1.9) and energy services and products distribution in the rural areas of Kenya is also low (M=1.9). Accessibility to affordable loans by SMEs is a major problem in Kenya.

Collaterals and strict borrowing terms have kept SMEs from financial institutions as most of them cannot afford costs of borrowing. This study sought to find out whether Kisumu entrepreneurs visit local banks for development loans and the responses were that they Also rarely (M=1.9) visit financial institution for development funds.

SMEs in Kisumu are moderately (M=2.5) aware of the industry success factors and because of this some have adopted competitive strategies such as good customer relations, effective measures to evaluate financial strengths, apply vertical integration strategies, established good cost structures and do evaluate product qualities to a moderate (M=2.6). Government energy offices/departments (M=1.8) were found to be few or if they are there then they are dormant. This means that the entrepreneurs cannot get government support services whenever they want thus delaying decision making.

5.3 Conclusions of the study

The study concludes that most of the SMEs operators lack professional qualifications since most of them have studied to secondary school levels and have not bothered to enhance their skills through skills related training programmes. SMEs rarely develop business strategies that can enhance their survival as evidenced in the findings about policies and procedures in the enterprises. Poor communication channels in the studied SMEs hinder team work and clarity of roles and responsibilities thus retarding enterprises growth. Ignorance of compliance requirements among Kisumu SMEs is a matter of concern given that the nature of the enterprises directly relate to matters of environmental, health and safety regulations in the country.

The distribution of energy products and services in rural areas is moderate implying that the enterprises at least have outlets for the products. However, the low involvement of entrepreneurs in government projects at rural levels is a concern to the respondents. This means that some of the energy related policy decisions are made without input of the rural trader who is more conversant with local energy requirements. Even after forming associations to have a common bargaining platform, SMEs still feel that the government does not support adequately existing and emerging associations which promote distribution of energy in rural areas. The study concludes that there is low research and dissemination of information in the energy sector to help SMEs keep with changing technologies and market demands.

Funding to SMEs in the energy industry is low generally and this has been attributed to the fact that energy services and products in the sector have not been viewed in the business / sense and that the major player or service provider in this sector has been the government. Without business profile, energy business are finding it difficult present good enough past trading experience that can convince financial institutions to fund the enterprises. This has kept the SMEs-off and they rarely go for development fund to the financial institutions.

The fact that SMEs in Kisumu are aware of the industry success factors and some are already developing strategies based on the factors is commendable. The SMEs are applying competitive strategies such as good customer relations strategies, measures to evaluate financial strengths, vertical integration strategies, good cost structure and evaluation of product quality.

5.4 Recommendations for policies and practices

The study has established that most of the energy SMEs do not formulate policies and procedures for sustainability of their businesses. This study recommends that energy SMEs should adopt long term plans for survival and growth. This will ensure that the SMEs survive beyond their first anniversary as opposed to the current situation where less than 30% survives beyond one year after establishment.

Communication at work place is crucial for team work and clarity of procedures and roles. Without proper communication channels in an enterprise, uncertainty dominates the work environment and productivity goes down. For survival and growth, SMEs should institute proper communication systems.

SMEs need clear policies in the industry. Kenyan energy industry has good policies but communication of such policies to reach the rural based energy trader or producer is a problem. Establishing effective energy offices/departments at the divisional/county level would go a long way in supporting rural SMEs in understanding the requirements and opportunities in the sector. Such offices/departments should have outreach programs to the enterprises to get views about the sector which would be important in policies formulation. In this way, it will be easier to engage them in local projects thus creating employment among the youths.

The Small scale energy enterprises do not seek development fund from the financial institutions according to the study findings. This has limited the ability of the SMEs to expand. It is thus recommended that government and financial institutions come up with policies and programmes that attract SMEs to borrow from the institutions under favorable

terms. Where subsidy is available, the government should engage the financial institutions to come up with programmes similar to the agricultural sector where farmer borrow at low rates. Energy products and services is at the core of development and cannot be overlooked in development planning.

5.5 Limitation of the study

Due to limitations in time and financial resources, the study was limited to only SMEs in Kisumu which just gave one sided-picture of energy SMEs in Kenya. A thorough comprehensive census study for same in the country would provide the real picture of energy SMEs Kenyan.

The nature of data collection tools had some effect on both quality and quantity of data generated. The questionnaire tool limited the amount of information that could be provided by the respondents as they could only respond to the question within the space provided. To some extent and given the nature of the informal sector, some responses could have been exaggerated to gain favors or in anticipation of favors in future. This could have distorted the quality of data collected.

5.6 Suggestions for further research

The data presented in this study if from SMEs in Kisumu. A similar study done in other areas could be different. It is thus recommended that other similar studies on strategies and industry key success factors be done in other regions to bring out the correct picture of energy SMEs in the industry in Kenya.

REFERENCES

- Andersen, P.H., Mathews, J.A., Rask, M. (2009). Integrating private transport into renewable energy policy: the strategy of creating intelligent recharging grids for electric vehicles. *Energy Policy*, Vol. 37 No.7, pp.2481-6.
- Ansoff, H. I. (1999) *Implanting Strategic Management*, Prentice Hall, Cambridge, United Kingdom
- Babbie, E. (2002). *Survey research methods* (2nd Ed.). Belmont: Wodsworth.
- Baker, J. (2008). New technology and possible advances in energy storage. *Energy Policy*, Vol. 36 No. 12, pp.4368-73.
- Bennett, R.J., Robson, P.J.A., & Bratton, W.J.A. (1999). Business link: the influence of BL structure and local context on use and client assessment of impact and satisfaction, 22nd ISBA National Small Firms and Policy Research Conference: *European Strategies, Growth and Development*, Leeds Metropolitan University, Leeds, pp.99-128.
- Central Bureau of Statistics (2002). *Economic Survey*.
- Central Bureau of Statistics (CBS), International Centre for Economic Growth (ICEG) & K-REP Holdings Ltd, (1999). *National Micro and Small Enterprise Baseline Survey* Survey Results, Nairobi.
- Central Bureau of Statistics, International Center for Economic Growth & K-Rep Holdings, (2004). National Micro and Small Enterprises Baseline Survey of 2004: Survey Results

Chan, K.W.L. and Chan, A.H.S., (2005). Spatial S-R compatibility of visual and auditory signals: Implications for Human-Machine Interface Design, *Displays*, 26/3, 109-119.

Chepkwony, J., (2001). Strategic responses of petroleum firms in Kenya to challenges of increased competition in the industry. Unpublished MBA project, University of Nairobi

Clancy, J., & Dutta, S., (2005). *Women and Productive Uses of Energy: Some light on a shadowy area*. Paper presented at the UNDP Meeting on Productive Uses of Renewable Energy, Bangkok, Thailand, 9-11 May 2005.

Driver, D. (2008). Making a material difference in energy. *Energy Policy*, Vol. 36 No. 12, pp.4302-9.

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Duncombe, R., and Heeks, R., (2001). *Information and communication Technologies (ICTs) and small enterprise in Africa'*. Lessons from Botswana." Online: www.man.ac.uk/idpm

George W. (2003). Kenya's energy industry has made major strides but needs to step up the grid, *Business Daily*

Government of Kenya (1999). A strategy of small Enterprise Development in Kenya Towards the year 2000, Nairobi - Government Printer

Government of Kenya (2000). *Economic survey*, Nairobi - Government Printer

GTZ (2010). Eastern Africa Energy Resource Base

- Hall, P.J., Bain, E.J. (2008). Energy-storage technologies and electricity generation. *Energy Policy*, Vol. 36 No. 12, pp.4352-5.
- Heeks, M., and Duncombe, R., (2001). "Information, technology and small enterprise: *A handbook for enterprise support agencies in developing countries.* " IDPM, University of Manchester, UK., Online: www.man.ac.uk/idpm/ictsme.htm.
- Hill, T. (1987). *Small business production/operations management*. Macmillan Education Ltd.
- Johnson G. and Scholes K., (2003). *Exploring Corporate Strategy* 6th Edition. New Jersey: Prentice Hall.
- Kabecha, W., (1999). "Technological capability of the micro-enterprises in Kenya's informal sector." *Technovation*, No. 19, pp.117-126.
- Karekezi, S., & Majoro, L., 2002. "Improving modern energy services for African's urban poor" *Energy Policy*, 30, 1015-1028.
- King, K. and McGrath, S. (2002). *Globalization, Enterprise and Knowledge*. Symposium, Oxford.
- Kinyanjui, M. (2000). *Tapping opportunities in enterprise clusters in Kenya: the case of enterprises in Ziwani and Kigandaini*. Working Paper 525, Institute for Development Studies, University of Nairobi, and Nairobi Kenya.
- Kisumudala (2010). *Kisumu City History*. Accessed at <http://kisumudala.com/history.htm>

Kittelsohn, D., (1998). *Productive uses of electricity: country experiences*. National Rural Electric Cooperative Association (NRECA) International Ltd., Prepared for Village Power 98, World Bank Headquarters, Washington D.C., 6-8 October.

Lanjouw, P. & Shariff, A., (2002). *Rural Non-Farm Employment in India: Access, Income and Poverty Impact*. Working Paper Series No. 81, This paper was prepared for the Programme of Research on Human, Development of the National Council of Applied Economic Research, sponsored by the United Nations Development Programme, National Council of Applied Economic Research, India.

Meadows, K., Riley, C., Rao, G., Harris, P., (2003). *Modern Energy: Impacts on Micro-enterprises*. A report produced for UK Department for International Development. UK.

Midwa J. M., (2008). Intensive growth strategies adopted by Total Kenya Limited in response to competition in the oil industry in Kenya.

Mintzberg, H & Quinn J.B. (1993). *The Strategy Process - Concepts, Contexts & Cases*. Prentice Hall Inc, Engelwood Cliffs N.J

Muteti, J. (2005). SME Lecture Notes. Nairobi: The Catholic University of Eastern Africa (CUEA).

Ngigi A. & Macharia D (2002). Energy industry policy overview paper: Intelligent Power East Africa

- Njoroge, J., (2006). *Competitive strategies adopted by IPG marketers in Kenya to cope with competition.*
- Obiero, H. O., (2008). *Competitive strategies applied by cement manufacturing firms in Kenya*
- OECD (2000). *Economic and Social Implications of Electronic Commerce*, OECD, Paris. Paper 2873, Washington, DC, August.
- Osunbitan, J.A., Olushina, J.O., Jeje, J.O., Taiwo, K.A., Faborode, M.O., & Ajibola, O.O., (2000). "Information on microenterprises in cassava and palm oil processing in the Osun 7 Ondo states of Nigeria." *Technovation*, No. 20, pp.577-585.
- Pearce, J.A. and Robinson, R.B. (2001). *Strategic Management: Strategy Formulation and Implementation*. Third Edition, Richard D. Irwin Inc
- Porter, M. (1996). What is strategy? *Harvard Business Review*, Vol. 74 No.6, pp.61-78.
- Practical.A.(2008). Energy access in Kenya. Accessed at http://practicalaction.org/print/programme_aim3id=kisumu_energystudy
- Rogerson, C.M., (1997). "Rural electrification and the SMME economy in South Africa." ERC, University of Cape Town. In: Meadows, K., Riley, C., Rao, G., Harris, P., 2003, *Modern Energy: Impacts on Micro-enterprises*, A report produced for UK Department for International Development. UK.
- Steer, L. and Taussig, M. (2003). Domestic private companies and Vietnam's pressing need for wage employment, *World Bank Policy Research Working*

USAID (1991). Gender and adjustment. Mayatech Corp.

Wanjohi, A.M. and Mugure, A. (2008). Factors affecting the growth of MSEs in rural areas of Kenya: A case of ICT firms in Kiserian Township, Kajiado District of Kenya.

World Bank (2005). *World Development Indicators*, World Bank, Washington, DC.

Young, A. J. (2000). *The Angle of the Manure Chute: An Introduction to Case Studies*. Utah Dairy Seminars, Richfield, Provo, and Wellsville, Utah.

Zumerchik, J. (2000). *Macmillan Encyclopedia of Energy*, 3rd ed., Vol 3, Macmillan Reference, New York, NY.

APPENDICES

Appendix i: Letter of Invitation to Respondents

August, 2012

Dear Respondent,

RE: PARTICIPATION IN RESEARCH

I am a postgraduate student pursuing my master degree in Business Administration at the University of Nairobi and conducting a research entitled "Small and Micro Enterprises Strategies and Key Success Factors in the Energy Industry in Kenya. This study targets energy enterprises around Kisumu and is meant to improve the business environment for the energy entrepreneurs in the area.

As a stakeholder in the industry in the area, you have been selected to take part in this study as a respondent. This exercise will seek your opinion on how the enterprises are managed; whether the enterprises are adopting the success factors within the industry and how best the enterprises can upscale their management strategies to be in line with the industry success factors within the industry in Kenya.

Kindly respond to all items to reflect your opinion and experience. Please feel free and answer all the questions to the best of your knowledge. The information provided will purely be used for this academic research only.

Thank you very much and I appreciate your participation in this exercise and I greatly appreciate your contribution.

Yours Sincerely,

Lloyd George Oito

Appendix ii: Questionnaire and Interview Guide

This questionnaire seeks information from Small and Micro Energy Enterprises from Kisumu. The questions contained herein will explore different strategies used by the entrepreneurs in running their businesses. The interview guide will be used to collect opinion of key informants from stakeholders in the industry.

PART A: GENERAL QUESTIONS

Please provide responses to the questions below.

1. Sex: Male [] Female []
2. Age bracket 18-35 yrs [] 36-50yrs [] Above 50 yrs[]
3. Level of education: Primary [] Secondary [] College []
University []
4. Professional experience
5. Work duration: Less than 1 yr [] 1-5 yrs [] 6-10yrs [] More than 10 years []
6. Designation in the organization:

PART B: POLICIES IN ENERGY SYSTEMS

7. To what extent do you agree to the following statements regarding policies in your enterprise? Tick appropriately using a scale of 5; where **5= Very great extent, 4= Great extent 3= Moderate extent and 2= Less extent and 1= No extent at all.**

		Very great 5	4	Moderat 3	2	1
	Has this enterprise adopted policies and/or procedures that promote its continuity?					
	Have sufficient resources been allocated for implementation of the policy/procedure?					
	Have the policies and procedures been communicated across the organization, for instance, through regularly scheduled internal trainings, internal memos, making a copy of the sustainability policy available to all staff?					
	Do you regularly review the policies to assess efficiency?					
	Is the enterprise aware of the compliance of its clients and their projects with the relevant environmental, health and safety regulations of the country?					
	Is the enterprise collaborating with any other institutions to meet production or product standards?					
	Does senior management fully support the implementation of the policy and procedure?					
	Is the enterprise aware of the Environmental Management Authority requirements?					

8. Please, recommend ways in which good policies in energy industry can be improved by the Kenyan government.

PART C: ENERGY SERVICES AVAILABILITY IN RURAL AREAS IN KENYA

9. To what extent do you agree to the following statements regarding energy systems decentralization? Tick appropriately using a likert scale of 5 where **5= Very great extent, 4= Great extent 3= Moderate extent and 2= Less extent and 1= No extent at all.**

		Very great extent	Great extent	Moderate extent	Less extent	No extent at all.
	Are energy services well distributed in rural Kenya					
	Does the government encourage private sector to participate in the managements of its energy projects					

	in the country.					
	Does the Kenyan government support the existing and emerging associations that promote accessibility of clean energy in rural areas.					
	Is sufficient and comprehensive research and information dissemination done in the energy industry in the country?					
	Is there increase in the trading of energy services and products in the rural areas in Kenya?					
	Are there well developed products, markets, and services for decentralized energy technologies?					
	Is innovation, institutionalization and sustainable implementation of models for energy distribution well conducted in the energy industry?					
	Would manufacturing of imported products locally reduce high shipping costs and increase employment.					
	Does your enterprise make regular visits to financial institutions for development fund?					
	Are the locals trained to become technicians to support productions and maintain energy equipment?					

10. What are your recommendations on how the participation between the government and private sector players can enhance the access to energy services in Kenya?

PART D: STRATEGIES AND KEY SUCCESS FACTORS IN THE ENERGY INDUSTRY.

11. To what extent do you agree to the following statements regarding success factors in the energy industry? Tick appropriately using a likert scale of 5 where 5= **Very great extent**, 4= **Great extent** 3= **Moderate extent** and 2= **Less extent** and 1= **No extent at all**.

	Very great extent	Great extent	Moderate extent	Less extent	No extent at all.
Has your enterprise identified the key success factors in the energy industry in Kenya?					
Does your firm have good customer relation strategies, measures to evaluate financial strength, vertical integration strategies, good cost structure and / evaluation of product capability?					
Has adequate funds been are allocated to the sustainable energy and its implementation in your enterprise?					
Are there specific officers or a department involved in addressing energy issues in your firm?					
Does your enterprise have regularly schedule training for various key personnel in the organization?					
Do you regularly produce regular financial and non-financial reports?					
Is there internal process to report on social and environmental issues to senior management?					

12. What are your recommendations on how energy enterprises can be supported to increase their productivity and growth?

Thank you for your time

Appendix iii: Interview Guide.

1. What are some of the strategies being used by energy entrepreneurs in this area to run their businesses?

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2. What successes have these enterprises achieved?

3. How can they improve on the strategies they are using?

4. Which are the key success factors in this industry that you know?

5. How are the success factors assisting the entrepreneurs to gain successes in businesses?

Appendix iv: SMES in energy industry in Kisumu.

1. Practical Action is an International NGO supporting organizations involved in renewable energy projects around Kisumu.

2. Solar cooker International - Is a registered NGO that promotes the use of solar cook kits as a source of cleaner energy around Kisumu.

3. KEYO Enterprise - a registered enterprise involved in the production of Improved Cook Stoves around Kisumu.

4. Lighting Africa Programme - is a registered organization promoting the use of solar in the provision of lighting services around Kisumu area.

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5. Chloride Exide - is a registered company trading on various energy products. They provide various solar products - batteries, solar products, solar systems etc.

6. Kibuye Jua kali Association - is an association operating around Kibuye market in Kisumu and supporting the production and fabrication of Improved Cook Stoves.

7. Kenya bureau of Standards is a government of Kenya department that ensures the use of standards in the production of various products in the country.

8. Ministry of Energy Official - based in Kisumu.