The influence of Knowledge Sharing On Sustainability of Sugar Companies in Kenya

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Abstract: Sugar companies in Kenya like many other firms in the world have used Knowledge Management Practices (KMP's) for almost six decades since 1959, to transform knowledge to enhance their performance and sustainability but have realized dismaying results as their performance consistently decline with the companies sinking under heavy debt burden. As most companies downsize on their workforce others get shortlisted for privatization for being on the verge of collapse at a time when domestic demand for sugar remains high, un matched with low production causing rising sugar imports from 4000 tonnes in 1984 to 249,336 tonnes in 2001. Studies have been conducted on KMPs' with focus to corporate performance but few have fully considered the influence of knowledge sharing on organizational sustainability with particular attention to sugar companies. This study aimed at testing the null hypothesis that Knowledge sharing has negative influence on sustainability of sugar companies in Kenya. A sample population of 250 respondents from all the five operational state owned sugar companies’ managerial staff were studied using Census. The outcome of this study is expected to cause a paradigm in improving management, performance and sustainability of sugar companies and adds stock of invaluable literature materials for reference by future scholars. The study reveals that Knowledge sharing is capable of influencing sustainability of sugar companies in Kenya but the practice has been hampered by staff fears of loosing superiority and power. Based on the findings, the study recommends that government should create a culture of knowledge sharing by encouraging inter and extra company benchmarking. And the companies to implement knowledge sharing strategies such as recognizing experience through group based promotion systems.

Key words: Knowledge Management Practices, Sustainability

1.0: INTRODUCTION

1.1: Introduction
Effective Knowledge Management Practices (KMP) such as knowledge creation, sharing, acquisition and application are fundamental to organizations’ performance and sustainability. According to PPI,2008 America and the rest of the world changed dramatically by the end of the 20th century by succumbing to the demands of knowledge era and that with the dawn of industrialisation their growth depended on the new knowledge economy- the level of knowledge sharing.

It is one major factor in addition to ecological (environmental) factors (Wagner, 2005) and organizations’ culture that influence competitive advantage of a firm and thus their sustainability.

In Mesopotamia, Egypt, India and China KMPs’ (knowledge acquisition, sharing and utilization) enabled people to improve their ecosystems, adapted to it and diminished its impact on their civilization (Jean, 2010). Underperformance of Kenya sugar companies that has shattered the country’s dream for sustainability could however be remedied by companies’ embracing appropriate Knowledge management practices (sharing) to rekindle the country’s diminishing hopes for improving sugar productivity, the company’s growth and sustainability.

Sugar Companies in Kenya: Historical perspective

The development of sugar companies in Kenya resulted from the introduction of industrial sugar in the country by Asians in 1902 as an attempt to empower Kenyans to cultivate a crop that was hitherto white settlers’ and Asians’ dominated activity for both domestic and export (Migot-Addhola, (1984); Odada, (1986). Mumias was the first sugar company to be set up in Kisumu in 1922 followed by Ramisi (presently referred to as Kwale
International Sugar Company limited (KISCOL) in Coastal province in 1927 (Wanyande, 2001). Other state owned companies such as Muhoroni in 1966, Chemelil in 1968, Mumias in 1973, Nzoia in 1978 and South Nyanza (SONY) in 1979 were also established through Sessional Paper no. 10 of 1965 for purposes of accelerating economic development, redressing regional imbalance, creating job opportunities, promoting indigenous entrepreneurship (growth of subsidiary industries) and promoting foreign investment (Odek et al., 2003). Later more privately owned sugar companies such as West Kenya (Kabras) in 1981, Butali sugar company in 2004, Soin in Kericho in 2006, Transmara in 2007, Sukari industries Ltd in 2009 and Kibos Allied Industries came in stream.

Pursuant to the above policy goals, the development of sugar industry became a political issue and hence sugar became a political commodity (Odek et al., 2003). As the Parliament resolved in 1965 to provide financial and technical support to the sugar industry to facilitate governments’ realization of objectives, Sugar was viewed further both as a strategic and a political commodity.

The companies spread countrywide across western Kenya, Nyanza, Rift Valley and Coastal region in areas that share common favourable characteristics of lying on altitude 1600m above the sea level, hot climate with temperature range of between 21°C - 27°C with reliable rainfall pattern of at least 1270 mm per a year and rich geological landscape of deep well drained alkaline soil with Ph of 4.8 – 8.5 that supports cane farming.

The government and other key players such as Kenya Sugar Board (KSB), Sugar Development Authority (SDA) and consulting agencies also supported sugar industry established through Parastatal Act of parliament of 1966 with financial and technical services to enhance their performance and achieve sustainable growth.

In 2003, the government also set up a task force on sugar industry Crisis 1 whose recommendations led to further financial support for upgrading of industries. With the implementation of the structural reform of the taskforce and involvement of other key players in the industry such as KSB, SDA the government envisaged a rapid take-off of the companies to mark the beginning of growth of subsidiary industries in Kenya, increase job creation, sustain the local demand for sugar and meet the country’s quota allocation of export.

However, the sugar companies continue to perform below public expectation, the reason they have often been brought under sharp focus of discussion in Kenya Parliament (Wanyande, 2010). The country’s situation worsened as local demands continue to outstrip production causing sugar import figures to rise from 4000 tonnes in 1984 to 249,336 tonnes in 2001, from COMESA region and other sugar producing countries such as Brazil, UK and Mexico (KSB, 2007).

The above challenges led to decline in company’s growth and shuttered the Kenya’s dream of achieving sustainability in the sugar industry as some firms such as Miwani and Muhoroni went into receivership.

1.2: Statement of the Problem

Knowledge is considered the heart of global economy (Carbaugh, 2007) and efficient Knowledge Management Practices (KMP) by firms’ are significant for their sustainability in the world (Acier, 2006). For over six decades since its introduction in management in 1959 (Drucker, 1959; Kellogg,1986) Sugar companies have shared knowledge resources in individuals and group to enhance their performance and sustainability, but have realized dismaying results.

The companies have continued to perform poorly with Muhoroni being put under partial receivership in 2010 and Miwani in full receivership. The rest of the companies Nzoia, Chemelil and Sony continues to perform poorly, often brought under sharp focus of discussion in Kenya Parliament (Wanyande, 2010) and were shortlisted for privatisation.

The country’s situation worsens with 200,000 metric tonnes deficit persisting as local demands continue to outstrip production causing sugar import figures to rise from 4000 tonnes in 1984 to 249,336 tonnes in 2001 from COMESA region and non-COMESA sugar producing countries such as Brazil, UK, Mauritius and Mexico (Odek, 2003; KSB, 2007).

To date, the companies have neither generated adequate buffer for both its home consumption and export nor embarked on continued growth strategies but instead are downsizing on their workforce, in debt burdens and ailed by financial constraints (KSB, 2005; KSB, 2010).

The country continues to witness underperformance in sugar production with a remarkable loss of foreign exchange on increased sugar imports, loss of employment to workers and reduction of industrialization initiatives that may
leverage growth and sustainability of sugar industry.

A country’s hopes hang in disequilibrium as its sugar companies’ poor performance diminishes its dreams for possible growth and sustainability. This can be attributed to inadequate knowledge sharing amongst the key stakeholders.

While studies conducted in Italy, Pakistan and Malaysia amongst multinational and pharmaceutical companies indicate that KMPs’ had relationship with improved performance (Rizwan & Mohamud, 2012), others done in Norway by Dingsoryr (2002) also reveal that KMPs’ is capable of influencing performance and growth. The question of sustainability thus remains unanswered as these studies did not however reveal that KMPs’ (sharing) could also lead to organizational sustainability.

In particular, these studies were on multinational and pharmaceutical corporations and little research seem to have been done in sugar companies in Kenya focussing on the relationship between Knowledge sharing and organizational sustainability.

It is on the basis of the forgoing claims that this study is purposed to explore the influence of Knowledge sharing on Sustainability of Sugar companies in Kenya using Census.

1.3: Specific Objective of the study
To establish relationship between Knowledge sharing and sustainability of sugar companies in Kenya.

1.3.1: Research Hypothesis
This study partly positions itself in epistemological philosophy which provides for trial and error based on possibility of null results in research. Suppe, (1997) suggests that all knowledge claims in sciences are tentative subject to revisions on the basis of new empirical evidence. The following null hypothesis was developed and tested;

H0: Knowledge sharing has negative correlation to sustainability of sugar companies in Kenya.

1.5: Significance of the Study.
The County governments may embrace suggestions by the study and allocate funds to develop human capital resources in the sugar companies to achieve the goals that led to their initiation in 1966 and the economy’s sustained growth in sugar production.

The report of this study is expected to increase stock of invaluable literature for reference by scholars who will endeavour to research in related area. Finally, it is also envisaged that study will equip Management of sugar companies with supportive knowledge management based practices and learning cultures that may be adopted besides tangible capital resources to foster partnership for enhanced performance, growth and sustainability.

2.0: LITERATURE REVIEW
2.1: Theoretical Review
Two theories that are associated to this study include Human capital theory and intellectual capital theory.

2.1.1: Human Capital Theory
Human capital means knowledge, skills and capability of individual employees that permits their provisions of solution to customers (Tapsell, 1998). The theory was coined by an American economist, Theodore W. Schultz in 1960. It states that an institutional growth is dependent on an aggregate knowledge and skills in its workforce.

It implies that for an institution to grow and sustain its structures, wealth and people both for now and in future, it must invest heavily in knowledge acquisition (education and training) of its human capital.

Grant (1991) also argues from resource based point of view that the source of a firm’s competitive advantage lies in its human capital and their knowledge and not how it positions itself in the market. Schultz and Grant’s perspectives are unrealistic because the firms’ aggregate knowledge assets and its position in the market are complementary and vital to its performance, economic, ecological and social sustainability.

This theory argues that knowledge is a crucial source of innovation and strategic re-newal whether it is from brainstorming or research laboratories or day dreaming at office, re-engineering new processes, improving personal skills or developing new sales lead (Bontis, 1996).

The theory of Human Capital was reviewed in the study of intellectual capital by the Economics Institute of Washington DC, that broadens its worth beyond an institution or a firm to the nations that "the economic value of the nations depends more on employees skills, knowledge and business problem aptitude than it does upon the market value of the firms commercial output" (Di Steffano and Kalbaugh, 1999). This theory also justifies
KMP (knowledge acquisition, sharing and application) as one of the main contributors to organizations’ competitive advantage which is fine but fails to authenticate its effect on firm’s sustained growth.

It did not also focus on effects of diminishing marginal utility, quality of firm’s tangible assets and the role of government policy and politics on corporate performance and organizational sustainability.

2.1.2: Intellectual Capital theory (ICT)

According to Dzinkowski, (2000) “Intellectual Capital is the stock of capital knowledge based equity which a company possesses that may be end result of Knowledge transformation process or knowledge itself that is capable of transforming into intellectual property of the firm.” Intellectual capital thus may be broken down into three areas, human capital, structural capital and customer capital. Human capital is comprised of knowhow, competence, skills and capability of human members of the firm. Structural capital is comprised of the capability that is developed to meet market requirements such as patents and trademarks, process improvements methodologies to improve effectiveness and profitability of the firm while Customer capital on the other hand includes communication between external and internal entities of the organization such as customer loyalty, good will and stakeholder’s relationships.

According to Edvison & Malome (1997), the above three variables capital components correlate to deliver value to customers making organizations to cut competitive edge and built value platform that makes it sustainable. The value platform may be illustrated as follows:

![Value Platform Model](image)

Value platform articulates that the intersection of the three capitals creates value that is fundamental to corporate sustainability. From the forgoing theory, it’s worth noting that the benefits of investing in KM practices are intuitive and should be authentic to proactive managers that are attempting to compete in the 21st century and beyond since it brings benefits to individuals, organizations and Community of practice as follows:-

For individual Employees, KMP helps workers in enhancing their job performance, saving of time through better decision making and problem solving, enable individual workers build a sense of community bond within the organization.

Ovaska et al., (2009) asserts that for Community of Practice, the sharing of companies’ knowledge assets serves as a foundation for collaboration which is significant in developing professional skills, promoting peer to peer mentoring through knowledge strategy, facilitates effective networking, collaboration and development of a corporate culture. According to KPMG, (2000) for Organizations, embracing appropriate KMPs’ helps to drive strategies that enhance problem solving, diffuses desirable corporate culture, best practices and improves knowledge that is embedded in product or services.

KMPs thus helps organizations in improving customer service, and organizations ability to innovate, improve coordination of efforts and commercialisation of new products by facilitating cross fertilization of ideas and increasing opportunities for innovation. Consequently, KMP also improves organizations’ responses to market challenges (KPMG, 2000; Taminian, Smit & Delanse, 2009) and enables them to remain competitive by building their memory.

In addition, Lu, Wang, Tung & Lin, (2010) asserted that firms facing stiff competition within their remote environments should increase their
value creation processes through intellectual capital because it is an important factor for sustaining competitive advantage in the market. The theory contends with the fact that in a knowledge-based economy, continuous knowledge creation is prerequisite to firms’ competitiveness.

The relevance of the Intellectual Capital Theory (ICT) lies in its recognition to sum of firms’ knowledge which is a key factor in production. However, this resource must be kept nurtured through prudent practices such as acquisition and sharing like training, seminars, and workshops so that they are kept relevant and oriented to firm’s culture and goals that deliver sustainable growth. In the same way, their employees’ social mobility must be controlled by firms’ offer of job security and good compensation practices.

The theory also considers customer capital which is an important element of performance and sustainability. Capturing customer capital also involves reaching the community through corporate social responsibility which also contributes to social sustainability. According to Edvison and Malome (1997), if a firm doesn’t position itself to the market, it will lack competitiveness, compromise its survivability and risk obsolescence. The theory therefore recommends the development of firms’ skills, provision of incentive and retention for mutual sustainable benefit rather than hiring of workforce for fear that they would exit to other rivals with firms’ knowledge for competitive rewards.

It’s also said that a firm must plough back its profits to diversify its programs and retain its workforce by providing competitive compensations and as well address the needs of its social environment through corporate social responsibility and through ecosystem integrity practices in order to achieve universal sustainability.

2.1.3: Conceptual framework

Fig.2.2 is an illustration of a conceptual framework that shows the relationship between Knowledge sharing as independent variable and Organization Sustainability on the other hand as dependent variable.

![Figure 2.2: Conceptual Framework](image)

The framework outlines that effective KMPs’ (sharing) results in Economic, Social and Ecological sustainability.
2.3: Review of empirical Studies on KMPs’ and Organizational Sustainability.

The 21st century is the era of knowledge economy in which nations have to adopt knowledge management practices (KMPs’) to enhance their corporate growth and performance (Gold et al., 2001). Effective KMPs’ such as knowledge sharing are fundamental to organizations’ performance and sustainability.

In their study of KMP from the perspectives of organizational capability, Gold et al., found that KMPs’ are vital drivers to organizational effectiveness, while Lee and Choi, (2000) in their study that examined correlation between KMPs’ (sharing) and organizational creativity, concluded that sharing are significant predictors for organizational innovation which is a basis for organizational growth and performance.

In developed and developing countries such as Italy, Pakistan and Malaysia, the study, of KM conducted amongst multinational and pharmaceutical companies indicated that it had relationship with improved performance (Rizwan and Mohamud, 2012). Other isolated studies such as of; Susan & Kasim (2010) on significant role of KMP on organizational performance revealed that that the processes are important determinants of organizational performance.

Mills & Smith (2011) also in examining the effect of KM Processes (structures and acquisition )in their study also had findings which revealed direct relationship to organizational performance. Studies done in Norway by Dingsoryr (2002) also revealed that KM practices are capable of influencing performance and growth.

Knowledge management should therefore help corporate management to cut down on organization layers, increase flexibility of enterprise and contribute to sharing infrastructure ( Huosong Xia, Kuanqu, Du and Shuquin, Cui, 2003).

They also pointed out that KM may also help in reducing time wastage required to capture correct information or make decisions, reduce production costs, improve success rate, potentially reduce research and development costs and product development cycle time. In addition, they indicated that good KMP can also help the organization in identifying cultural and behavioural changes that are prerequisite to the implementation of incentives and practices that foster improved changes.

In Nigeria, IFAD (2007) pointed out that KM became one of the key deliverables for corporate actions that enhanced organizations dramatic transformations in agriculture and industry, and served as a means of alleviating poverty amongst the poor Rural Nigerians. This means that Knowledge enables man to develop flexible behaviour in understanding and adjusting to the world around him as well as transforming it to suit his needs and that it is capable of helping humans become subjects rather than objects of change (Scaruffi, 2003).

In Mesopotamia, Egypt, India and China KMP (knowledge acquisition) enabled people to improve their ecosystems, adapted to it and diminished its impact on their civilization (Jean, 2010). According to Prusack & Leissers, (2010) and Ahmed et al.,(2002) adoption of prudent KM based competencies in firms human capital should lead to companies’ efficient utilization of resources, reduction of wastages, improved competitive edge, wider market share, profitability which are elements of growth and sustainability.

Knowledge management practices (KMP) which this study focused includes knowledge sharing in addition to challenges faced by organizations in implementing KMP as intervening variables.

2.3.3: Knowledge Sharing and Organizational Sustainability

Knowledge sharing or dissemination is a process of distributing explicit and implicit knowledge possibly through socialization processes to produce innovative outcome (Nonaka & Takeuchi, 1995). This practice thus help organizations in transferring knowledge resources by identifying relevant information and disseminating it so that learning takes place.

According to Foucault (1980) and Leonard (1999) the new Knowledge based economy places great significance on knowledge diffusion and use of information as well as its creation. It is an organization Knowledge capacity in terms of skills, intelligence and expertise that give an organization its peculiarity, competitive performance and sustainability.

Knowledge sharing is key in enhancing innovation and capability of firms (Saenz et al., 2009) the reason Stein & Riddestrale (2001);Winter & Sculanski (2002) argued that Knowledge
Management is worthless if adequate processes of diffusion are not structured in place.

Teece (2001) and Schumpeter (1934) also added to the argument that in an economy where creative destruction and new combinations predominate, it is the judicious integrations of knowledge creation and effective diffusion that stimulates business performance and its economic growth.

Benchmarking on the other hand is an important way of Knowledge sharing. Swart & Kinnie, (2003) indicates that firms perform well when they share knowledge with others, form network to provide integrated quality products that enable them to gain large market share and profitability. It is the process of comparing performance of what the employees are doing in one organization with the colleagues in a competing firm.

Well disseminated knowledge by an organization creates intellectual capital base. Knowledge is sourced from many areas; explicit knowledge from socialisation (Brainstorming, e-learning, community of practice and informal meetings); internalization sources (documentations and reports, seminars and trainings and informal meetings) and externalization (Workshops, seminars and trainings and informal visits) while Tacit knowledge may be sources from externalization, socialisation and internalization, Takeuchi(1995), and He & Li, (2010).

Taminiau and De-launge (2009) also claim that the most important route to innovation is informal knowledge sharing because it has operational benefits which helps people to direct labour savings and reduce staff turnover. It also increases employees’ job satisfaction and effectiveness and promotes process benefits which help to increase Productivity.

Fowler & O’Gorman, (2005) suggest that mentoring is also a knowledge sharing mechanism and it involves providing emotional guidance, coaching and role modelling cultures friendship which in effect improves employees’ motivation, work relationship, commitment and job performance.

3.2.2: Performance Management

Performance appraisal has also emerged as an important knowledge sharing methodology, IRIS Employment Trend (2003) indicates that it focuses on empowering, motivating and rewarding employees best practices. It helps organisations to correct mismatch in performance and this gives an organization competitive and sustainable advantage.

Knowledge diffusion may also be enhanced by interaction between social capital and organization capital (Armstrong, 2006). Sharing involves orienting information to fit culture and skills which are specific to organizational requirements; for this is fundamental to improved performance and sustainability. According to Huosong Xia et al., (2003) Knowledge Management especially sharing may significantly help corporate management to cut down on organization layers, increase flexibility of enterprise and contributes to its efficiency. In addition, they pointed out that KM also helps in reducing time wastage required to capture correct information or make decisions, reduce production costs, improves success rate and potentially reduce research and development costs and product development cycle time.

Organizations’ performance and sustainability depends on its capacity to manage its human capital competencies’ (Knowledge) which is possible through varied practices such as mentoring, performance appraisal and bench marking which makes knowledge sharing feasible.

According to Davenport & Prusak, (2000) where a firm has efficient KMP such as adoption, sharing and application there would be competitive advantage as the firm acquire larger market by delivering competitive intelligence to make it withstand competition.

Finally, Matzler & Mueller, (2011) argue that effective knowledge sharing can facilitate organization learning and innovation since before combining new knowledge, relevant knowledge must first be acquired and then incorporated into existing knowledge base. In conclusion they assert that knowledge sharing is critical in creating a firm’s competitive advantage.

2.4.3: Sustainability

According to Bruntland Commission of 1987, WCED,(1987) World Bank, (2005), Kuckartz & Wagner,(2010) Sustainability means “meeting the demands of the present society without compromising ability of future generations to satisfy their own needs by responding to current economic and social environmental challenges”.

The purpose of sustainability is to improve economic environment and social performance of companies (Bos Brouwers, 2010) to enhance their survivability and make them self supporting. A sustainable company is one that offers product and services that fulfil the societal needs while considering its ecological, social and economic impacts on earth’s inhabitants and without compromising the needs of its future
generations, (Azapagic & Perdan, 2000; Welford, 2000).

DELTA, (2000) further argued that sustainability is all about ensuring better quality life for every one now and for generations to come through social progress while meeting people’s needs, protecting environment, ensuring prudent use of natural resources and maintaining stable economic growth and empowerment.

Roy, (2003) argued that the essence of sustainable development is determined by the people and is attributed to changes of people’s attitudes and habits. According to Hennicke, (2000) organisational sustainability could be measured using economic, social and ecological parameters the achievement which anchors on firms prudent KMP and a country’s political good will.

The bottom line of sustainable development is to develop capacity to help the poor to maintain and improve their natural capital (natural resources) while developing their human capital (human resources) and manmade capital (investment infrastructure, social capital, cultural bases and political systems) that makes society function, (Cellisri & Jean-Louis, 2004).

Precisely sustainability issues are focussed on making organizations self reliant in their social, economic and ecological growth and developments.

The study on KM had been conducted in developed countries such as Italy, and Pakistan by Rizwan and Mohamud, (2012) and in Malaysia amongst multinationals Pharmaceutical companies and Microsoft & Hewlett Packard where it established that there was relationship between KM and performance.

Similar study had also been done in Norway by Dingsoryr (2002) in medium sized companies where it established that an intranet based KM practices for knowledge cartography and knowledge repository for larger software was significant in influencing performance and growth.

Even though Rizwan and Mohamud (2012) studies confirm that there is significant association between KMPs’ with performance, it was based on Multinational firms while this study would be based on national context with different operational and structural perspectives.

Doo et al., (2005) also indicated that many firms lack understanding of how to develop KMP and sharing strategies that are capable of driving the firms to innovation and sustainability, a challenge that this study will investigate.

These previous studies linked KMPs’ influence to firm’s economic sustainability but were blatantly silent on whether the same KMPs’ could also influence firm’s ecological and social sustainability. It implies however that lack of empirical verification of a strong link between KMPs’ and organizational performance and sustainability in diversity exist which thus fuel the urgency for this study.

Although the previous researchers who obtained empirical support used case studies (Zaim, 2007) and survey indicated positive relationship, their findings could not be generalised to a wider population. Because this study is purposed to be used for general application, census design has been considered appropriate. Furthermore, no previous studies had captured government policies and its moderating effect on KMP and organizational sustainability. Elsewhere in the world, researchers had centred their interest on relationship between KMPs’ and the firms’ economic sustainability and very little interest had been put in studies linking KMPs’ to corporate sustainability in its diverse perspectives. This thesis on influence of Knowledge Management practices on Sustainability of sugar companies in Kenya fills these gaps.

3.0: METHODOLOGY

3.1: Research Design

Design is a scheme or plan that is used to conduct the study to generate answers to research questions, (Noum, 2007; Orodo 2003). It is a blue print of collecting, measuring and analyzing data. It is an actual configuration the research process is based on that links all aspects of research process to provide meaning (Kothari, 2008 and Laurel, 2011). The relevance of research design is to provide direction of what methodology is to be used to collect and analyze data to answer research questions.

This study adopted Census design to collect data from all the state owned Sugar companies in Kenya. Census is a principal means of collecting basic population and housing statistics required for social and economic development, policy interventions, program implementations and evaluation (United Nations,2010; United Nations, 2007; ABS, 2006).

Its use made the study exempt of coverage errors resulting from omissions or duplication and content errors that may also result from incorrectly structured questionnaires or poor sequencing of the same.
According to Machenzie and Knippe (2006) census design is rooted within positivism philosophy that allows for application of qualitative methods, empirical rational technique and is associated with the testing of hypotheses. However, purposive sampling was also applied to identify targeted respondent managers at the company’s departmental levels.

3.2: Target Population & Sample of the study

This study focused on population of 1200 managerial employees from all the state owned sugar companies in Kenya. Target population for the study is what Sekaran & Bougie, (2010) defined as the entire group of people, events or things with common observable characteristic that researcher is interested in and wishes to investigate, through a sample of 300 respondents. The sample was arrived at based on Yamane (1967) formulae at 95 % level of confidence with 5.0 margin of error as given by;

\[
\text{n} = \frac{\text{N}}{1 + \text{N} (e)^2}
\]

Where: 
- \(N\) - population sample
- \(n\) - Sample size
- \(e\) - Level of precision (confidence)

\[
= \frac{1200}{1 - 1200 (0.05)^2}
\]

\[
= 300
\]

This Sample translated to 25% of the population, which was considered representative and adequate to minimize the likely error in generalising findings of the study since it is over 10% (Saunders et al., 2005).

3.3: Sampling Technique

The study adopted random sampling approach and in particular employed purposive random sampling technique which made it focus on respondents with reliable experience especially at the company’s departmental level.

According to Mugenda and Mugenda, (2003) and Kumar, (2011) sampling is a process of selecting a few respondents (sample) from a bigger group (sampling population) to become the basis of estimating or predicting the prevalence of unknown piece of information situation or outcome regarding a larger population in the study.

Purposive sampling helps to focus the researcher’s attention on the intended respondents and enables him/ her appreciate the economy of time and often leads to collection of accurate information, (Onen and Osoo, 2005).

3.3: Data Collection Instruments.

This study developed and used structured (Open-ended) and semi-structured questionnaire (Closed-ended) as well as Interview Schedule which were self-administered to help in data gathering. Significantly, the structured questionnaires restricted respondents to hypothetical views of the researcher and were styled using a 5- likert scale. The study used both primary and secondary techniques to collect data. Beside open ended questionnaires, the researcher used Semi structured (closed ended) questionnaires because of their suitability in encouraging clientele responses (Pettit and Frances, 2000). Open and closed ended questionnaires were constructed and administered with the assistance of “collectors” to a sample of respondents who aided in soliciting of primary data, (Orodho, 2003).

Significantly the choice of questionnaires was based on the fact that they required little time, low cost of training for research assistants to administer and less cost of administration generally (Vinten, 1995). They also facilitated data analysis, probed interviewee’s independent views, gave respondents freedom, spontaneity of answers and eased the testing of hypotheses (Vinten, 1995).

Interview schedule comprising of semi structured interview questions was also used. According to Robison (2002) such interview questions are predetermined but whose wording could be changed, explanation given for and additional question added or omitted as long as satisfactory responses are achieved.

Easterby- smith et al., (2002) on the other hand posited that interview schedule / guide makes it easy to comprehend constructs used by interviewees as a basis for their opinion and beliefs.
on issues and at the same time helped the researcher to check against ambiguity and inadequacy in the main instrument (Igwe, 2005)

3.3.1: Reliability

Reliability has been defined as the degree of consistency that the instrument or procedure demonstrates (Best And Kahn, 1993). According to Kerlinger (1986), reliability is the absence of errors of measurement or the accuracy of measuring instrument. It is also said to be the consistency of a research instrument in producing the expected results when applied repeatedly under the same circumstances. To ensure reliability, the instruments were pilot tested during pre-visits and this permitted necessary modifications on the instruments. For this study, the developed instrument (questionnaire) were given to two respondents, pre-tested and re-tested on two managerial staff in each of the companies (not the ones that were to be finally included in the main study). The test-retest which was computed gave Cronbach alpha coefficient value of 0.78 which according to Orodho (2008) and Field, (2009), that was high enough to establish the extent to which the contents of the questionnaire were reliable in eliciting the same responses every time the instrument was administered. Since for Orodho & Field, the alpha coefficient value of between 0.70 - 0.80 should be considered high enough to authenticate the instruments’ reliability and suitability for the study.

3.3.2: Validity

This is the extent to which the instruments are expected to measure the content, probe issues and produce results they are expected to generate. To justify validity of the instruments the researcher re-examined the questionnaires and removed ambiguities so that questions were realigned to the objectives of the study. This study also applied Content Validity Index (CVI) formula to measure and determine validity of the instruments. In this, the number of questions rated as relevant was divided by the total number of items in the questionnaire and this gave a CVI of 0.78.

\[
CVI = \frac{NiV}{TiQ} \geq 0.7
\]

Where:

- \( NiV \) - Number of questions rated as relevant
- \( TiQ \) - Total number of the items in the questionnaire

Using the above formula since the CVI was 0.78 lies between 0.7 - 0.8 which are the acceptable limits, then the instruments were then considered valid.

3.4: Data Collection Procedure

This was the outline or plan in which the intended data were to be collected. The researcher ensured that administration of research instruments complied with ethical principles requiring keeping the identity of respondents in anonymity and putting to use gathered data to its predetermined academic purpose (Gatara, 2010; Hoyle et al., 2002).

Guided by the same principles, the researcher ensured that he received informed consent of the respondents after providing them with the pertinent information about the study and in particular, its purpose. And that, respondents participated freely in the study without coercion and were made free from any physical and mental injuries as their rights and dignities were respected (Hennik et al., 2001).

3.5: Data Presentation and Analysis

Data was presented using basic cartographic techniques such as tables and bar graphs. Descriptive statistics such as percentages, mean and standard deviation were also adopted in the presentation to display the results of theoretical dimensions as measured in the questionnaires and these simplified presentation and eased the analysis.

This study used both quantitative and qualitative approaches especially inferential and descriptive statistics in analysing data. It embraced philosophical orientation that involved the identification of linkages between independent and the dependent variables which accordingly entailed interpretation of data and formulation of explanations of facts using inductive reasoning (Cooper and Schindler, 2003: Kothari, 2008).

This thesis partly therefore followed a coherence theory that advocates for the use of correlation analysis to bring out justifications of findings in a more pragmatic sense, validating the virtue that truth is relative and contextual and that the best truth is the one that predominates understandings of existence of a situation in the long run or has withstood test of times. Pearson’s Coefficient correlation technique was used in the analysis due to its ability to test the hypotheses on the nature of influence of independent variable on dependent variable (Cooper and Schindler, 2003: Kothari, 2008).
4.0: RESULTS AND DISCUSSION

4.1: Background Information

Questionnaire return rate (QRR) was 83% was registered. This was considered high enough to guarantee reliability since it was well above 50% (Baibbe, 2002), with only 17% non questionnaire return rate (NQRR).

4.1.1: Demographic information

Table 4.1: Respondents’ demographic information

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>230</td>
<td>92%</td>
</tr>
<tr>
<td>Females</td>
<td>20</td>
<td>8%</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100%</td>
</tr>
</tbody>
</table>

The above table indicate that 250 respondents involved in the study comprised of 230 (62%) males and 15 (38%) females. The data indicates poor gender representation in the appointments since it doesn’t reflect affirmative action rule which require 30% female representation. It implies that the companies may not enjoy any favour based on affirmative action.

Table 4.2: Age of respondents and work experience in the company

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Range</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>23-34</td>
<td>75</td>
<td>30</td>
<td>0-5 yrs</td>
<td>63</td>
</tr>
<tr>
<td>Between</td>
<td>35-45</td>
<td>113</td>
<td>45</td>
<td>6-11 yrs</td>
<td>75</td>
</tr>
<tr>
<td>Between</td>
<td>46-56</td>
<td>57</td>
<td>36</td>
<td>12-17 yrs</td>
<td>105</td>
</tr>
<tr>
<td>Above</td>
<td>65 yrs</td>
<td>5</td>
<td>2</td>
<td>17 yrs</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100</td>
<td>250</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Work Experience

The above table indicates that the companies is comprised of 105 (42%) experienced managerial staff capable of effectively implementing improvements and quality strategies for its sustainability. It also indicates that only 5 (3%) of its workforce have served for over 17 years and may have been retained due to their knowledge that enable them to provide the requisite technical orientation and induction to newly recruited staff constituting 63 (31%) of the managerial staff.

Age

The table shows that the companies have well balanced managerial staff with 113 (45%) of the managerial staff falling between 35-45 years who are dynamic workforce in their active working life while 90 (36%) of the managers falls between the ages of 46-56 years considered to be more experienced with only 5 (2%) of the managers above 65 years set to retire in the five companies. These scenarios reflect effective human resource planning.

4.2: The influence of Knowledge sharing on sustainability of sugar companies in Kenya.

To establish the influence of knowledge sharing on sustainability of sugar companies in Kenya, various knowledge sharing benchmarks were correlated against sustainability parameters to establish the influence of knowledge sharing on sustainability of sugar companies in Kenya. The computation of responses according to correlation table 4.6 was recorded below.
According to a correlation analysis above the company shares its endowed knowledge through its public open day education, benchmarking programs and performance appraisal of its staff. The study reveal that the companies public day education fora and benchmarking programs have a stronger positive correlation $r=0.874$ and a p-value of 0.001 which is considered to be statistically significant at 95% confidence interval. This implies that through the company’s public open education days it improves its public image with consequent expansion in product market.

### Table 4.6: Knowledge Sharing and Organizational Sustainability

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Pearson Correlation</th>
<th>Growth</th>
<th>Innovation</th>
<th>Social mobility (turnover)</th>
<th>Product diversification</th>
<th>Environmental control</th>
<th>Social responsibility</th>
<th>Institutional development</th>
</tr>
</thead>
<tbody>
<tr>
<td>The companies open day’s education has made it good public relations with consequent expansion of product market</td>
<td>1</td>
<td>.624</td>
<td>.541</td>
<td>-.054</td>
<td>.571</td>
<td>.514</td>
<td>.013</td>
<td>.874**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.054</td>
<td>.106</td>
<td>.883</td>
<td>.085</td>
<td>.128</td>
<td>.972</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Benchmarking of operative employees with foreign firms have stocked our staff with experiential knowledge resulting into companies growth</td>
<td>.624</td>
<td>1</td>
<td>.294</td>
<td>-.041</td>
<td>.144</td>
<td>.917**</td>
<td>.607</td>
<td>.553</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.054</td>
<td>.410</td>
<td>.911</td>
<td>.692</td>
<td>.000</td>
<td>.063</td>
<td>.098</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.106</td>
<td>.250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>The company’s performance (appraisals) management systems have resulted into great deal of innovation</td>
<td>.541</td>
<td>.294</td>
<td>1</td>
<td>.670**</td>
<td>.498</td>
<td>.294</td>
<td>.192</td>
<td>.402</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.106</td>
<td>.410</td>
<td>.034</td>
<td>.143</td>
<td>.410</td>
<td>.595</td>
<td>.250</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.514</td>
<td>.917**</td>
<td>.294</td>
<td>.041</td>
<td>1</td>
<td>.607</td>
<td>.553</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Knowledge sharing through induction of new staff effectively reduces their social mobility (turnover)</td>
<td>-.054</td>
<td>-.041</td>
<td>.670**</td>
<td>1</td>
<td>.141</td>
<td>.041</td>
<td>.237</td>
<td>-.175</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.883</td>
<td>.911</td>
<td>.034</td>
<td>.697</td>
<td>.911</td>
<td>.510</td>
<td>.628</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.571</td>
<td>.144</td>
<td>.498</td>
<td>.141</td>
<td>1</td>
<td>.000</td>
<td>-.168</td>
<td>.620</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Knowledge sharing has led to product diversification thus growth of this company</td>
<td>.514</td>
<td>.917**</td>
<td>.294</td>
<td>.041</td>
<td>0.000</td>
<td>.607</td>
<td>.553</td>
<td>.956</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.128</td>
<td>.000</td>
<td>.410</td>
<td>.911</td>
<td>1</td>
<td>.063</td>
<td>.098</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
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<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Sharing knowledge with foreign based firms, our company has managed to enhance environmental control</td>
<td>.013</td>
<td>.607</td>
<td>.192</td>
<td>.237</td>
<td>-.168</td>
<td>.607</td>
<td>1</td>
<td>-.146</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.972</td>
<td>.063</td>
<td>.595</td>
<td>.510</td>
<td>.644</td>
<td>.063</td>
<td>.688</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Benchmarking with foreign firms has brought cultural re-orientation that has led to institutional development of this company</td>
<td>.874**</td>
<td>.553</td>
<td>.402</td>
<td>-.175</td>
<td>.620</td>
<td>.553</td>
<td>-.146</td>
<td>1</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.001</td>
<td>.098</td>
<td>.250</td>
<td>.628</td>
<td>.056</td>
<td>.098</td>
<td>.688</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).
Furthermore, benchmarking of company’s staff with foreign firms has strong positive correlation of $r=0.917$ with 0.00 statistically significant effect. This suggests that sharing knowledge with foreign based firms not only brings cultural re-orientation that leads to institutional growth and development but also enhances environmental control.

The findings also reveal that performance appraisal as well as new staff induction leads to innovation and reduced staff mobility, hence knowledge sharing has positive correlation of $r=0.670$ coefficient of determination with 0.34 statistical significant intervals at 95%. It is on the account that the study fails to accept the null hypothesis that knowledge sharing has negative correlation to sustainability of sugar companies in Kenya. This finding concurs with Saenz et al., (2009) who indicated that knowledge sharing is key in enhancing innovation and capability of firms. The findings suggest that increased knowledge sharing through performance appraisal and efficient staff induction not only leads to innovation but also reduces staff turnover in the sugar companies. These finding also supports Taminiau De-lounge, (2009)who indicated that the route to innovation is informal knowledge sharing since its through way the operational costs and staff turnover are reduced to help organization in increase employees’ satisfaction and the firms’ productivity. Bench marking as a knowledge sharing methodology registers strong correlation value implying that it’s key in influencing firms’ sustainability. This supports Swart & Kennie (2003) who purported that a firm is able to perform well when they share knowledge with others and form network that makes them provide integrated quality products thus gaining large market share and profitability; which are fundamental drivers for organizational sustainability.

5.0: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1: Summary
This study involved 250 managerial staff from all the state owned sugar companies on the influence of Knowledge management practices on sustainability of sugar companies in Kenya. The effect of Knowledge management practices (KMPs') in particular relationship between Knowledge sharing and sustainability of sugar companies was examined. This study found out that managerial staff in all the sugar companies in Kenya have good academic and experiential qualifications despite poor gender representations.

The study used Pearson Correlation Coefficient and percentages in analysing varied data. The study explored KMPs and in particular looked at Knowledge Sharing and critically examined its influence on sustainability of sugar companies in Kenya. The study used null hypotheses to test the hypothesis on the influence of Knowledge sharing and in the analysis, 2-tailed test used gave sig. $\leq 0.01$ to $\leq 0.05$ which were used to accept or reject (failing to accept) null hypotheses. In this objective, Knowledge sharing measurements computed in a correlation analysis table revealed that knowledge sharing milestones/ methodologies indicates a positive statistical correlation(r) at 95% confidence interval. Implying that increased Knowledge sharing activities influences companies’ performance, growth and sustainability on which premise the study failed to accept null hypotheses that Knowledge Sharing has negative correlation to sustainability of sugar companies in Kenya.

5.3: Conclusion
This study found out that knowledge sharing practices have relationship to sustainability of sugar companies in Kenya but the practices have been ineffective due to employees’ fears of loss of superiority and power, this study thus concludes that the sugar companies should embrace strategic KMPs’ that encourage knowledge sharing culture through experiential group based promotion systems.

5.4: Recommendations
5.4.1: To the Government of Kenya

The government should create culture of knowledge sharing amongst the sugar companies by encouraging intercompany benchmarking and with other companies abroad.
5.4.2: To the Managements of Sugar Companies in Kenya.

Sugar companies to implement strategic KMPs that permit knowledge sharing such as encouraging group discovery and innovation by building of collaborative culture.

The companies to increase the frequency of managerial trainings through workshops, seminars and benchmarking locally and abroad.

5.4.3: For further research.

Since the findings of this study have revealed there has not been effective KMPs (Knowledge sharing) due to intervening effects of government policies and implementation challenges, this study finds it prudent to recommend further studies on, ‘Effects of KMPs’ implementation challenges for sustainability of sugar companies in Kenya’. And because the scope of this study could not have permitted its exhaustiveness as was expected the Strategic KMP measures that can influence sustainability of sugar companies in Kenya is also hereby recommended for further research. These are summarised as under:-

- Repositioning Sugar companies towards vision 2030 by establishing challenges facing them in Knowledge Management Practices for Sustainability in Kenya.

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