

**INFLUENCE OF STRATEGIC KNOWLEDGE MANAGEMENT PRACTICES
ON ORGANIZATIONAL COMPETITIVENESS OF LARGE SCALE
MANUFACTURING FIRMS IN NAKURU COUNTY, KENYA**

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DECLARATION

This project is my original work and has not been presented for a degree in any other University.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

This work is dedicated to my late mother Florence Nkararo, for inculcating in me a reading culture, my son John Wachira and daughter Florence Wanjiru; - you are the reason I work hard, to my siblings you believed in me and to my friend Stephen Chege Ndegwa (Kawangari) for your love and trust, your support will always be treasured.

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OPERATIONAL TERMS

Knowledge: Knowledge is a strategic intangible key resource that can be harnessed for the good of the organization.

Knowledge Application: It is an activity where knowledge is translated into something useful i.e. new product development.

Knowledge Generation: It is an activity that involves acquiring or sourcing new knowledge in an organization.

Large Scale Manufacturing Firm: These are all firms that have been registered by the Kenya association of manufacturers within the Nakuru County and not based on capital base or number of employees as long as they had applied to be members in that body.

Organizational competitiveness: Organizational competitiveness is the aspect where the firm understands its environment and comes up with structures and procedures that will ensure it remains relevant in the turbulent market

Organizational innovation: Organizational Innovation involves processes of improving the whole process of serving the clients of an organization better through methods that new product development, process improvement, discovery of new markets and improvement in the organization structure

Knowledge Management: Knowledge management as used in this study includes the activities of acquiring, organizing, sharing and applying knowledge in an organization.

Knowledge Management Policy: Knowledge management policy is a document that guides the management on how its key knowledge resources will be organized and managed.

Knowledge Sharing: It is an activity that revolves around transferring knowledge to other members of the organization ensures exposure on the available knowledge.

LIST OF ABBREVIATIONS AND ACRONYMS

HRM:	Human Resource Management
IT:	Information Technology
KAM:	Kenya Association of Manufacturers
KMS:	Knowledge Management Strategies
KM:	Knowledge Management
R&D:	Research and Development
SMEs:	Small and Micro Enterprises

ABSTRACT

This study sought to examine the influence of strategic knowledge management practices on organizational competitiveness in large scale manufacturing firms in Nakuru County Kenya. The main focus of the study was to examine the influence of knowledge generation, the influence of knowledge transfer, the influence of knowledge management policy, influence of organizational innovation on organizational competitiveness in large scale manufacturing firms in Nakuru, Kenya. The study adopted the Resource Based view theory, Organizational Learning Theory, Competency based view theory and Unified model of dynamic knowledge creation. The study employed a descriptive research design with a quantitative approach. The target population for this study was 75 staff from the 15 large scale manufacturing firms registered by the Kenya Association of Manufacturer, licensed by county government of Nakuru and that operated in the period 2017. The study employed a purposive sampling method to select 75 staff comprising General Manager, human resource development, production and operations, marketing, research and development managers from each of the 15 large scale manufacturing firms. Primary data for this study was collected using structured questionnaires which were filled by the respondents. Collected data was analysed using both descriptive and inferential statistics with the aid of SPSS Version 22. Mean, minimum, maximum and standard deviations were used as measures of central tendencies and dispersion respectively. Multi regression analysis was used to establish the influence of strategic knowledge management practices on organizational competitiveness. Analyzed data was presented using tables with associated explanations for their clear understanding. The findings of the study showed that knowledge transfer, knowledge application and knowledge Generation and organizational innovation had a statistically significant positive influence on organizational competitiveness. However, knowledge management policy and knowledge organization did not show statistically significant influence on organizational competitiveness even though their influence was positive. The outcome of the study is expected to assist management of large scale manufacturing firms, to have an understanding on the influence of strategic knowledge management practices on organizational competitiveness, and how to adjust strategic knowledge management practices appropriately to enhance organizational innovation in manufacturing sector and to design targeted policies and programs that will actively stimulate knowledge management practices to harness continuity and competitive advantages in the firms.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The twenty-first century is undoubtedly the century of knowledge. The everyday usage of available advanced information, business and internet technologies in business activities confirm that this is not only a phrase from the literature, but the reality (Nawab, Nazir, Zahid & Fawad, 2015). Alternatively, globalization has brought about many modern trends, and companies have the task to adopt them as quickly, easily and painlessly as they can in order to survive in the competitive market (Chen & Huang, 2009). It has been observed that the vital strategic resource today is the knowledge of individual on organization; hence by realizing the major value of intellectual resources, companies have begun to manage rationally and improve them.

The importance of knowledge management as a concept of organizational knowledge, aimed at effective application of knowledge to make quality decisions (Huang & Li, 2009). Intellectual resources, and the first place knowledge, contribute to the company as a revenue contribution of products and services, preserve and increase the reputation, through the reduction of operating costs, create barriers to entry of potential competitors, by increasing customer loyalty and create innovation (Hau, Kim, Lee & Kim, 2013). The success of organizations largely depends on continual investment in learning and acquiring new knowledge that creates new businesses and improve existing performances. In that processes, the balanced scorecard as a strategic managerial tool provides the enormous help.

Organizations need to capture and use knowledge to improve performance hence the future must embrace strategic knowledge management practices. Strategic KM practices means the process of acquiring, storing, understanding, sharing, implementing knowledge, and these actions are taken in the organizational learning process with regard to the culture and strategies of the organizations Kiessling, Richey, Meng and Dabic (2009). On the other hand, Bhatti and Qureshi (2007) stated that strategic KM means

efforts to explore the tacit and explicit knowledge of individuals, groups, and organizations and to convert this treasure into organizational assets so that individuals and managers can use it in various levels of decision making. KM is a systematic and integrated management strategy that develops transfers, transmits, stores, and implements knowledge so that it can improve efficiency and effectiveness of the organization's manpower (Dahiya, Gupta & Jain, 2012). The relevant theory that helps significantly towards realizing the important role of knowledge management is the knowledge-based theory. This theory supposes that knowledge management practices such as knowledge acquisition, knowledge storage, knowledge creation, knowledge sharing and knowledge implementation play a critical role in achieving high level productivity, financial and human resource performance and finally improving sustainable competitive advantage (Soderberg & Holden, 2002).

Study by Kör and Maden (2013) points out that in the light of globalization and modern business, the companies are exposed to the challenges posted by unpredictable and complex competitive environment. The globalized business environment is characterized by changed business conditions, market liberalization, high production, information and communication technology, flexible organizational structure of companies and partnership development. In such an environment, the competition among companies is sharpened in the market (Novicevic & Jelenic, 2008). The companies are forced to innovate and develop new techniques for improving the quality and functionality of products, reduce costs and, of course, the answer to the increasingly sophisticated customers' demands in order to survive in the market (Nilsen, Nordström & Ellström, 2012).

The changes in the nature of business, the shift to "knowledge economy" and the new information age brought new resources that companies use in business processes. In the era of industrialization, companies have created value by the physical transformation of tangible assets into the products. Contrary of the industrial era, in the era of IT, the value of physical Intangible resources significantly increases and Intangible assets are becoming a major source of competitive advantage (Von Krogh, Takeuchi, Kase &

González, 2013). The companies-leaders, who care about their high business performance, have realized that the market value of their property increases with greater participation of intangibles resources especially intellectual resources in relation to tangible property.

1.1.1 Strategic Knowledge Management Practices

Knowledge Management (KM) may be defined as the explicit and systematic management of vital knowledge and its associated processes of creation, organization, diffusion, use and exploitation (Prusak & Matson, 2006). Karadsheh (2009) on the other hand defined knowledge management as a structured process with activities to capture, discover, create, filter, evaluate, store, share and apply knowledge from individuals to advance business processes and meet organizations objectives and goals. According to Pillania (2005), knowledge management is defined as a systematic, organized, explicit and deliberate ongoing process of creating, disseminating, applying, renewing and updating the knowledge for achieving organizational objectives.

Knowledge management can be tactical (operational) or strategic (Zack, 2009). Tactical KM refers to the knowledge workers use in their daily work on a continuous basis (Filius, de Jong & Roelofs, 2000) to execute strategy. On the other hand, strategic KM relates to the processes and infrastructures firms employ to acquire, create and share knowledge for formulating strategy and making strategic decisions (Zack, 2009) thus linking KM strategy to business strategy (Filius, de Jong & Roelofs, 2000). Strategic knowledge management relates to the procedure and substructure firms employ to obtain, create and share knowledge for developing strategy and making strategic decisions (Zack, 2009), thus linking knowledge management strategy to business strategy. A firm's knowledge strategy describes the approach an organization has on its knowledge resources and abilities to the rational necessity of its strategy, thus reducing the knowledge gap existence between what a company must know to carry out its strategy and what it does know (Zack, 2009). A similar definition is provided by Bierly and Daly (2008), who argues that the set of strategic choices addressing knowledge creation in an organization including firm's knowledge management strategy, which furnishes the firm with

guidelines for creating competitive benefit. Both definitions are cognizant of the convenience of clearly managing knowledge with a clear knowledge strategy.

The whole organization must share a common knowledge management direction because knowledge management is central to their capacity to grow and compete, Salojrvi, Furu and Sveiby (2005) observed. An essential element is the balance firms should observe between examination and utilization (March, J.G 2008), for instance between the creation, finding or getting of knowledge and its purification, reutilize or a focus on efficiency in knowledge resource management. Hansen, Nohria and Tierney (1999) symbolism of knowledge strategies differentiates between personalization and codification of knowledge. This classification is based on the distinction between tacit and clear knowledge, and the distinct use of IT (Martini & Pellegrini, 2005). In the codification strategy knowledge is extracted from the person who developed it, made independent of that person, and reutilized for various purposes, while the personalization strategy focuses on conversation between individuals.

1.1.2 Organizational Competitiveness

Competitiveness relates to how effectively an organization meets the wants and needs of its customers in the marketplace relative to other organizations that offer similar products or services. Porter's (2004) concept of competitiveness focuses on prosperity created from economic activity that creates value by providing products and services at prices above their cost of production. Porter uses productivity as the key factor in defining competitiveness. Porter defines the competitiveness of a location as the productivity that companies located there can achieve. He uses this definition of competitiveness to understand the drivers of sustainable economic prosperity at a given location.

Organizational competitiveness refers to the ability of an organization to withstand various challenges in the operating environment. It is the various strategies that have been put in place to prepare an organization for eventualities as well as to make it better placed than its competitors to face an ever changing world of economic turbulence. Some organizations adopt technologies that are unique or advanced, while others invest in

preparing their staff for all kinds of unforeseen changes. It is also common to use a strong brand as a tool to enhance competitiveness, especially where an organization deals with a product that has a large number of substitutes (Cobb, 2003).

Many organizations also use globalization as a tool for competitive advantage. Survival and growth in competitive environments require achieving global competitiveness. Since globalisation has changed and opened up the world as a market place for us, be it for products, people or financial resources, so to capitalize on this opportunity, organizations have to be moulded to become globally competitive (Varadajaran & Cunningham, 1995).

1.1.3 Strategic Knowledge Management and Organizational Competitiveness

Competitiveness procedure favorably depends on organizational knowledge management especially on tacit knowledge (Gloet & Terziovski, 2004). New and valuable knowledge is created and transformed into products, services and procedure by converting general knowledge into specific knowledge (Choy, Yew, & Lin, 2006), A knowledge management system that expands the creativity envelope is thought to improve the competitiveness procedure through quicker approach and movement of new knowledge (Majchrzak, Cooper, & Neece, 2004). Also, effective knowledge management is an important factor when sending out new unique products. Organizational interest in knowledge management is excited by the possibility of resulting from benefits, such as increased competitive products and services (Darroch, 2005).

The extent of application of knowledge management as a competitive strategy among aviation training institutions in Nairobi showed that knowledge management had improved competitiveness of employees on their duties in the aviation training institutes paper by Joseph (2013). Knowledge management not only created the value of intellectual assets but also enhance an employee's productivity and competitiveness the employees. Knowledge management practices enabled employees and customers to get the information they need on time. Open and flexible organization system promoted knowledge management in an organization. Mwihi (2008) on ascertaining the nature and extent of the relationship between knowledge management strategy and organizational

competence established that there was a very strong and significant relationship between knowledge management strategy and organizational competence. Mbugua (2010) on determination on how Kingsway Tyres has utilized knowledge management as a competitive tool established that organization objective in introducing KM was to leverage implicit knowledge and at the same time retaining knowledge of employees as they exit the organization. With the introduction of the knowledge management process, the organizations ability to act has been enhanced due to the increased competency of the employees.

1.1.4 Large Scale Manufacturing Firms in Nakuru County

Nakuru County, the former rift valley province, is well endowed with agricultural and tourism resources which have attracted several manufacturing firms. The role of the manufacturing sector in vision 2030 is to create wealth and employment. There are 15 large scale manufacturing firms in the larger Nakuru. Including Comply Industries Ltd dealing with Timber, Wood & Furniture, Fontana Limited which deals fresh produce, Gone Fishing deals with Textiles & Apparel, Happy Cow Ltd. Manufactures Food & Beverages, Kapi Ltd dealing with Chemical & Allied products, Menengai Oil Refineries Ltd that processes cooking oils and makes detergents and soaps, Nakuru Plastics are manufacturers of polythene bags, packaging bags, polythene rolls and printing., Njoro Canning Factory (Kenya) Ltd, that processes garden peas and assorted vegetables, Bedi Investment Limited that deals with textile milling, Reliable Concrete Works Ltd that specializes Building, Mining & Construction, Shayona Timber Ltd deals with Timber, Wood & Furniture, Spin Knit Limited that makes threads and yarn from cotton lint, Turaco Limited deals with Motor Vehicle Assemblers & Accessories, and Valley Confectionery Ltd that deals with Food & Beverages.

The large scale manufacturing firms produce a variety of products ranging from food to various non-food products. The study described target population comprising of all the large scale manufacturing firms in Nakuru. The reason for focusing on this sector is because it constitutes a larger part of the manufacturing sector which contributes a

substantial percentage of output to the gross domestic product of Nakuru and Kenya in general.

1.2 Statement of the Problem

Competition in the manufacturing industry is stiff and is highly changing with the passing of time. Manufacturing firms must find a way to stay on top of competition by developing new products, new processes, and new markets for products as well as synchronizing the organization structure. A number of studies have been done globally on the effect of strategic knowledge management practices on organizational competitiveness for example, Mbugua (2010) Mwihiia (2008) Joseph (2013). The extent and the nature of the relationship between knowledge management strategy and organizational competence show that there is a very strong and significant relationship between knowledge management and organizational competence. No scientific study has ever been carried out in Nakuru County that covers the influence of strategic knowledge management practices on organizational competitiveness in large scale manufacturing firms. The study sought to determine the above mentioned influence and document the same to bridge the apparent gap in knowledge.

1.3 Objective of the Study

1.3.1 General Objective

To establish the influence of strategic knowledge management practices on organizational competitiveness in large scale manufacturing firms in Nakuru County, Kenya.

1.3.2 Specific Objectives

The specific objectives of the study included the following:

- i. To establish the influence of knowledge Management policy on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.
- ii. To analyse the influence of knowledge generation on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

- iii. To examine how knowledge organization practice influences organizational competitiveness in manufacturing firms in Nakuru County, Kenya.
- iv. To establish the influence of knowledge transfer on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.
- v. To analyse the influence of knowledge application on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.
- vi. To examine the mediating effect of organizational innovation on relationship between strategic knowledge management practices and organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

1.4. Research Hypotheses

In conducting the study the following hypothesis were tested

H₀₁: Knowledge Management policy has no significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

H_{a1}: Knowledge Management policy has a significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

H₀₂: Knowledge generation has no significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

H_{a2}: Knowledge generation has a significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

H₀₃: Knowledge organization has no significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

H_{a3}: Knowledge organization has a significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

H₀₄: Knowledge transfer has no significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

H_{a4}: Knowledge transfer has a significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

Ho₅: knowledge application has no significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

Ha₅: knowledge application has a significant influence on organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

Ho₆: organizational innovation has no significant mediating effect on the relationship between organizational competitiveness and strategic knowledge management practices of manufacturing firms in Nakuru County, Kenya.

Ha₆: organizational innovation has a significant mediating effect on the relationship between organizational competitiveness and strategic knowledge management practices of manufacturing firms in Nakuru County, Kenya.

1.5 Justification of the Study

This study aimed at investigating the influence of strategic knowledge management practices on organizational competitiveness in large scale manufacturing firms in Nakuru County. The study will be valuable to the various stakeholders in manufacturing industry in Kenya and beyond. This study will provide the management of manufacturing firms with valuable data and information which will be of use for decision making purposes in the area of knowledge management. Corporate managers in manufacturing industry will get insight on using knowledge management practices as a strategy in achieving organizational competitiveness.

This study will also provide information to potential and current scholars with regard to the relationship knowledge management practices and organizational competitiveness in manufacturing firms in Kenya. The study will bridge literature gap in the area of knowledge management hence act as a base for further studies in the same area. In addition, researchers would be able to gain additional knowledge from the study given that it is focusing on knowledge management practices and how the practices influence organizational competitiveness in large scale manufacturing firms in Nakuru County, Kenya.

1.6 Scope of the Study

This study was conducted to determine the influence of strategic knowledge management practices on organizational competitiveness in manufacturing firms in Nakuru County, Kenya. The study focused on the following strategic knowledge management practices including knowledge generation, knowledge sharing and transfer, knowledge storage and organization, knowledge application and protection and knowledge management policy. The study was a survey of manufacturing firms in Nakuru County, Kenya. The target population will be 15 large scale manufacturing firms in Nakuru County. The Staff targeted the General Manager, managers from human resource development, production and operation, marketing, and Research and development departments. The study was carried out in October 2017.

1.7 Limitation of the Study

The current study on influence of strategic knowledge management practices on organizational competitiveness was successfully carried out. However some challenges were experienced during the study. The top management of most of the manufacturing firms was a little hesitant to give permission for the study to be carried out in their respective firms; the general managers were very busy to fill in the questionnaire and they were among the most important aspect on the study, the researcher had to assure them that information was for academic purpose only and will be treated with utmost confidentiality. Most of the respondents also had work commitments on the day of visit to the firms and the researcher had to leave the questionnaires behind for them to fill them later. The researcher also had to take contacts of the firms to do a follow up on the progress of filling of the questionnaires left behind. The study was also a little constrained by high cost of travelling to all the manufacturing firms as most of the firms are spread apart within the county.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter discussed theoretical review, review of study variables, conceptual framework, empirical review, critical review, research gaps and summary of literature.

2.2 Theoretical Review

Several theories exist that explain the association between strategic knowledge management practices and organizational competitiveness. These theories include Resource Based View (RBV) theory, competency based theory, organizational learning theory. A summary of these theories and their implications to this study are discussed in the sections that follow.

2.2.1 Resource Based View Theory

The theoretical foundation of RBV dates back to the year 1950 when Penrose's viewed organization as a pool of resources and articulation of the same by Penrose, 1995. The RBV consider the resources of a firm as being a fundamental predictor of a firm's competitive advantage and performance. Whereas resources can be categorized in different ways, for instance tangible and intangible, tangible resources facilitate execution of business process while the intangible resources are the ones that might result in competitive advantage by allowing organizations to incorporate unique and valuable practices (Ray, Barney & Muhanna, 2004; Barney, 1991). As noted by Barney (1991), RBV is based on two assumptions of resources being heterogeneously distributed across organizations and the non-transferability of productive resources from one organization to another without incurring cost.

Thus, given the two assumptions, RBV holds that only an intangible resource that is valuable, rare, hard to imitate and without strategically equivalent substitutes is critical in sustaining a firm's competitiveness (Barney, 1991). Within projects, RBV is critical in that project management practices are based on tangible and intangible resources (Fernie,

S., Green, S. D., Weller, S. J., & Newcombe, R. (2003)). For instance, resources that are tangible include the use of codified methodologies, templates, tools and techniques that are readily available across the discipline (Crawford, L., Pollack, J., & England, D. 2006) and (Jugdev & Mathur, 2006). On the other hand, intangible resources include leadership, teamwork, knowledge etc. that might contribute towards competitive advantage (Killen, C., Jugdev, K., Drouin, N., & Petit, Y. 2012). Thus, given leadership, knowledge and teamwork are valuable, rare, and imperfectly imitable resources, these resources are expected to have an effect on organizational innovation performance. In terms of applicability, RBV is criticized due to lack of consensus in the uses of various definitional terms such as capabilities, assets, resources and competences. In addition, RBV is criticized on the basis of whether it can be tested due to lack of methodology to measure intangible resources (Barney, *et al.*, 2011).

Resource based theory view is relevant for the current research on influence of strategic knowledge management practises on organizational competitiveness since knowledge can be a unique resource that must be managed efficiently and effectively to contribute to organizational competitiveness. The knowledge resources identified by the resource based view theory should be organized and managed efficiently and effectively to ensure achievement of organizational competitive of the manufacturing firms in Nakuru Kenya. The theory is thus appropriate for this study as it helps in identifying the key resource knowledge whose use can be well planned to achieve organizational competitiveness goals.

2.2.2 Organizational Learning Theory

For analyzing organizational learning the theoretical framework involved the environmental context surrounding the latent organizational context as part of the cycle of task performance skill leading to knowledge formation (Argote & Miron-Spector, 2011). This organizational learning theory was started as a theory through a concern in organizational learning and knowledge as essential to both organizational performance and success (Argote & Miron-Spector, 2011). Garcia-Morales, Jimenez-Barrionuevo, and Gutierrez-Gutierrez (2012) additional defined this as the process where the individuals of

the organization improve an organization's knowledge system. While this theoretical framework addresses employee turnover and knowledge retention, it is criticized for since it does not ascertain a place where knowledge creation occurred nor innovation as central constructs (Argote & Miron-Spektor, 2011).

Organizational learning, defined as the change in the organization that occurs as the organization acquires experience (Argote & Miron-Spektor, 2011) through processes of exploratory and exploitative innovation (March, 1991; Van de Ven, 1999) has played an especially prominent role in studies of innovation. Learning is multi-level knowledge acquisition process situated within the environmental context of the organization (Hutchins 1991; Lave & Wenger, 1990). Argote's learning cycle approaches organizational learning from a strongly task oriented operational perspective and includes the sub-processes of knowledge creation from direct experience, knowledge transfer from others and knowledge retention by virtue of knowledge flowing into active context (Argote & Miron-Spektor, 2011). These sub-processes function within the organizations learning context while interacting with the extra-firm environment.

Knowledge is complex, multi-dimensional and can be either explicit or tacit which is less tangible and more difficult to transfer (Nonaka, 1994). Other knowledge dimensions include content (tasks, interactions), spatial (geographic by nature), temporal (frequency, pace, timing and rarity) and mindfulness. Heterogeneity of experiences (experience variety across dimensions) has been shown to enhance learning (Schilling, Vidal, Ployhart, & Marangoni, 2003), a finding that contradicts the intuitive advantages of specialization. Some (especially exploratory) knowledge creation processes such as analogical reasoning are more mindful and therefore demand greater attention (Weick and Sutcliffe, 2006) while other learning processes are more routinized and therefore require less attention (Leviathan & Rerup, 2006). Organizations that successfully balance both mindful and routinized learning processes achieve an ambidexterity that saves cognitive capacity for high demand activities. Knowledge retention can also be more or less mindful – some routines are retained and recalled by rote while others involve more reflection and potential for adaptation (Williams, 2007).

Organizational learning theory is applicable in this study on influence of knowledge management practices on organizational competitiveness. The learning of knowledge should be exploited to ensure balancing of knowledge to give a firm the competitiveness it requires remaining relevant in the dynamic of a market. Organizational learning studies have their relative advantage in the in-depth discussion about the dynamics of knowledge, as a strategy to create a healthy competition.

2.2.3 Competency Based View Theory

Another approach is the competence-based view theory, primarily represented by (Heene and Sanchez (1997), Sanchez and Helene (1997), and Sanchez (2001). They argue that firms utilize competence in order to reach set goals, regardless of whether it is reduced costs or competitive advantage. But the core of the competence-based perspective lies in its approach to the nature of knowledge, and of its discussion of learning processes (Sanchez, 2001). For instance, the difference between data, information, knowledge and interpretive frameworks is highlighted, as is the difference between learning and sense-making. A key feature of this school of thought is the transformation of knowledge into competence, which is made through learning cycles, encompassing individual, group and organizational learning (Sanchez, 2001). Within the capability perspective, knowledge is identified as a link between capabilities and performance. Winter (2000) states that a capability is a high-level routine or collection of routines that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type (Winter, 2000). Leonard-Barton (1992) further suggests that capabilities consist of particular skills, technical systems, managerial systems, all of which are grounded in the norms and values that the firm has built during its existence. Teece, D. (1997) along with Eisenhardt and Martin (2000), claim that capabilities comprise the abilities to create and utilize resources so as to improve performance. Like many of the other perspectives mentioned, the capability perspective suggests that knowledge is important, that it can contribute to improved performance. However, despite identifying the link between capabilities and performance, it is not very clear on how this link is managed and whether there is automatic causality between capabilities and performance.

Competency based theory provides an underpinning for the current study on the influence of strategic knowledge management on organizational competitiveness as it holds that knowledge which is a strategic resource can be converted into competency. Manufacturing firms can utilize the competency created to pursue competitiveness by coming up with products and services that are unique at the most efficient way. The end result is a firm that uses its knowledge assets by converting them into capabilities and competency areas that encourages organizational competitiveness in the long run.

2.2.4 Unified Model of Dynamic Knowledge Creation.

Unified dynamic knowledge creation model best discourses the study. Organizational knowledge creation requires continuous work and leadership to maintain and improve organizational knowledge assets (Nonaka, I., Toyama, R., & Konno, N. (2000). With this model, knowledge sharing and transfer must occur through knowledge creation at the foundation of an organization's success and with that, (Nonaka, 1994). Knowledge creation occurs as the interaction between tacit and explicit knowledge churns through the SECI model (Nonaka, 1994; Nonaka *et al.*, 2000). This theory is the most suitable framework for this study since it addressed knowledge creation as it works with organizational changes in a dynamic environment (Von Krogh et al., 2013). It is also provided support for organizational growth and hence an appropriate theoretical framework since it recognized various types of knowledge sharing.

Mental, virtual, or physical space aspect where knowledge creation ensues from information interpretation addressed the location in support of knowledge sharing enhances the theoretical place where knowledge creation occurred (Nonaka et al., 2000; Von Krogh et al., 2013). Theoretical place where knowledge creation and sharing occurs are four types which fall into two categories: media and type of interaction (Nonaka et al., 2000). Nonaka *et al.* (2000) categorized the media into visual, exercising and systemizing theoretical place of knowledge creation, and face-to-face, originating and dialoguing theoretical place of knowledge creation. Nonaka et al. (2000) also divided the individual exchanges involving the exercising and originating and the mutual interactions

involving dialoguing and systemizing theoretical places of knowledge creation and sharing.

This theoretical framework support employee-wide knowledge sharing and the gap created in the line of knowledge due to employee exit and the firm performance and execution in business planning did not account for this as strategic plan (Von Krogh *et al.*, 2012). Leadership guided the knowledge creation cycle and supported innovation, which in turn encouraged more innovation and innovative practices (Nonaka *et al.*, 2000). Organization's capability to sustain a competitive advantage is supported by knowledge creation, which advances itself to a positive firm performance relationship through knowledge management and innovation (Nonaka *et al.*, 2000). Knowledge creation within learning organizations strengthens knowledge sharing.

Unified model of dynamic knowledge creation is relevant for the current research on influence of strategic knowledge management practices on organizational competitiveness since sharing of knowledge eliminates any gaps that could otherwise occur in a firm if the knowledge is not shared. It creates innovation for a firm hence enabling organizational competitive of the manufacturing firms in Nakuru Kenya. The theory is thus appropriate for this study as it helps in sharing the key resource knowledge whose use can be well planned to achieve organizational competitiveness goals.

2.2.5 Knowledge Management Cycle

Knowledge management cycle involves a series of steps that starts from knowledge creation and ends at knowledge use. The steps are explained in the succeeding subsections. This places knowledge management as a core value for firms to remain relevant in a turbulent market where competition is the order.

2.2.5.1 Identify and/or Create

A knowledge request may be triggered for numerous reasons, some of which include strategic and/or operational problem solving, decision making, knowledge gap analysis,

or innovation. When a request for knowledge is made, the searcher must identify if appropriate knowledge exists in-house, or if appropriate knowledge assets need to be created or acquired. This is one of the reasons why these phases are interrelated and grouped together in the KMC model. In some cases, the searcher may find that they will both identify existing appropriate knowledge assets and also have a need to create new knowledge assets. This is another reason why these two phases are shown together in the KMC model. Even though there is clear overlap, for the purpose of clarity these phases need to be addressed separately.

The identify stage involves eliciting codified and encapsulated knowledge assets. In addition, this stage identifies subjectively held tacit knowledge (Dalkir, 2011) through methods such as network analysis or brainstorming sessions. Inevitably, this will be interrelated with the store phase. Along with effectively searching for knowledge assets, the identify stage subsequently involves analyzing and assessing the assets based on specific organizational rules, cultures, and evaluation criteria. According to Wiig (1993), analysis involves reviewing and extracting what appears to be value in the asset and abstracting it further to find potential underlying knowledge. Other models (Dalkir, 2011) include an assessment, which is meant to identify and extract patterns and relations, and then evaluate the value of the asset as a feasible solution to the problem or decision at hand. It is critical that, throughout the analysis and assessment, emphasis is placed on the quality (Bukowitz & Williams, 1999) and relevance of the information extracted from the knowledge asset. Some general metrics include accuracy, currency, credibility, and value to the organization. The identify stage of the KMC model is most similar to build (Wiig, 1993), acquisition (Meyer & Zack, 1999), get (Bukowitz & Williams, 1999), claim (McElroy, 2003), capture (Dalkir, 2005), and identify (Evans & Ali, 2013).

Create A knowledge request may trigger the need for new knowledge assets to be created, if none are found through searching during the identify stage. New knowledge assets may also need to be created if existing knowledge assets only partially satisfy knowledge needs. Some common organizational initiatives that assist in the creation of new knowledge assets include expert interviewing, prototyping, information and workflow analysis, and competence and process mapping. An example of technology that

can be used in this phase is idea management software. The creation of new knowledge assets should follow the same guiding principles as those relating to analyzing and assessing Knowledge assets, as outlined in the identify stage. The create stage of the KMC model is most similar to the create stage in Evans and Ali (2013) and both contextualize and create in Dalkir (2005).

2.2.5.2 Store Knowledge

Once the knowledge has been deemed valuable to the organization, based on the analysis and assessment in identify and create phases, it is stored as an active component of the organizational memory. This may entail retaining more codified forms of knowledge into corporate portals and encapsulating knowledge artifacts and tools through prototyping. More tacit forms of knowledge may be stored in the form of knowledge audits, maps, models, and taxonomies. However, the repository cannot be a random collection of knowledge assets, regardless of their individual and collective value. Beyond their intrinsic value, knowledge assets must be stored in a structured way that allows them to be efficiently manipulated, retrieved, and eventually shared. Common related activities include mitigating, templating, annotating, classifying, archiving, linking, and optimizing search and retrieval. These activities extend Meyer and Zack's (1999) labeling, indexing, and cross-referencing. The store stage of the KMC model is similar to hold (Meyer and Zack, 1999), build and sustain (Bukowitz & Williams, 1999), assess (Dalkir, 2005), and organize and store (Evans and Ali, 2013).

2.2.5.3 Share Knowledge

Share Knowledge assets are retrieved from the organizational memory, to be shared (disseminated/communicated) both internally and externally. The timing and frequency of sharing can be either pre-established or in an ad-hoc fashion, based on immediate need (similar to a 'pull' approach). The process through which knowledge is shared is important, as employees are seldom aware of its existence, particularly when new knowledge is created and stored. As Bukowitz and Williams (1999) assert, it is not uncommon for organizations to seek knowledge outside their boundaries, when in fact that knowledge may already exist. Having an explicit, dynamic, and flexible (Wiig, 1993;

Meyer & Zack, 1999) network of expertise fosters collaboration and can greatly assist in the sharing of organizational knowledge assets.

The sharing of more tacit forms of knowledge may be encouraged through coaching, mentoring, and apprenticeships programs as well as through storytelling, narratives, and anecdotes (Swap et al, 2001; Peroune, 2007). It is also important to choose the optimum mix of technologies and dissemination channels, as various communication media have their own strengths and weaknesses (Dalkir, 2011). The choice of medium is not only a function of specific professional tasks (Dalkir, 2011), but also dependent on the KM maturity of the organization. The more mature the organization, the more efficient the medium, and the more timely the sharing of knowledge. Some of the more common technologies used to share knowledge assets include communication and collaboration technologies and many current customer relationships, supply chain management, and decision support systems. It should also be noted that the share phase of the KMC model can be seen as a bridge between the upstream knowledge ‘hunting and gathering’ and the downstream putting knowledge into practice (exploitation and exploration). The share stage of the KMC model is most similar to pool (Wiig, 1993), distribution (Meyer and Zack, 1999), contribute (Bukowitz & Williams, 1999), integration (McElroy, 2003), share/disseminate (Dalkir, 2005), and share (Evans & Ali, 2013).

2.2.5.4 Knowledge Use

Once shared, knowledge assets can be activated (put to use) – their value can be extracted and applied throughout the organization, to solve problems, make decisions, improve efficiency, or promote innovative thinking. Knowledge assets can be used in encapsulated form (Wiig, 1993), but there will always be some degree of tacit knowledge that is applied. As Dalkir (2011) posits, codified forms of knowledge may not, by themselves, translate into understanding. For example, there may be some contextual information that has not been encoded or tacit knowledge that has not been encapsulated. In addition, the larger or more complex a knowledge asset is, the more difficult it may be for value to be extracted from it. Therefore, the intervention of an expert may be required to apply the knowledge correctly and efficiently. An example of such intervention would

be taking a general document and making it specific for the problem that needs to be solved, which is referred to as ‘recontextualization of knowledge’ (Dalkir, 2011: 211). The use stage is also important to internalizing tacit forms of knowledge. Yuasa (1987) called this ‘learning with the body’ and Boisot (2002) ‘learning-by-doing’. This is usually done by assimilating and dwelling in the activity or with the artifact (Tsoukas, 2005). Some of the more common activities that assist in the use stage include developing communities of practice, workshops, and tutorials. The technologies employed in these activities include, for example, incident and help desk systems, expert systems, and communication and collaboration technologies. It is important to note that unless this phase is accomplished successfully, ‘all of the KM efforts have been in vain, for KM can only succeed if the knowledge is used’ (Dalkir, 2011). The use stage of the KMC model is most similar to apply (Wiig, 1993), presentation/use (Meyer and Zack, 1999), contribute (Bukowitz and Williams, 1999), integration (McElroy, 2003), apply/use (Dalkir, 2005), and apply (Evans and Ali, 2013).

2.2.5.5 Learning

The knowledge assets that have been shared and used in previous phases can also be used as the foundation for creating new and refining existing knowledge assets. The use of knowledge, particularly in situations where experts provide contextual understanding, leads to employees gaining experience, as they interpret the impact of knowledge on their work environment (Evans and Ali, 2013). This phase involves deconstructing the knowledge blocks, integrating, connecting, combining, and internalizing knowledge. If knowledge assets are found to be valuable, based on the previously mentioned analysis and assessment criteria, they proceed to the improve stage in the KMC model, where further refinement and/or codification/encapsulation activities take place. However, if knowledge assets are judged insufficient (or incomplete), the searcher returns to identify and/or create phase where additional knowledge assets are identified or created based on the gaps found. This iterative process of reflecting on the value and applicability of knowledge assets constitutes double-loop learning (McElroy, 2003) in the KMC model. Existing rules are challenged and new knowledge assets are created, thus triggering the life cycle to begin all over again. Some of the more common activities that assist in the

learn stage include benchmarking, best practices and lessons learned, and knowledge gap analyses. The technologies employed in these activities include, for example, learning management and help desk systems. The learn stage of the KMC model is most similar to apply (Wiig, 1993), integration (Meyer & Zack, 1999), contextualize (Dalkir, 2005), and evaluate and learn (Evans & Ali, 2013).

2.2.5.6 Improving Knowledge

The learning that takes place in the previous phase leads to further refinement of the knowledge assets. New value is either identified or created from them and additions or updates are made to keep them current in the organizational memory and applicable to the organizational context. The knowledge assets are repackaged to be stored or referenced so that their value may be effectively leveraged in the future. Bukowitz and Williams' (1999) may view this stage as a cleansing or sanitizing of sorts, which they refer to as divesting. In the KMC model, improve is the decision point for knowledge assets to be archived, retired, or transferred outside the organization for further use. Some of the more common activities that assist in the improve stage include after action reviews, reflection time, and adapting lessons learned. Technologies that assist in these activities include, for example, learning management and workflow technologies. The improve stage of the KMC model is most similar to refinement (Meyer and Zack, 1999), assess and divest (Bukowitz and Williams, 1999), and update (Dalkir, 2005).

2.3 Conceptual Framework

The study sought to look upon some dependent and independent variables that addressed the relationship between strategic knowledge management practices on organizational innovation in manufacturing firms.

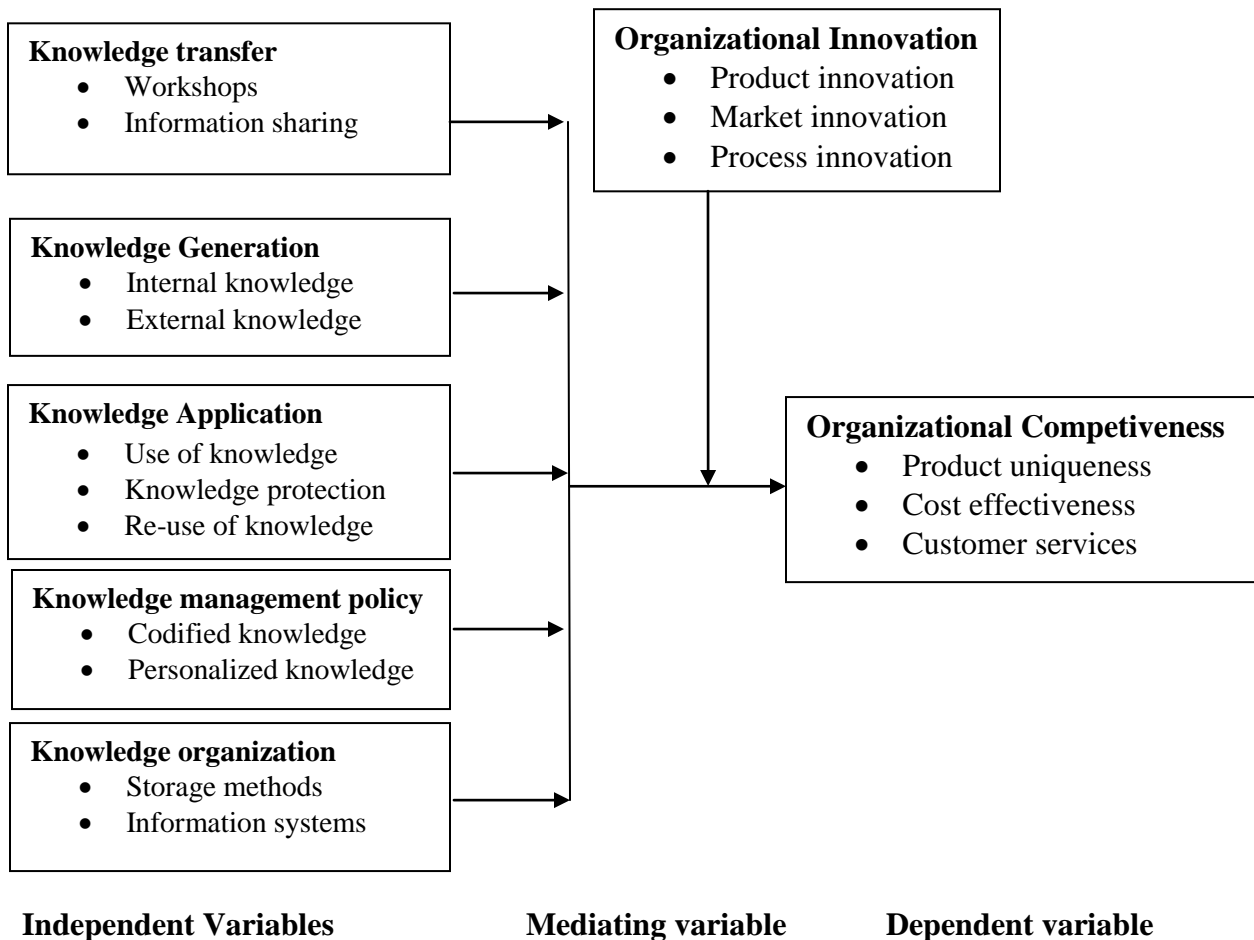


Figure2.1: Conceptual Framework

Figure 2.1 illustrates the relationship between strategic knowledge management practices which is the independent variables and organizational competitiveness as the dependent variable of the study. The independent variable is strategic knowledge management practices that include knowledge generation, knowledge application, knowledge sharing, knowledge management policy, and knowledge organization. The moderating variable is

organizational innovation subdivided into product, process, market and administrative innovation.

2.4 Review of Study Variables

Strategic Knowledge Management consists of a range of practices used in an organization to create, capture, collect, transfer and apply of what people in the organization know, and how they know what people in the organization know. The major Strategic knowledge management practices are discussed in following subsections.

2.4.1 Knowledge Generation and Organizational Competitiveness

Knowledge Generation are processes oriented toward obtaining knowledge which can be described by many other terms such as acquire, seek , create, capture, and collaborate, all with a common objective. The ability to generate knowledge is, however, partly based on an organization's absorptive capacity for innovation (Gold, Malhotra, & Segars, 2001) and the full value creating potential of new knowledge can only be realized through other key KM processes manipulating the created/acquired knowledge (Gold, Malhotra, & Segars, 2001). Knowledge generation and trust-building are the central components of the approach to collaboration Knowledge capturing and acquisition refers to the mechanisms that an organization uses to import external knowledge into the organization, (Thomas H, Per O, Carl F, Kristin, 2006) concludes.

Knowledge acquisition deals with the processes of creating, generating, developing, building and constructing knowledge internally which leads to the growth of an organization innovation capabilities. These terms refer to the process of deriving new and useful insights and ideas. Organizations have an option to acquire knowledge from external sources such as hiring or employing individuals with the required knowledge or by purchasing knowledge assets such as patents, research documents or other intelligence. Organizations often suffer permanent loss of valuable experts through dismissals, redundancies, retirement and death (Probity, Raub & Romhardt, 2000). The reason for this is that much knowledge is stored in the heads of the people and it is often

lost if not captured elsewhere. To avoid knowledge loss organizations need to identify the expertise and the skills of their staff and capture it.

Organizations need to develop ways of capturing its internal knowledge, devise systems to identify people's expertise and develop ways of sharing it. Knowledge creation involves the utilization of internal and external resources of an organization to generate new knowledge for achieving the organizational goals. Brainstorming methods and conducting research to make the best use of the knowledge assets of customers, suppliers and staffs are strategies applied in many prosperous SMEs for creating knowledge (Moodysson, 2008). Knowledge Acquisition: This practice encompasses the process of acquiring and learning appropriate knowledge from various internal and external resources, such as experiences, experts, relevant documents, plans and so forth. Interviewing, laddering, process mapping, concept mapping, observing, educating and training are the most familiar techniques for knowledge acquisition.

2.4.2 Knowledge Transfer and Organizational Competitiveness

Knowledge transfer is defined as a business process that requires collective knowledge, skills and expertise, and dissemination of knowledge across the organizational units (Chen & Huang, 2009; Lin & Lee, 2005). Knowledge sharing also involves the exchange of employee knowledge, experiences, and skills throughout the organization and the whole organization in order to establish new routines and mental models (Lin, 2007; Nonaka & Takeuchi, 1995). Organizational members can easily access to knowledge by sharing knowledge among themselves and/or across different units, which reduces the amount of time and investment required to gather information. Through reducing time and investment for gathering information and establishing new routines and mental models, organizations can transfer their valuable resources to innovation processes.

Knowledge sharing refers to the activities that diffuse and share knowledge. It includes the exchange of tacit and explicit knowledge, among individuals, groups, and units at the same and different organizational levels. Expertise exists in people, and much of this kind of knowledge is tacit rather than explicit, which makes it difficult to be shared. At its

most basic, knowledge sharing is simply about transferring knowledge of employees to other employees within the organization. Knowledge sharing is based on the experiences gained internally and externally in the organization. Making this know how available to other organizational members will eliminate or reduce duplication of efforts and form the basis for problem solving and decision-making. Probst, Raub and Romhardt (2000) have pointed out that it is vital that knowledge should be shared and distributed within an organization, so that isolated information or experience can be used by the whole company. Knowledge sharing also includes exchange of knowledge externally with other individuals, groups, and organizations. Knowledge transfer can occur explicitly, when an individual or a unit communicates with another individual or another unit, or implicitly, through norms and routines.

Furthermore, high levels of participation in learning and joint creation of new knowledge are caused by sharing and exchanging knowledge, which are fundamental for the development innovative ideas (Chen & Huang, 2009; Tsai, 2001). Hence, knowledge-sharing procedures tend to be positively associated with innovation. Knowledge sharing can be distinguished between an individual, an intra-organizational, and an inter-organizational level. Intra-organizational knowledge sharing manifests itself through changes in knowledge or performance of the recipient unit. Inter-organizational knowledge sharing describes sharing between organizations. Even though knowledge sharing takes place on the intra- or inter-organizational level, individuals in terms of organizational members have to share knowledge, (Wilkesmann, Fischer & Wilkesmann, 2009).

Knowledge sharing both explicit and tacit occurs when employees are open to sharing, which can raise an organization's competitive advantage (Wang & Wang, 2012). Subsequently explicit knowledge appears less costly and easier to transfer, tacit knowledge on the other hand is viewed as higher in value due to its complication in ability to share (Hau, Kim, Lee, & Kim, 2013). Jain and Moreno (2015) stated that a buildup of knowledge ensues when shared within the organization; this is an important aspect to contemplate when building knowledge to support cultivating the firms'

performance. While Wang and Wang (2012) established that tacit knowledge sharing had negative associations with the promptness of innovation and firm financial performance, they did find tacit knowledge had positive associations with innovation worth and the firms' operational performance. Wang and Wang (2012) stated that contrary to explicit knowledge sharing since knowledge sharing was positively associated with innovation speed and firm financial performance. The organizational culture may influence the frequency of knowledge sharing between employees.

Employees do not share more easily experienced-based knowledge, or tacit knowledge than researched-based knowledge, or explicit knowledge, Nilsen et al. (2012) hypothesized. For a firm to yield positive units, associations in radical innovation knowledge flow among individual employees, organizational decision makers, are necessary (Zhou & Li, 2012). Zhang, de Pablos, and Xu (2014) found cultural values in a virtual environment, which may directly affect knowledge sharing and have interactive effects on knowledge sharing motivations as well as complex effects on knowledge sharing. Understanding and usage of knowledge management practices requires solid organizational leadership.

2.4.3 Knowledge Application and Organizational Competitiveness

In order to solve existing problems knowledge application, is related with the actual use of the existing knowledge (Gold *et al.*, 2001; Alavi & Tiwana, 2002), and creating values for organizations, making knowledge more active and relevant is important (Bhatt, 2001). Lin and Lee (2005) describe knowledge application as a process through which business is more effective in storage and retrieval mechanisms enabling a firm to access knowledge easily. Effective application of knowledge, organizations increase their capabilities of managing different sources and types of knowledge successfully, using the right knowledge in the right form, decreasing making mistakes, and converting shared knowledge to the benefits for organizations (Alavi & Leidner, 2001; Bhatt, 2001; Huang and Li, 2009; Gold *et al.*, 2001). Hence, knowledge application plays an important role in increasing administrative and technical innovation in organizations (Johannessen *et al.*, 1999; Sarin and McDermott, 2003).

Application of are processes oriented toward the actual use of the knowledge (Gold, Malhotra, & Segars, 2001), making knowledge more active and relevant for the firm in creating value. Process characteristics that have been associated with the application of knowledge in the literature include storage, retrieval, application, contribution, and sharing (Almeida, 1996; Appleyard, 1996). Effective application of knowledge has helped organizations improve their efficiency and reduce costs (Davenport & Klahr, 1998). Knowledge application describes the methods and mechanisms that an organization adopts to use available knowledge to improve its processes, products and services, and organizational performance. Knowledge application also refers to any broadly available thought in the organization that can be generalized and applied, at least in part, to new situations (Tiwana, 2000). As stated by Bhatt, applying and sharing knowledge means making it more active and relevant for the organization in creating values.

2.4.4 Knowledge Management Policy and Organizational Competitiveness

The codification of knowledge enables the use of it to be more efficient, and it's re-use more effective ensuring more work done and hence reducing communication costs (Hansen, 1999, Watson, S. and K. Hewett (2006). knowledge management naturally involves the accessibility of manuals and databases documenting firm-specific knowledge primarily about internal management practices and procedures. These codified management policy concern employees with management functions, but largely all staff at the bench-level. The availability of a codified knowledge management policy also positively affects the cost reduction possibilities of a firm

Organizations should focus on generating strategies and policies that ensure a competitive ad-vantage (Porter, 2011; D. Quinn & Shapiro, 1991). A strategy is defined as a pattern or plan that integrates goals, policies, and sequential actions that lead to a cohesive organizational plan (Mintzberg, 2011; Mintzberg & Quinn, 1991; J. Quinn, 2005). Given that policies are part of a strategy, policies are defined as action guides containing rules and responsibilities for each area of an organization's work (Blumentritt & Danis, 2006; Michie & Sheehan, 2005). Policies and strategies within a system of KM

refer to rules, conditions for the use of the information, and the protection of intellectual property (Prusak & Matson, 2006). These practices are part of a differentiation strategy that generates competitive advantage for enterprises (Boyes, 2011). Through the establishment of strategies and policies for the use of knowledge, KM has been identified as an important element to generate creativity and boost innovation (Darroch & McNaughton, 2002). Studies of SMEs in different countries reveal that the adoption of strategies, practical human re-sources (development, the promotion of employees and staff retention incentives), and knowledge management policies contribute to the productivity of the company and have a positive impact on innovation (Durst, Edvardsson, & Bruns, 2013).

Most studies emphasize the fundamental role of KM by adopting strict internal policies that strongly support creativity at work and encourage innovation (Alegre, Sengupta, & Lapiedra, 2013). Policies that are based on the protection of knowledge encourage organizations to have greater control of information and knowledge and have a significant relationship to the creativity and performance of the company (Berce, Lanfranco, & Vehovar, 2008). The implementation of strategies and policies as a means to manage knowledge leads to an increased intensity of R&D on products and processes and generates a higher yield in the business (Cantner, Joel, & Schmidt, 2011)

2.4.5 Knowledge Organization and Organizational Competitiveness

Many empirical studies show that most organizations can create knowledge but fail to properly organize and store that knowledge Stein and Zwass (2005) indicated and referred. They further defined organizing knowledge as the means by which knowledge from past experience and events influence present organization activities. Tan, Teo, Tan and Wei (2007) imitated that organizational knowledge should be organized and stored in a proper way. It includes knowledge in various forms like written documentation, codified human knowledge stored in an expert system, structured information stored in electronic databases, documented organizational procedures and processes and tacit knowledge acquired by individuals or network of individuals. Explicit knowledge should

also be stored properly and it resides in unstructured documents in the form of memos, notes, meeting minutes etc.

Knowledge storage involves both the soft copies and hard copies recording and retention of both individual and organizational knowledge in a way so as to be easily retrieved. Knowledge storage utilizes technical systems such as modern informational hardware and software and human processes to identify the knowledge in an organization, then to code and index the knowledge for later retrieval (Stein & Zwass, 2005). In the other words, organizing and retrieving organizational knowledge means knowledge storage by providing the ability to retrieve and use the information by the individuals. Hansen et al. (2009) differentiate two different knowledge management strategies. To codify explicit knowledge the codification strategy is used. The sharing and storage of knowledge has been made cheaper and easier by networked computer which is on the rise. Knowledge embedded in a firm's staff is modifiable a-priori but not all of it. The persons who developed Knowledge are often closely tied to it; therefore it is often referred to as tacit knowledge. Through interpersonal interaction tacit knowledge can be share. Firms cannot use internal sources to create the knowledge they need but it is realistic.

To acquire external knowledge, in this context; Chesbrough (2004) directs the significance of open innovation where external channels to the market and external sources of knowledge need to be added to the internal knowledge to generate additional value. The researchers differentiate between three knowledge management techniques: the attainment of external knowledge, a codified knowledge management policy, and incentives for employees to share (tacit) knowledge. The empirical study explores firms that use particular techniques will realize a higher innovation performance with respect to new product sales (product innovation) and unit cost reduction of production (process innovation). Based on the kind of innovation to be obtained it is important for a firm to adjust their usage of knowledge management procedures. There is a positive effect on production innovation with the use of external knowledge. A codified management policy is of paramount importance for a firm to obtain a process innovation, incentives for employees to share knowledge.

To codify explicit knowledge codification strategy endeavors this; to disseminate knowledge across individuals, departments, divisions or subsidiaries, codification makes it easier, making the transfer possibly less accidental, not time consuming and eventually may yield economies of scale. To save time and costs related to creating new knowledge from scratch reusing and leveraging existing knowledge is important (Watson et al. 2006). Due to increase use of network computers codification has been made possible; hence the aspect of sharing and storing knowledge has been made easier and cheaper. For a firm to codify explicit information, an important factor like IT is crucial, referred to as knowledge management systems. Implementation of a codification successful strategy will not be attainable at zero cost. The significant but not yet systematized knowledge has to be identified, codified, stored and, most importantly, maintained and kept up-to-date with scheduled updating plan to ensure relevance of the knowledge. This argument relates to a theoretical model by Watson et al. (2006) who stressed that a successful implementation of knowledge management systems entails the willingness of individuals to donate their knowledge to the system, and that employee's acquire easy access and reuse the knowledge embedded in this system.

2.4.6 Organizational Innovation

There are several definitions of innovation. Herkma (2003) stated that foremost and basic purpose of innovation is to produce new knowledge which can develop and find out the doable solutions for society. Innovation is a practice and process which capture, acquire, manage and diffuse knowledge with the aim of creating new knowledge which will support, produce and deliver distinctive and idiosyncratic kind of products and services, (Gloat & Terziovski, 2004). Plessis (2007) delineated innovation as a formation of new knowledge which helps the new business returns, which has purpose to make organization internal business process and structure more sophisticated that produce the market acceptable products and services. Innovation can also be defined as activities and processes of creation and implementation of new knowledge in order to produce distinctive products, services and processes to meet the customers' needs and preferences in different ways as well as to make process, structure and technology more sophisticated that can bring prosperity among individuals, groups and into the entire society (Alegre &

Chiva , 2013). Innovation is creating value through more effective processes, products, or pricing to create a competitive advantage for an organization (Hinterhuber & Liozu, 2014).

Innovation might be radical or incremental. A radical innovation is a product, service and process with entirely unique or significant improvements in existing features which improve the cost and performance (Leifer *et.al* 2007). To commercialize radical innovated products are more difficult as radical innovation is highly risky business. It is worth noting, radical innovation in product, service or process is critical for the business as it involves the development and application of new technology. To what extent is new technology more sophisticated and advance as compared to current technology important aspect of radical innovation is (Govindarajan & Kopalle, 2004, Christenson & Overdorf, 2000). Leifer *et.al* (2007) opened the idea of different centers to bring radical innovation. Among those centers, one important center is of idea generators. They are responsible for generating distinctive ideas and there are people who exploit these distinctive ideas, idea hunters, who actually exploit and execute these ideas. Idea gatherers basically are receivers of the ideas. They have skills, expertise, judgment and motivation to respond these unique ideas. The combination of generators, hunters, and gatherers play important role to bring radical innovation in large organization.

There are two causes that firms strive to bring radical innovation. First, these radical innovations create barriers for the potential competitors and ruin the market share of existing industry players (Christenson, 1997, Christenson & Bower, 1996). Second, competitors are much capable to develop or produce radical innovated products (Christenson, 1997, Christenson & Bower, 1996, Christenson & Overdorf, 2000, Leifer *et. al.*, 2000,). Plessis (2007) explained that incremental innovation is basically a modification in a product which also called line extension or market pull innovation. Incremental innovation does not need to significantly diversify from current business. That is why this type of innovation enhances the skills and competencies of the organizational employees. Incremental innovation is decisive for the organization

because it helps the organization to increase their market share to be remaining in industry for a long time (Banbury & Mitchell, 1995).

2.4.7 Organizational Competitiveness

Competitiveness relates to how effectively an organization meets the wants and needs of its customers in the marketplace relative to other organizations that offer similar products or services. Porter's (2004) concept of competitiveness focuses on prosperity created from economic activity that creates value by providing products and services at prices above their cost of production. Porter uses productivity as the key factor in defining competitiveness. Porter defines the competitiveness of a location as the productivity that companies located there can achieve. Porter's (2004) uses this definition of competitiveness to understand the drivers of sustainable economic prosperity at a given location.

Organizational competitiveness refers to the ability of an organization to withstand various challenges in the operating environment. It is the various strategies that have been put in place to prepare an organization for eventualities as well as to make it better placed than its competitors to face an ever changing world of economic turbulence. Some organizations adopt technologies that are unique or advanced, while others invest in preparing their staff for all kinds of unforeseen changes. It is also common to use a strong brand as a tool to enhance competitiveness, especially where an organization deals with a product that has a large number of substitutes (Cobb, 2003).

Many organizations also use globalization as a tool for competitive advantage. Survival and growth in competitive environments require achieving global competitiveness. Since globalisation has changed and opened up the world as a market place for us, be it for products, people or financial resources, so to capitalize on this opportunity, organizations have to be moulded to become globally competitive (Varadajaran and Cunningham, 1995).

2.5 Empirical Review

Empirical studies subsection analyses previous studies by scholars on knowledge management and innovation. A number of studies have been carried out globally and locally on strategic knowledge management and organizational competitiveness

2.5.1 Knowledge Generation and Organizational Competitiveness

Study by Yu, Zhang, Lin & Wu (2017) examined the relationship between the knowledge creation process and technological innovation capabilities, and analyzes their effect on a firm's sustainable competitive advantage using a knowledge-based view theoretical framework. We conduct structural equation modeling analyses using survey data from 315 Chinese industrial firms to test the direct and indirect effects of the knowledge creation process on sustainable competitive advantage. Technological innovation capabilities operationalized to reflect the dimensions of process innovation capability and product innovation capability—are used as the mediating variable for explaining the relationship between the knowledge creation process and sustainable competitive advantage. The results indicate that the knowledge creation process does not have a significant direct effect on sustainable competitive advantage. Rather, the knowledge creation process can only influence the sustainable competitive advantage through the mediating effect of technological innovation capabilities completely.

Research by Sulaiman, Hashim, Ibrahim, Hasan, & Oluwatosin (2015) on impact of creativity, knowledge creation to organizational competitiveness noted the impact towards competitiveness becomes increasing important as most learning and training has focused on accumulation of knowledge rather than ensuring practicable skill and knowledge transfer that is central to creativity. This study reported the impact of creativity to organizational competitiveness. The review confined to performance enhancement of creativity leading to organizational competitiveness which is a necessity to match with the transitional changes from knowledge based to creativity. This review unveils organizational performance for stronger and more inclusive growth based on key priorities that complementarily provide the basis for a comprehensive and action-oriented approach to innovation from knowledge creation to problem solving. Creativity leading

to innovation was found to be an integral part of organizational process. However, this finding's strengthens knowledge creation and innovation diffusion to enhance organizational competitiveness using a modified version of Kianto Model.

To spread knowledge involving a certain subject of the results of knowledge management strategies on firm's innovation and incorporated in performance Maroofi, Nayebi and Dehghani (2013) was the aim of the study. This study consisted of 195 Iranian organizations and structural equations modeling, results show that both Knowledge Management strategies influences on innovation and organizational performance directly and indirectly. Thus, one of the main final decisions of the research is that Knowledge Management has been found as a significant mechanism to increase innovation and incorporated in performance. In addition, both codification and personalization strategies have a positive influence on financial results.

Study by Hegazy and Ghorab (2014) assessed the influence of knowledge management processes on organizational business processes' and employees' benefits at an academic institution. The study particularly investigated the effect of knowledge discovery, knowledge capture, knowledge sharing and knowledge application on business processes' effectiveness, efficiency, and innovation; and employees' learning, adaptability, and job satisfaction. Consistent with the literature and previous research, knowledge sharing produces the highest effect on business processes' and employees' benefits. First, supporting knowledge sharing through a corporate portal was positively associated with business processes' innovation; and employees' learning, and adaptability. Second, supporting knowledge discovery was positively associated with business processes' effectiveness, and employees' learning, adaptability, and satisfaction, whereas knowledge capture was positively associated with business processes' efficiency, effectiveness, and business innovation; and employees' learning. Finally, supporting knowledge application had the lowest positive association with business processes and employees. The analysis showed that providing tools that support knowledge application through a corporate portal had a significantly positive effect on business processes' effectiveness and efficiency; and employee satisfaction.

To reconcile the literature on knowledge management and innovation in organizations a by Akram, Siddiqui, Nawaz, Ghauri and Cheema, (2011) pursued this quest. The study sought to examine and elaborate the linkage between knowledge management process and innovation process to dig out the important relationships and flows of activities. The study was induced using qualitative methodology. The relationships postulated and the propositions made were based on the reconciliation of secondary data on the study variables. Theoretical relationships were enriched by the conclusions drawn from keen literature review. By studying several empirical and conceptual studies, the researchers found that different components of Knowledge Management as Knowledge activities, Knowledge types, transformation of knowledge and technology have a significant positive effect in bringing innovation through transformation of knowledge into knowledge assets in organizations.

Results from various studies conclude that a company that is able to effectively develop the acquisition of knowledge and consider it a crucial task can achieve organizational benefits both in innovation and in operating results (Hassan, & Shaukat, 2014; Rahimi *et al.*, 2011). Explicit knowledge is currently collected in enterprises through information technologies such as databases, web sites, e-reports, presentations, and social networks that are inside and outside the organization and that support substantial changes to methodologies and processes (Chen & Huang, 2012). Tacit knowledge based on the experience of employees, customers, and suppliers is an important element for companies given the intellectual value that it represents, which helps to generate innovative ideas (Nonaka *et al.*, 2014). The acquisition of knowledge has become a decisive factor for the improvement of employee training and leads to the strengthening of best practices in innovation in a company (Durst & Edvardsson, 2012). The acquisition of knowledge has significant results that lead to competitive advantage, increased sales, new product development, adaptations, and improvements in innovation processes (Kale & Karaman, 2012, Sain & Wilde, 2014).

2.5.2 Knowledge Management Policy and Organizational Competitiveness

The influence of management knowledge on the firm's innovation competitiveness was examined by Czarnitzki and Wastyn (2009). The firm's ability to introduce new products and products new to the market is affected by the way the firm sources out external knowledge positively. Sharing knowledge by employees ensures cost reduction is obtained and therefore should be encouraged. The cost reduction possibilities of a firm are positively affected by the availability of a codified knowledge management policy. The kind of technical innovation a firm wants to proceed should be carefully selected to have the tools of knowledge management function as important. The study showed knowledge management techniques as having a positive influence on the innovative performance and competitiveness of a firm. The benefits of low cost can be attained by investing on incentives for employees to share knowledge and a codified knowledge management policy be implemented. It is important to source external knowledge for a firm whose interest is to introduce new products. Knowledge management is a broader part of organizational strategy.

To establish the influence of organizational environment on the selection of knowledge management strategies a study was carried out by Greiner, Bohmann and Krcmar (2007). The paper focuses particularly on the relationship between business and knowledge management strategy and the success of the knowledge management initiatives. This paper is a case study researching 11 German and Swiss companies. The knowledge management initiatives were categorized by six criteria (objectives, processes, problems, content, strategy, knowledge type) and their fit with the respective business strategy of the organizational unit was evaluated. The findings in the paper suggest a relationship between the success of knowledge management and the alignment of knowledge management and business strategy. The paper also shows that an organization whose business strategy requires process efficiency should rely primarily on a codification strategy. An organization whose business strategy requires product/process innovation should rely primarily on a personalization strategy. The most successful knowledge management projects were driven by a strong business need and with the goal to add value to the organizational unit operations.

To ascertain the nature and extent of the relationship between knowledge management strategy and organizational competence Mwihia (2008) sought out. The study also sought to determine the relationship between knowledge management strategy, organizational competence and competitiveness. Additionally, the influence of the interaction between knowledge management strategy and organizational competence on competitiveness was also investigated consequently; four hypotheses were formulated for testing in order to meet these key objectives. The research was cross-sectional study that applied a triangulated research approach in order to access the widest possible range of data from the organizations under study A census survey was carried out targeting 118 commercial publishing firms in Kenya involved in publication of educational and general books and managing directors or at least one other top line manager The study used correlation and regression analysis to test the hypotheses relating to the relationships between the study variables. The results of the study showed that there was a very strong and significant relationship between knowledge management strategy and organizational competence and that the two variables in turn had a moderately strong and significant relationship with competitiveness. It also revealed that increased competitiveness was marginally more strongly linked to organizational competence than knowledge management strategy. It was further established that competitiveness was not a function of the interactive relationship between knowledge management strategy and organizational competence even though a combination of the two variables was positively linked to increased competitiveness. In view of these findings, Mwihia (2008) concluded that for enhanced competitiveness, organizations should focus on enhancing both their organizational competence and knowledge management strategies.

2.5.3 Knowledge Organization and Organizational Competitiveness

Knowledge storage involves both the soft or hard style recording and retention of both individual and organizational knowledge in a way so as to be easily retrieved. Knowledge storage utilizes technical systems such as modern informational hardware and software and human processes to identify the knowledge in an organization, then to code and index the knowledge for later retrieval (Stein & Zwass, 2005). In the other words, organizing and retrieving organizational knowledge means knowledge storage by

providing the ability to retrieve and use the information by the individuals. Hansen et al. (2009) differentiate two different knowledge management strategies. To codify explicit knowledge the codification strategy is used. The sharing and storage of knowledge has been made cheaper and easier by networked computer which is on the rise. Knowledge embedded in a firm's staff is modifiable a-priori but not all of it. The persons who developed Knowledge are often closely tied to it; therefore it is often referred to as tacit knowledge. Through interpersonal interaction tacit knowledge can be share. Firms cannot use internal sources to create the knowledge they need but it is realistic.

The focus on the role of middle management in the implementation of knowledge management with the help of KM processes and strategies which eventually leads to competitiveness was a Study carried out by (Nawab, Nazir, Zahid, & Fawad, 2015),. Also the critical success factors of knowledge management on innovation are discussed in the study. The study concludes that the Knowledge Management processes which are Knowledge Creation, Knowledge organizing, Knowledge Storage , Knowledge & Knowledge Utilization have significant but indirect impact on banking industry, and the results showed that these processes are contributing in the enhancement of competitiveness in banking industry .This study concludes that the critical success factors of KM which are HRM, IT, Management leadership & support and Training & education have direct significant impact on banking industry, and the results showed that these factors are contributing towards the better and improved organizational performance in banking sector. The study also concludes that the KM processes which are Knowledge Creation, Knowledge organizing, Knowledge Storage, Knowledge Sharing & Knowledge Utilization have significant but indirect impact on banking industry, and the results showed that these processes are contributing in the enhancement of competitiveness in banking industry.

In the paper, Harlow (2008) examined the use of the tacit knowledge index (TKI) to assess the level of tacit knowledge within firms and its effect on firm performance. A sample of 108 US and Canadian firms that are using knowledge management was surveyed to determine each firm's TKI. This measure includes both the degree of usage

and the tacitness of the knowledge management method. Regression and correlation were used to statistically analyze the innovation and financial outcomes. Significant relationships were found between a firm's level of TKI and the firm's innovation performance. Less clear is the relationship between a higher TKI and financial measures. This research gives managers a way to structure their use of knowledge management methodology and use of resources in a way that may maximize performance, either as standalone systems or as part of the Balanced Scorecard. The use of this research could greatly reduce the uncomfortable gut feeling that many managers have in funding so-called soft tacit-based knowledge management systems rather than invest in easier to assess hardware systems

2.5.4 Knowledge Sharing and Organizational Competitiveness

Study by Nawab, Nazir, Zahid, & Fawad (2015) on Knowledge management, innovation and organizational performance noted that Organizations are striving for innovation and to gain a competitive edge. Knowledge Management put emphasis on particularly this issue. This study has focused on the role of middle management in the implementation of knowledge management with the help of KM processes and strategies which eventually leads to innovation. Also the critical success factors of knowledge management on innovation are discussed in the study. The study concludes that the Knowledge Management processes which are Knowledge Creation, Knowledge organizing, Knowledge Storage , Knowledge Sharing & Knowledge Utilization have significant but indirect impact on banking industry, and the results showed that these processes are contributing in the enhancement of innovation in banking industry

Study by (Lin, 2007), sought to examine the influence of individual factors, organizational factors and technology factors on knowledge sharing processes and whether more leads to superior firm innovation capability. The results showed that two individual factors (enjoyment in helping others and knowledge self-efficacy) and one of the organizational factors (top management support) significantly influence knowledge-sharing processes. The results also indicated that employee willingness to both donate and collect knowledge enable the firm to improve innovation capability.

Another study was carried out by (Hanif, Hanif, Kamran, Khan, & Yunfei, 2016), The study examined how Chinese and Pakistani SMEs use HR Generic Strategies specifically about the mediating role of affective management that influences ‘knowledge sharing’ and ‘innovation performance’. It specifically focused how HR practices adds value to knowledge sharing and innovation by providing essential assurance and dedication to workers and induce them to be enthusiastic to share their knowledge and perform well in innovation. The finding suggested that Affective Commitment mediates high-commitment, knowledge-sharing behavior and Innovation performance in SMEs. The study also explored the level to which employees sharing knowledge within Organizations has positive and significant influence to the Organization’s innovation performance.

Study by Gichuki (2014) sought to determine the knowledge management practices adopted by hotels in the coastal region, Kenya in achieving competitive advantage and the factors that influence adoption of knowledge management for competitive advantage by hotels. The study used a descriptive survey design. A census study was conducted of all high end hotels in the coastal region. The data collected helped to assess the adoption of knowledge management practices. The data collected was meant to establish the extent of implementation of knowledge management practices by the hotels and to help determine the factors that influence adoption of knowledge management by hotels. The study found out that knowledge management practices are adopted by the hotels in the areas of knowledge creation, knowledge acquisition, knowledge filtering, knowledge storage and representation, knowledge application and knowledge distribution and exchange.

Study by Eskandarzadeh, Ebrahimpour and Hasanzadeh (2015) sought to evaluate the effect of Knowledge Management on Innovative Function at Mehre Eghtesad Bank by reviewing the concepts of knowledge management and Strategic innovation. The researchers used census method and questionnaire was distributed among all the 200 people and finally 150 questionnaires fulfilled which were applicable in analyzing data. The data was collected using structured questionnaires. The amount of Chronbach alpha

for questionnaire was % 84 which showed high level of reliability of the questionnaires. SPSS software was used to analyse data. One sample Kolmogorov-Smirnov and Regression was adopted. The results showed that knowledge management affects positively the strategic innovation.

2.5.4 Knowledge Application and Organizational Competitiveness

Research by Seidler-de Alwis, & Hartmann (2008) examined the use of tacit knowledge within innovative organizations. It addresses what organizations can do to promote knowledge sharing in order to improve successful innovation. Compared to available research material on explicit knowledge, the use of tacit knowledge within companies is relatively unexplored. The use of tacit knowledge is assessed with special emphasis on its significance and implications in the innovation process. Existing research is structured with the objective of examining how companies make use of tacit knowledge. Key levers for tacit knowledge management are identified and the positive impact of tacit knowledge on innovation success disclosed. The role of tacit knowledge in innovation management is analysed. Creation, availability and transfer of tacit knowledge within an organization are highlighted. Competitive advantage will be gained when companies value their tacit knowledge because explicit knowledge is knowledge we are already aware of and is public by its nature. Tacit knowledge can be the source of a huge range of opportunities and potentials that constitute discovery and creativity. Practical implications – As this paper focuses on the transfer of tacit knowledge, barriers to successful knowledge transfer are described and success factors are explored which help to secure and improve the transfer of tacit knowledge

A study by Johns (2014) sought to determine the extent of application of knowledge management as a competitive strategy among aviation training institutions in Nairobi. The study adopted a descriptive survey research design because of its ability to create a profile about a phenomenon. The target population comprised aviation training institutions in Nairobi. Primary data was collected using a questionnaire. Knowledge management not only created the value of intellectual assets but also enhance an employee's productivity and competitiveness of the employees. Knowledge management

practices enabled employees and customers to get the information they need on time. Open and flexible organization system promoted knowledge management in an organization. The study concludes that Knowledge is a fundamental factor in the creation of competitive advantages. The study also recommends that knowledge management systems should be provided to ensure greater access to knowledge and equally important is that users' need to be enabled to use the knowledge once it is accessed and to subsequently share it with others. Finally this study recommends that a similar study should be done on the relationship between knowledge management and competitive strategy in all the aviation training institutions in Kenya.

Research by Gómez and Manzanares, (2004) investigates, from the knowledge-based view of the firm, whether there are groups of firms with homogeneous behaviors, as regards to knowledge management strategies (KMS) and tries to identify their influence on innovation management and firm performance. The study focus on the following domains of KMS: conception, objectives, development over time and extension, introduction mechanisms and practice and support systems. These dimensions overcome some difficulties of earlier studies, because it establishes a new KMS typology, with a holistic view of KMS, a greater number of variables and a multi-sectorial analysis. A postal survey was sent to a sample of Spanish firms for empirical research. The results showed important differences in the conception and implementation of KMS, and significant relationships between the performance of some firms and their efficiency in the transmission and application of existing knowledge. They also showed that the complexity of a knowledge strategy has performance implications. The results of the exploratory analysis showed that there are important differences between firms in the knowledge management strategy conception and implementation and a significant relationship among the performance of some firms and their efficiency in the transmission and application of existing knowledge.

Study by Young (2016) was a correlation study to determine if there was a correlation between knowledge management, innovation, and firm performance. Data were collected from 69 CEO/Presidents, Human Resource personnel, or members in leadership positions of the Virginia Ship Repair Association in the mid-Atlantic region of the United States.

The theoretical framework for the study was the unified model of dynamic knowledge creation with the key constructs of the socialization, externalization, combination, and internalization process; places of knowledge sharing, whether they are virtual, physical, or mental, and leadership. Data collection occurred through an online survey. Multiple linear regression analyses significantly predicted the dependent variable, Increasing knowledge sharing and innovation practices provides for positive social change for the personnel of these organizations, since the skills they learn within their organizations are immediately usable in their personal endeavors in their churches, neighborhoods, and family relationships and are transferrable to those they interact with outside of their organizations.

2.5.5 Organizational Innovation and Organizational Competitiveness

Study by Sulaiman, Hashim, Ibrahim, Hasan & Oluwatosin (2015) on impact of creativity to organizational competitiveness noted that organizations increasingly seek to improve creative capability to enhance their performance. Therefore the impact towards competitiveness becomes increasing important as most learning and training has focused on accumulation of knowledge rather than ensuring practicable skill and knowledge transfer that is central to creativity. This study reported the impact of creativity to organizational competitiveness. The review confined to performance enhancement of creativity leading to organizational competitiveness which is a necessity to match with the transitional changes from knowledge based to creativity. This review unveils organizational performance for stronger and more inclusive growth based on key priorities that complementarily provide the basis for a comprehensive and action-oriented approach to innovation from knowledge creation to problem solving. Creativity leading to innovation was found to be an integral part of organizational process. However, this finding's strengthens knowledge creation and innovation diffusion to enhance organizational competitiveness using a modified version of Kianto Model.

Paper by Beyene, Shi, & Wu (2016) on the impact of innovation strategy on organizational learning and innovation performance: noted that though innovation strategy and organizational learning have been credited to impact on product innovation

performance, they have been rarely considered in a single model simultaneously. Thus, the main aim of the paper is to investigate the extent of impact of innovation strategy on organizational learning and product innovation performance. A structural equation modelling analysis was performed on the survey data collected from Ethiopian textile and leather product manufacturing firms. The result reveals that innovation strategy is positively related to product innovation performance. Further, firm size and ownership type moderate the effect of innovation strategy on product innovation performance.

Doğan, E. (2016) on the effect of innovation on competitiveness noted that Innovation being the basis of development and dynamism in all economies is also a determinant of competitiveness defined as the sum of institutions, policies and production factors forming the productivity level of a country. Due to this important role of innovation, companies approach innovation with its broadest sense including both new technologies and new business forms. The fact that companies will obtain the competitive advantage acquired with the help of innovation activities and maintain this advantage with continuous development will also increase the national competitiveness. Nevertheless, national competition creates the innovation pressure on companies. Because of this relation between innovation and competitiveness, the effect of the factors determining the innovation for member and candidate countries of the EU on competitiveness was analyzed and it has been concluded that knowledge-technology output and creative output positively affect competitiveness.

Mathenge (2013) investigated the effects of financial innovation on competitive advantages of telecommunication companies in Kenya. The study used survey correlational research design. The target population for the study was comprised of 250 respondents. The study used both secondary data and primary data collected using questionnaires both structured and unstructured. Data reliability and validity was tested subsequent to the data collection. Quantitative data was analysed using descriptive statistics while qualitative data was analyzed using content analysis. The study findings made the following conclusions and recommended on the same: telecommunications companies indicated growth through financial innovations that gave them a competitive advantage in the ICT (Information, Communication and Technology) field; financial

innovation affects positively the performance of telecommunications companies to a great extent hence they are considered often important for developing services in the telecommunication companies giving them the competitive advantage in the telecommunications field.

2.6 Critical Review

Generally a number studies have been carried out on effect of strategic knowledge practices on innovations and competitiveness. Even with the variety of studies done globally and locally, there still exist gaps in literature that needs to be filled. Hegazy and Ghorab (2014) showed that Knowledge discovery, knowledge capture, knowledge sharing and knowledge application on business processes' effectiveness, efficiency, and innovation; and employees' learning, adaptability, and job satisfaction. Hegazy and Ghorab (2014) however looked at other organizations performance parameters rather than innovation only. Johns (2014), Knowledge management not only created the value of intellectual assets but also enhance an employee's productivity and competitiveness. Knowledge management practices enabled employees and customers to get the information they need on time. Open and flexible organization system promoted knowledge management in an organization. Mwihi 2008 showed that there was a very strong and significant relationship between knowledge management strategy and organizational competence and that the two variables in turn had a moderately strong and significant relationship with competitiveness. It also revealed that increased competitiveness was marginally more strongly linked to organizational competence than knowledge management strategy.

2.7 Research Gap

We are in an error where every country in the world needs to be industrialized. The African continent has not been left out as they are the only way it will be able to have its glory and position in the world. The manufacturing firms creates a milestone towards this achievement and hence the importance of most studies having been done globally and locally in Kenya, it is evident that most studies carried out that relate knowledge management directly to competitiveness have not fully covered the knowledge

management practices and the ones that do, were not been carried out in the manufacturing sector. Kenyan studies have tended to relate knowledge management practices to competitiveness or performance of organization but mostly in banking and service firms. Specifically to the best of my knowledge, no study exists that has looked at influence of strategic knowledge management practices on organizational competitiveness with organizational innovation as moderating variable in manufacturing firms in Nakuru County. Organizational innovation; which are administrative and technical, product and process, radical and incremental are three pairs that have gained significant attention and which part they play to ensure the manufacturing firms gain competitiveness. The current study therefore intended to bridge the gap in literature by seeking to study the moderating role of organizational innovation on the relationship between strategic knowledge management practices and organizational competitiveness in manufacturing firms in Nakuru County, Kenya.

2.8 Summary of Literature

The literature review has elaborated on theoretical review, conceptual framework, study variables review, empirical review, critical review and research gap. The theoretical review discussed four theories that is resource based view theory, organizational learning theory, Unified model of dynamic knowledge creation and competency based theory. The conceptual framework diagrammatically shows the relationship between the independent variable strategic knowledge management and dependent variable organizational competitiveness. The review of study variables gives the meaning of independent variables and how they relate to dependent variable. The empirical review discusses the empirical literature that relates to current study globally and locally. The critical review looks at the achievements of empirical literature and their short comings and finally research gap shows the gaps identified in the empirical literature in terms what they left uncovered.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides details of the methodology that were employed in the study. It discussed the Research design, Target population, Sample frame, sampling technique and sample size, data collection and analysis and their justification.

3.2 Research Design

The study employed a descriptive survey as its research design to establish the relationship between strategic knowledge management practices and organizational competitiveness in manufacturing firms in Nakuru County. Surveys are useful in describing the characteristics of a large population. In addition, it has a high reliability and it is easy to obtain by presenting all subjects with a standardized stimulus which ensures that observer subjectivity is greatly eliminated (Mugenda & Mugenda, 2009). Surveys according to Robson (2002), is the collection of information from a group through interviews or the application of questionnaires to a representative sample of that group. This study employed this design because very large samples are feasible, making the results statistically significant even when analyzing multiple variables.

3.3 Target Population

This study was a survey of all large scale manufacturing firms operating in Nakuru County Kenya in 2017. There are 15 large scale manufacturing firms operating in Nakuru County according to KAM. The respondents were the General Manager, human resource development, production and operations, marketing, research and development managers from each of the 15 large scale manufacturing firms operating in Nakuru County.

3.4 Sample Frame

Sampling frame is the list of all elements from which the sample is to be drawn (Mugenda & Mugenda, 2009). Nakuru County constitutes of only 15 large scale manufacturing firms, a census was done in order to provide a true measure of population.

Purposive sampling was used to select respondents that comprised General Manager, human resource development, production and operations, marketing, research and development managers since they are central in knowledge management as well as innovation and competitiveness within the manufacturing firms.

3.4.1 Sample Size

A sample is the appropriate number of individuals or items that the researcher selects from the population and subject to data collection through the use of the appropriate sampling methods and designs. This study was a survey of the entire 15 large scale manufacturing firms in Nakuru County, Kenya. This therefore means that all the 15 licensed large scale manufacturing firms were subjected to the study. All the 75 respondents that comprise the General Manager, human resource development, production and operations, marketing, research and development managers from the 15 licensed large scale manufacturing firms in Nakuru County formed the sample size.

3.5 Research Instruments

The researcher used a questionnaire as the main data collection instrument to collect data from the respondents. According to Cohen *et al.* (2004) a questionnaire is a collection of items to which a respondent is expected to react, usually in written form. The questionnaires had structured questions inform of Likert scale. The use of questionnaires is justified because they are cost effective and gives adequate time to the respondent to fill in and return to the researcher (Mugenda & Mugenda, 2009). The questionnaire had sections on background data and specific questions on strategic knowledge management practices, organizational innovation and organizational competitiveness.

3.6 Data Collection Procedure

The researcher first obtained introduction letter from the postgraduate school. The researcher then got appointment with the general managers of the 15 manufacturing firms to explain the purpose of the study and get permission to collect data. The researcher then printed questionnaires for eventual distribution to respondents. The questionnaire were administered using a drop and pick later method.

3.7 Pilot Testing

A pilot test was conducted to determine the reliability of the research instrument. This was conducted at Unga limited before the actual data collection. The information generated during pilot study was used for testing reliability and validity of research instrument used in the study.

3.7.1 Validity

Validity is the degree to which a test measures what it purposes to measure. The accuracy of data collected is largely depended on the data collection instruments in terms of validity and reliability (Mugenda & Mugenda 2009). Validity is the degree to which results obtained from the analysis of data actually represents the phenomenon understanding. To establish validity of questionnaires, the researcher solicited the opinions of scholars and experts of strategic management. According to Kothari (2004), validity can be assessed using expert opinion and informed judgment.

3.7.2 Reliability

Reliability refers to the ability of an instrument to produce similar results at different times with the same respondents (Shaughnessy & Zechmeister1997).The study used a two-step measure of reliability. First those items that were tested for reliability by other researchers as cited in the previous section were adopted. Secondly the researcher used the most common measure of internal consistency known as Cronbach Alpha which indicates the extent to which a set of items can be treated as measuring a single latent variable. The recommended value of 0.7 was used as cut off point since a Cronbach Alpha value of less than 0.7 implies that internal consistency among items is weak (Kothari, 2004). The questionnaire was then updated based on the findings of the pilot test and the final version was developed thereafter for use.

3.8 Data Analysis

Completed questionnaires were scrutinized for completeness and then entered into Statistical Package for Social Scientist version 21 computer packages. After entering data into data editor, data cleaning, editing, coding and arrangement for analysis followed

next. Data was then analyzed using the Statistical Package for Social Science (SPSS version 22) software where descriptive and inferential statistics were used. Descriptive statistics in the form of percentages, frequencies, standard deviation, mean, minimum and maximum were employed. Inferential statistics involved bivariate Pearson correlation and multi regression. The data was then presented using tables and their associated explanations.

3.8.1 Statistical Model

The statistical model shows the mathematical relationship between the independent variable strategic knowledge management practices and dependent variable organizational competitiveness.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$$

Where Y is dependent variable organizational competitiveness

X₁- X₅: are independent variables

X₁: knowledge generation

X₂: knowledge organization

X₃: knowledge transfer

X₄: knowledge application

X₅: Knowledge management policy

X₆: organizational innovation

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and β_6 : are the coefficients of independent variables

β_0 : intercept term

e: stochastic error term

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the study and critical analysis of the results. The study sought to analyze the influence of strategic knowledge management practices on organizational competitiveness in large scale manufacturing firm in Nakuru County. The research findings were computed from responses of various management personnel from different departments of the entire population of large scale manufacturing firms in Nakuru County. Consequently, the findings were based on questionnaires which were administered and returned on time by the various respondents.

4.1.1 Response Rate

Out of the 75 questionnaires that were administered among the various respondents at the 15 manufacturing firms, 65 were returned and were useable for the study accounting for 87 % response rate. The high response rate was attainable by employing a number of strategies including: assuring the management that the data collected were only for academic purposes and was not to be diverged for any other purpose and convincing the respondents that the information generated was not to be used to implicate them whatsoever.

4.1.2 Reliability Test

The reliability was measured by calculating internal consistency using Cronbach Alpha Index. The results are shown in table 4.1

Table 4.1: Test of Reliability

Variable	Cronbach Alpha
Knowledge management policy	0.724
Knowledge generation	0.733
Knowledge application	0.802
Knowledge organization	0.745
Knowledge transfer	0.741
Organizational innovation	0.721
Organizational competitiveness	0.784

The value of Cronbach's Alpha for all the variables were above the threshold of 0.7 hence the questionnaire used in the study was reliable enough in measuring the content with high degree of reliability hence the questionnaire could give similar result if used repeatedly in different studies.

4.2 Descriptive Analysis

The aim of the descriptive statistics was to describe the general distributional properties of the data, to identify any unusual observations or any unusual patterns of observations that may cause problems for later analysis to be carried out on the data. Thus initial exploration of the data using simple descriptive tools was provided to describe the study respondents as well as summarize the data generated for the study. The following section provides the descriptive statistics as per the objectives of the study.

4.2.1 Demographic Information

The background information that was retained for analysis relating to the respondents included: the number of years the institution has been in existence, gender distribution and the number of years worked at the firm. The results are summarized in Table 4.2.

Table 4. 2: Demographic Information of the Respondents

Variable	Category	Frequency	Percentage(%)
Experience at the firm	2 years and below	4	6.17
	3 -4 years	6	9.23
	5 -6 years	15	23.10
	6 years and above	40	61.50
	TOTAL	65	100
Age of institution	2 years and below	0	0
	3 -4 years	0	0
	5 -6 years	0	0
	6 years and above	65	100.0
	TOTAL	65	100
Gender	Male	41	63.0
	Female	24	37.0
	TOTAL	65	100

The results in Table 4.2 show that majority (84.6%) of the respondents had worked in the organizations for more than five years. This signifies that there is low staff turnover by management employees in the firms. Hence they could employ their long years of tacit knowledge with their respective firms to improve organizational competitiveness. It is also clear from the results that majority (63.0%) of the respondents were male while 37.5 % were female implying that the organization human resource department has met the two third gender rule stipulated in the constitution of Kenya, (2010) and finally that the all the firms had been in operation for more than six years meaning they were well anchored to invest in knowledge management practices to improve the competitiveness.

4.2.2 Knowledge Management Policy

Knowledge management policy was identified as one of the practice of strategic knowledge management. Therefore, the present study sought to determine the extent to which knowledge management policy was used in the respective companies to improve organizational innovation. All the measures were on a five point Likert Scale where; 1=strongly disagree, 2= Disagree, 3=Not sure, 4=Agree, 5=strongly agree. These results are as summarized in Table 4.3

Table 4. 3: Perceptions to Knowledge Management Policy

Statements	SA %	A %	N %	D %	SD %	N	Mean	Std. Dev
The firm has an effective written knowledge management policy or strategy	69	31	0	0	0	65	4.6923	.46513
The firms have an effective values system or culture intended to promote knowledge sharing	65	35	0	0	0	65	4.6923	.46513
The firm has either policies or programs intended to improve workforce retention	60	40	0	0	0	65	4.6923	.46513
The firm has policies for protection of valuable knowledge within the organization	31	20	29	20	0	65	3.6154	1.12767
The firm knowledge management policy elaborates on knowledge sharing strategies among employees	20	27	42	11	0	65	3.5692	.93490
The policy on knowledge management has adequate strategies for knowledge generation and storage	9	0	39	41	11	65	2.5538	1.01598
knowledge management policy of the firm is accessible to all staff in the organization	40	20	18	11	11	65	3.6769	1.38189
The firm knowledge management policy has strategies for utilization of the knowledge generated	20	29	20	9	22	65	3.1692	1.43145

The results in Table 4.3 indicate ways the manufacturing firms under the study practices strategic knowledge management with respect to existence and preparation of knowledge management policy. The respondents were asked to evaluate different statements about knowledge management policy. The statement that the firm has an effective written knowledge management policy or strategy was supported by all respondents (100%) who agreed meaning the firms have knowledge management policy in place. The statement that the firms have an effective values system or culture intended to promote knowledge

sharing was also supported by all (100%) respondents which indicate that the firms have a sound knowledge sharing culture.

The statement the firm has either policies or programs intended to improve workforce retention was also supported by all respondents which implies the firms are ensuring low rate of staff turnover. The statement that the firm has policies for protection of valuable knowledge within the organization's, was supported by 51% which implies that firms may be losing valuable knowledge from the firms through unauthorized means. Few respondents (47%) supported the statement that the firm knowledge management policy elaborates on knowledge sharing strategies among employees hence most of the employees may not be aware of how to share knowledge. The statement that the policy on knowledge management has adequate strategies for knowledge generation and storage was supported by the least number of respondents (9%) an indication that the level of awareness to the employees in the firm is very low.

Majority of respondents (60%) also supported the statement that knowledge management policy of the firm is accessible to all staff in the organization indicating all the employees have not been exposed to the policy. Finally, 49% of the respondents supported the statement that the firm knowledge management policy has strategies for utilization of the knowledge generated which indicates the policy has not been well developed. Generally most of the respondents agreed with majority of statements on knowledge management policy practice as evidenced by percentages of agreements above 50% and majority of mean responses for almost all statements being above 3 signifying that the majority of firms had a strategic knowledge management policy in place.

4.2.3 knowledge Generation

The study also sought to establish the extent to which knowledge generation was being practiced by the 15 large manufacturing firms in Nakuru Kenya. The respondents were required to rate a number of responses given on Likert scale .The data collected and associated analysis is given in table 4.4.

Table4.4: Level of awareness on Knowledge Generation

Knowledge Generation	SA	A	N	D	SD	N	Mean	Std. Dev
	%	%	%	%	%			
The firm has procedures for acquiring knowledge about our customers	81	19	0	0	0	65	4.18	.391
The firm has processes for generating new knowledge from existing knowledge	22	31	29	9	9	65	3.46	1.199
The firm has procedures for distributing knowledge throughout the organization	9	71	9	0	11	65	3.67	1.032
The firm has procedures for acquiring knowledge about new products	72	28	0	0	0	65	4.72	.450
The firm has procedures for transferring organizational knowledge to individuals	28	63	9	0	0	65	4.18	.583
The firm has procedures for absorbing knowledge from individuals into the organization	52	39	0	9	0	65	4.33	.888
The firm has procedures for integrating different sources and types of knowledge	31	31	27	0	11	65	3.70	1.221
The firm has procedures for organizing knowledge	42	49	9	0	0	65	4.32	.640

Table 4.4 shows the data presentation and analysis of responses about statement on knowledge generation practice in the 15 large scale manufacturing firms in Nakuru County, Kenya. The statement that the firm has procedures for acquiring knowledge about our customers was supported by all (100%) respondents meaning the firms hold the customers interest at heart. The statement that the firm has processes for generating new knowledge from existing knowledge was supported by (52%) respondents showing the firms learn from old ideas to new ones. Majority of respondents (80%) were of opinion that the firm has procedures for distributing knowledge throughout the organization showing a good relationship between different departments.

The statement that the firm has procedures for acquiring knowledge about new products/services within the industry was supported by (100%) of the respondents

showing good attributes on firm benchmarking. Majority of respondents (91%) also supported the statement that the firm has procedures for transferring organizational knowledge to individuals showing the growth of the firm is distributed to all the employees. Almost all the respondents (91%) supported the statement that the firm has procedures for absorbing knowledge from individuals into the organization this shows that the firms ensures employees feel like owners of the firm. Finally, the statements that the firm has procedures for integrating different sources and types of knowledge, and that the firm has procedures for organizing knowledge , was supported by 62% and 91% respectively, presenting a keen interest of the firm's management to ensure a system that encourages smooth running of affairs. It is evident that knowledge generation is an important practice that is ongoing in all large scale manufacturing firms in Nakuru County as evidenced by majority of respondents who supported different statements on knowledge generation. The mean responses for majority of statements was found to be above 4 (>4), this means that knowledge generation practice was taken seriously in most of the firms studied.

4.2.4 Knowledge Application

The study also sought to establish the extent to which knowledge was being applied by the 15 large scale manufacturing firms in Nakuru County, Kenya. A likert scale was utilized for this purpose with statements that were rated by the respondents in the study. The results are presented in table 4.5.

Table 4. 5: Levels of awareness on Knowledge Application

Statements	SA	A	N	D	SD	N	Mean	Std.
	%	%	%	%	%			Dev
The firm procedures for using knowledge in development of new products/services	40	60	0	0	0	65	4.40	.493
The firm has processes for using knowledge to solve new problems	51	11	20	18	0	65	3.93	1.210
The firm uses knowledge to improve efficiency	49	51	0	0	0	65	4.49	.503
The firm uses knowledge to adjust strategic direction of the firm	69	9	0	22	0	65	4.26	1.228
The firm has processes to protect knowledge from inappropriate use inside the organization	71	0	0	0	29	65	4.12	1.375
The firm has processes to protect knowledge from inappropriate use outside the organization	60	40	0	0	0	65	4.60	.493
The firm has elaborate policies and procedures for protecting trade secrets	69	31	0	0	0	65	4.69	.465
The firm values and protects knowledge embedded in individuals	82	18	0	0	0	65	4.81	.391

Table 4.5 shows the results of the responses on the statements about knowledge application in the large scale manufacturing firm in Nakuru County, Kenya. Statement that the firm procedures for using knowledge in development of new products/services was supported by (100%) respondents showing that knowledge is key for the growth of the firms. A big portion of respondents (62%) supported the statement that the firm has processes for using knowledge to solve new problems indicating continues improvement of the firms. Still all respondents (100%) were of the opinion that the firm uses

knowledge to improve efficiency implying knowledge is important for good productivity and innovation.

The statement that the firm uses knowledge to adjust strategic direction of the firm was supported by (100%) respondents indicating the importance of knowledge in steering a firm into the future. Majority of respondents (71%) strongly agreed with the statement that the firm has processes to protect knowledge from inappropriate use inside the organization indicate misuse of knowledge can lead to poor development and misuse of resources. All respondents (100%) were also of the opinion that the firm has processes to protect knowledge from inappropriate use outside the organization showing that the firm protects its self from unfair competition if the knowledge is shared without proper guidelines. The statement that the firm has elaborate policies and procedures for protecting trade secrets was supported by 100% respondents giving each firm its own competitive advantage and finally, the statement that the firm values and protects knowledge embedded in individuals was supported (100%) respondents showing that the firms have a way of accepting innovative ideas from its employees.

Generally it was evident that the 15 large scale manufacturing firms studied in Nakuru County, Kenya were applying knowledge management especially in improving organizational innovation. This is evidenced further by majority of mean responses being above 4 with the exception of one statement.

4.2.5 Knowledge Transfer

The study was also interested in establishing the extent to which Knowledge was being transferred in the organization between staff at the 15 large scale manufacturing firms in Nakuru, Kenya. This was also evaluated using likert scale where the respondents were required to rate the statements given. The results are presented in table 4.6

Table 4.6: Level of awareness on Knowledge Transfer

Statements	SA	A	N	D	SD	N	Mean	Std. Dev
	%	%	%	%	%			
The firm has a culture of knowledge sharing among employees	40	60	0	0	0	65	4.40	.493
Information system allows and encourages knowledge sharing among staff	58	42	0	0	0	65	4.58	.496
The firm gives motivation to encourage knowledge sharing among staff	40	36	11	13	0	65	4.60	.493
The firm encourages sharing of knowledge and experience with other staff through special topic reports	20	70	5	5	0	65	4.20	.403
The management of the firm share knowledge and experience with other staff through means like journals, diaries and seminars	60	40	0	0	0	65	4.60	.493
The firm knowledge is stored in a way that encourages sharing among staff	29	51	9	11	0	65	4.29	.458
The firm encourages workers to continue their education by providing funding for work-related courses, on job training	52	38	0	0	0	65	4.61	.490
The firm facilitates the sharing of knowledge and information by accessing directories or expertise locators to find subject-matter experts	60	29	11	0	0	65	4.60	.493
The firm facilitates virtual knowledge-sharing via Communities of Practice	71	29	0	0	0	65	4.70	.458

The, Table 4.6 presents results of data analysis about the responses on the statements about knowledge transfer practice in the large scale manufacturing firms in Nakuru County, Kenya. The statement that the firm has a culture of knowledge sharing among employees was agreed upon by all respondents (100%) showing that firms have embraced sharing of knowledge. Majority of the respondents (98%) too agreed with the statement that information system allows and encourages knowledge sharing among staff

indicating an elaborate system on sharing of knowledge among the firms under the study. About 76% of the respondents also agreed with the statement that the firm gives motivation to encourage knowledge sharing among staff bringing the aspect of staff inclusion on matters of the firm.

The firm encourages sharing of knowledge and experience with other staff through special topic reports, this statement was supported by 90% of the respondents showing that firms have embraced an integrated system to steer the firm forward. The statement that the management of the firm share knowledge and experience with other staff through means like journals, diaries and seminars was supported by all respondents (100%) showing the growing of the firm is dependent on the level of knowledge sharing. The statement that the firm knowledge is stored in a way that encourages sharing among staff was supported by about 80% of the respondents bring out the firm ability to rely on its employee for innovation.

All respondents (90%) agreed with the statement that the firm encourages workers to continue their education by providing funding for work-related courses, on job training showing that firms under the study invest on their employees. Majority of the respondents (89%) were of the opinion that the firm facilitates the sharing of knowledge and information by accessing directories or expertise locators to find subject-matter experts signifying the level of confidence bestowed in the employees.

Finally, all respondents (100%) supported the statement that the firm facilitates virtual knowledge-sharing via Communities of Practice or team not located in the same geographical area indicating that all the firms operations are intertwined to ensure movement of the firm on the same direction at all stations. Knowledge sharing practice was generally agreed upon by all respondents in good measure as supported by majority of respondents who supported the statements about knowledge sharing by either strongly agreeing or just agreeing (91%). This is exemplified further by mean responses of above 3 simplifying that the 15 large scale manufacturing firms are sharing knowledge to a great measure.

4.2.6 Knowledge Organization

The study also wanted to establish the extent to which knowledge was being organized by the large scale manufacturing firms in Nakuru Kenya. The respondents were required to rate a number of responses given on Likert scale .The data collected and associated analysis is given in table 4.7

Table 4. 7: Level of awareness on Knowledge Organization

Statements	SA %	A %	N %	D %	S D %	N	Mea n	Std. Dev
Firm has categorized knowledge into tacit and explicit knowledge categories	0	31	60	9	0	65	3.21	.599
The firm uses computer technology to organize and store knowledge	0	69	31	0	0	65	3.69	.465
The form of knowledge organization in the firm enables easy sharing of the same	11	40	40	9	0	65	3.52	.812
The firm has processes used for knowledge dissemination and feedback using IT	40	40	11	9	0	65	2.16	1.153
The management takes the knowledge organization seriously	0	31	20	29	20	65	2.61	1.127
Knowledge is stored both in soft copy and hard copy	0	29	51	20	0	65	3.09	.700
Knowledge organization format encourages innovation and competitiveness in the organization	9	31	29	11	20	65	2.98	1.268

The Table 4.7 shows the results of the responses on the statements about knowledge organization in the large scale manufacturing firm in Nakuru County, Kenya. The statement that the firm has categorized knowledge into tacit and explicit knowledge categories was supported by only 31% of the respondents indicating that the firms have not put in place processes to ensure that knowledge is categorized. Majority of the respondents (69%) who responded were of the opinion that the firm uses computer technology to organize and store knowledge showing that firms have embraced information technology to a greater extent. The statement that the form of knowledge organization in the firm enables easy sharing of the same was agreed upon by about half

of the number of respondents (51%) showing knowledge organization was not embraced properly by the firms.

About 80 % of the respondents supported the view that the firm has processes used for knowledge dissemination and feedback using information technology showing that the use of knowledge is controlled within the firm by use of website and internet. The statement that the management takes the knowledge organization seriously was supported by only 31% of respondents an indication that there is laxity when it comes to knowledge organization which could have contributed to a low percentage on the statement that the form of knowledge organization in the firm enables easy sharing of the same was agreed upon by about half of the number of respondents (51%). Additionally, only 29% of the respondents supported the statement that knowledge is stored both in soft copy and hard copy as most knowledge resides in people as tacit knowledge. Finally, only 40% of the respondents supported the statement that knowledge organization format encourages innovation in the organization which can also attribute to the fact that the firms had a low percentage on sharing of knowledge (51%). Generally, the low percentage (47%) of respondents who supported the statements about knowledge organization was clear indication that knowledge was not well organized in most of the firms.

4.2.7 Organizational Innovation

The researcher also sought to establish the extent to which the 15 large scale manufacturing firms in Nakuru Kenya were performing in terms of innovation. The respondents were required to rate a number of responses given on Likert scale .The data collected and associated analysis is given in table 4.8.

Table 4. 8: Awareness levels on Organizational innovation

	SA %	A %	N %	D %	SD %	N	Mea n	Std. Dev
Firm has enhanced goods quality	40	60	0	0	0	65	4.40	.493
The number of new or improved products and services launched to the market is superior to the average product in the industry	60	40	0	0	0	65	4.60	.493
The firm has widen the line of products without increasing costs	49	51	0	0	0	65	4.49	.503
The firm has been able to continuously improve products due to market research	63	37	0	0	0	65	4.63	.486
The firm has prevented duplicate or redundant operations	41	50	9	0	0	65	4.52	.812
New methods of serving customers that are more efficient has been implemented continuously	40	49	11	0	0	65	4.29	.654
The firm has improved operational performance through collaborative efforts of communities of practice	51	38	0	0	11	65	4.18	1.210
The firm has minimize the cost of production greatly	48	11	31	10	0	65	3.95	1.110
The firm has been able to improve the management structure	33	28	30	9	0	65	3.83	.993
Application of knowledge management practices in the firm provides evidence of organizational reform and transformation	39	40	0	22	0	65	3.95	1.124
The firm structure is flexible and encourages improved performance among the staff	32	39	18	11	0	65	3.92	.973
The firm has used knowledge about prospective customer needs to expand the existing products into new untapped markets	38	42	11	9	0	65	4.09	.930
The has identified new uses of the current products	54	28	18	0	0	65	4.35	.779
The has improved the performance of sales personnel	80	11	9	0	0	65	4.70	.630

Table 4.8 shows the distribution of responses about the organizational innovation in the 15 large scale manufacturing firms in Kenya. Responses about organizational innovation

were grouped into four comprising product, process, market and administrative innovation as explained in following subsections.

4.2.7.1 Product Innovation

The statement that the firm has enhanced goods quality using knowledge resources was supported by all the respondents (100%) showing that knowledge is a resource that should be guarded by firms. All the respondents (100%) were of the view that the number of new or improved products and services launched to the market is superior to the average product in the industry showing that knowledge is important in any innovative firm. The respondents of (100%) also supported the statement that the firm uses knowledge management to widen the line of products without increasing costs showing well unutilized internal source of knowledge can reduce cost to the firm. The statement that the firm has been able to continuously improve products due to market research was also supported by (100%) respondents showing the firms under study invest in market research to ensure they stay relevant. Generally, it's evident that most of the organizations studied used knowledge management to improve product innovation as shown by mean responses of above 4 supporting statements about product innovation.

4.2.7.2 Process Innovation

As shown in table 4.8, the statement that through the use of knowledge management practices, the firm has prevented duplicate or redundant operations was supported by (91%) of respondents signifying that firms are on the look out to ensure its resources are well utilized for innovation purposes. The study also showed that 89% of the respondents supported the statement that knowledge about new methods of serving customers that are more efficient has been implemented continuously putting customers as key indicators for the growth of the firm. Additionally, the statement that the firm has improved operational performance through collaborative efforts of communities of practice was supported 89% of the respondents this brings the aspect of group consolations within the organization for the betterment of the products. Finally, the statement that Knowledge management has enabled the firm to minimize the cost of production greatly was supported by 59% of the respondents showing that a proper management of knowledge

can ensure reduction in operational cost for the firm which will enhance increased sales turnover. The results of the study shows that most of the organizations that participated in the study used knowledge generated to improve process innovation by the fact that the mean was well >4.

4.2.7.3 Administrative Innovation

Table 4.8 also shows responses about the extent of administrative innovation in the firms studied. The statement that the firm has been able to improve the management structure using external knowledge sources was supported by 61% of the respondents an indicator that firms familiarize themselves with the happening within the same industry. About 79% of the respondents were of the view that the application of knowledge management practices in the firm provides evidence of organizational reform and transformation a good indicator that reforms to occur in any firm knowledge has to be applied. The statement that the firm structure is flexible and encourages improved performance among the staff was supported by 71% of the respondents signifying that each employee plays a key role the growth of the firm. The high percentages of (70%) respondents who supported statements administrative innovation is a clear indication that strategic knowledge management has also been used to support administrative innovation in the respective firms, confirmed by a mean of >3.

4.2.7.4 Market Innovation

Finally table 4.8 shows results about responses on market innovation by the large scale manufacturing firms in Nakuru County, Kenya. The statement that the firm has used knowledge about prospective customer needs to expand the existing products into new untapped markets was supported by majority of respondents (80%) showing the important of creating customer loyalty which will help the firm place itself better in the market. Additionally, 82% of the respondents were of the opinion that the respective firms had used research knowledge to identify new uses of the current products (OI13) investment in knowledge research for any firm is inevitable if a firm wants to have its market share. Finally, majority of the respondents (91%) agreed with the statement that the firm uses knowledge management to improve the performance of sales personnel which indicates that the firm continually trains its employee to ensure it maintains its

market share. It's also evident enough that the firm uses knowledge to improve market innovation as shown by high percentages of respondents (79%) who supported statements on market innovation. Mean responses are also above 3.8.

4.2.8 Organizational Competitiveness

The researcher also sought to establish the competitiveness of the 15 large scale manufacturing firms in Nakuru. The respondents were required to rate a number of responses given on Likert scale .The data collected and associated analysis is given in table 4.9.

Table 4. 9: Level of Awareness on Organizational Competitiveness

Statements	SA %	A %	N %	D %	S D %	N	Mea n	Std. Dev
The firm is producing products that are of superior value	32	58	7	3	0	65	3.31	.591
The firm has achieved competitiveness through adoption of organic organizational structure	0	68	32	0	0	65	3.89	.466
The firms efficiency has improved greatly since adoption of strategic knowledge management	20	51	20	9	0	65	3.55	.912
The firm has been actively involved in cost cutting decisions	45	35	12	8	0	65	3.66	1.150
The firm is currently a cost leader in the industry	20	43	7	30	20	65	3.71	1.113
The products of the firm are very distinct from those of competitors	29	51	5	15	0	65	3.97	.712
the firm has the latest manufacturing technology which is very efficient	30	45	3	7	15	65	3.98	1.268

Table 4.9 shows the responses on the opinion on different statements about the competitiveness of the 15 Manufacturing firms in Nakuru County. The statement that the firm is producing products that is of superior value was supported by majority (90%) of respondents who agreed with the statement. The statement that the firm has achieved competitiveness through adoption of organic organizational structure was supported by 68% of the respondents who agreed with the statement with the remaining respondents having contrary opinion. Majority of the respondents (71%) supported the statement the

firm' efficiency level has improved greatly since adoption of strategic knowledge management with only 29% of respondents having opinion of the contrary. The statement that the firm has been actively involved in cost cutting decisions was agreed upon by majority of respondents who felt that their respective firms were doing all they could to reduce the cost of operation. The statement that the firm is currently a cost leader in the industry was agreed upon by 63% of the respondents who felt that their firm was performing well as far as costs of operation are concerned. Majority of the respondents (80%) who filled the questionnaires were of the opinion that the products of the firms are very distinct from those of competitors by agreeing with the statement and finally the statement that the firm has the latest manufacturing technology which is very efficient was supported by 75% of the respondents who filled the questionnaires. The high percentages of (70%) respondents who supported statements organizational competitiveness is a clear indication that strategic knowledge management has also been used to support organizational competitiveness in the respective firms, this is id confirmed by a mean of responses above 3(>3).

4.3 Correlation Analysis

In this subsection the correlation analysis using the Pearson Product Moment Correlation was made to first determine the degree of multicollinearity between the independent variables and also show the degree of their association with the dependent variable separately and the resulting correlation matrix given in Table 4.9.

Table 4. 10 : Bivariate Pearson Correlation Coefficient

		KMP	KG	KA	KT	KO	OI	COM P
KMP	Pearson Correlation	1	-.331**	.218	.261*	.259*	.429**	.432**
	Sig. (2-tailed)		.007	.081	.036	.037	.000	.000
	N	65	65	65	65	65	65	65
KG	Pearson Correlation	-.331**	1	.044	.434**	.410**	.382**	.391**
	Sig. (2-tailed)	.007		.728	.000	.001	.002	.001
	N	65	65	65	65	65	65	65
KA	Pearson Correlation	.218	.044	1	.187	.313*	.301*	.321*
	Sig. (2-tailed)	.081	.728		.135	.011	.015	.019
	N	65	65	65	65	65	65	65
KT	Pearson Correlation	.261*	.434**	.187	1	.261*	.696**	.712**
	Sig. (2-tailed)	.036	.000	.135		.036	.000	.000
	N	65	65	65	65	65	65	65
KO	Pearson Correlation	.259*	.410**	.313*	.261*	1	.354**	.366**
	Sig. (2-tailed)	.037	.001	.011	.036		.004	.002
	N	65	65	65	65	65	65	65
OI	Pearson Correlation	.429**	.382**	.301*	.696**	.354**	1	0.852**
	Sig. (2-tailed)	.000	.002	.015	.000	.004		.000
	N	65	65	65	65	65	65	65
COMP	Pearson Correlation	.432**	.391**	.321*	.712**	.366**	0.852**	1
	Sig. (2-tailed)	.000	.001	.019	.000	.002	.000	
	N	65	65	65	65	65	65	65
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

Independent Variables: Knowledge Management Policy (KMP), Knowledge Generation (KG), Knowledge Transfer (KT), Knowledge Organization (KO) and Knowledge Application (KA) and Organizational Innovation (OI) and **Dependent variable:** Organizational competitiveness (COMP)

The results in Table 4.10, shows the correlation between Strategic Knowledge Management Practices variables and organizational competitiveness in large scale manufacturing firms in Nakuru county Kenya. Knowledge management policy was positively and significantly correlated with organizational competitiveness ($r = .432^{**}$, $p = 0.00$, $\alpha = 0.05$), while knowledge geration was positively and significantly correlated with the organizational competitiveness ($r = .391^{**}$, $p = .001$, $\alpha = 0.05$). Knowledge application was positively and significantly correlated with organizational competitiveness ($r = .321^*$, $p = .019$, $\alpha = .05$). The correlation between knowledge transfer and organizational competitiveness was positively and significant correlated ($r = .712^{**}$, $p = .000$, $\alpha = .05$). Knowledge organization was positively and significant correlated with organizational competitiveness ($r = .366^{**}$, $p = .002$, $\alpha = .05$) and finally the correlation between organizational innovation and organizational competitiveness was positively and significantly correlated ($r = 0.852^{**}$, $p = .000$, $\alpha = .05$)

4.4. Regression Analysis

The study used simple OLS Regression analysis to see the causal effect relationship between the variables. That was multiple in natures as there were five independent variables and one moderating variable. The independent variables were knowledge management policy, knowledge generation, knowledge application, knowledge transfer and knowledge organization and the moderating variable was organizational innovation. The dependent variable was organizational competitiveness. Multiple regression analysis involved calculation of coefficient of determination (R^2), Analysis of Variances (ANOVA) and regression coefficients.

Table 4. 11 : Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.929 ^a	.863	.849	.14656

a. Predictors: (Constant), knowledge Organization, Knowledge Policy, Knowledge transfer, knowledge Application, knowledge Generation and organizational innovation.

In table 4.11, the overall correlation coefficient (R) between independent variables strategic knowledge management practices and organizational competitiveness was found

to be .929. This means that there was a strong positive relationship between strategic knowledge management practices and organizational competitiveness. Furthermore, it indicates that the model explains only 86.3 % of the variations in organizational competitiveness in large scale manufacturing firms in Nakuru County as shown by coefficient of determination (R^2) of 0.863 with the remaining 13.7% of the variation in organizational competitiveness being explained by other factors

Table 4. 12: Analysis of Variances

Model		Sum of Squares	Df	Mean Square	f	Sig.
1	Regression	7.847	6	1.308	60.887	.000 ^b
	Residual	1.246	58	.021		
	Total	9.093	64			

Dependent Variable: Organizational competitiveness, b. **Predictors:** (Constant), knowledge Organization, Knowledge Policy, Knowledge transfer, knowledge Application, knowledge Generation and organizational innovation

According to table 4.12 the F value of 60.887 with an overall significance of model 1 was .000. The level of significance was lower than 0.05 and this means that strategic knowledge management practises shows statistically significant influence on organizational competitiveness in large scale manufacturing firms in Nakuru County, Kenya.

Table 4. 13: Coefficients of Independent Variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	Constant	4.258	.807		5.277	.000		
	KMP	.045	.025	.108	1.772	.082	.633	1.579
	KG	.464	.054	.514	8.566	.000	.657	1.521
	KA	1.089	.084	.064	12.96	.000	.653	1.532
	KT	1.096	.177	.437	6.199	.000	.474	2.109
	KO	.063	.041	.091	1.539	.129	.678	1.476
	OI	1.132	.126	.709	9.014	.000	.381	2.622

a. Dependent Variable: Organizational competitiveness(COMP)

Table 4.13 further, shows the coefficients of independent variables (knowledge management policy, knowledge generation, knowledge application, and knowledge transfer, knowledge organization and organizational innovation) the values of β and values of t . The model was thus estimated as shown in equation (2).

$$\text{COMP} = 4.258 + .045 \text{ KMP} + .464 \text{ KG} + 1.089 \text{ KA} + 1.096 \text{ KT} + .063 \text{ KO} + 1.132 \text{ OI}.$$

The estimated model equation simplifies the causal effect relationship between strategic knowledge management practices and organizational competitiveness in large scale manufacturing firms in Nakuru County, Kenya. The value 4.258 is the intercept term of the model showing the level of organizational competitiveness when the independent variable in the model are held constant at zero. Knowledge generation had a statistically significant influence on organizational competitiveness ($\beta_1 = .464$, $t = 8.566$, $p = .000$ and $\alpha = 0.05$), the null hypothesis that knowledge generation has no significant influence on organizational competitiveness was thus rejected. Knowledge organization had statistically insignificant influence on organizational competitiveness ($\beta_2 = .063$, $t = 1.539$, $p = .129$ and $\alpha = 0.05$), the null hypothesis that knowledge organization has no significant influence on organizational competitiveness was thus accepted. Knowledge transfer had a statistically significant influence on organizational competitiveness ($\beta_3 = 1.096$, $t = 6.199$, $p = .000$ and $\alpha = 0.05$), null hypothesis that knowledge transfer has no significant influence on organizational competitiveness was thus rejected. Knowledge application had a statistically significant influence on organizational competitiveness ($\beta_4 = 1.089$, $t = 12.964$, $p = .000$ and $\alpha = 0.05$), the null hypothesis that knowledge application has no significant influence on organizational competitiveness was thus rejected. Knowledge management policy had a statistically insignificant influence on organizational competitiveness ($\beta_5 = .045$, $t = 1.772$, $p = .082$ and $\alpha = 0.05$), the null hypothesis that knowledge management policy has no significant influence on organizational innovation was thus accepted and finally organizational innovation had a statistically significant influence on organizational competitiveness ($\beta_6 = 1.132$, $t = 9.014$, $p = .000$ and $\alpha = 0.05$), hence null hypothesis that organizational innovational has a significant influence on organizational competitiveness was thus rejected.

4.5 Discussion of Findings

The study sought to establish the influence of strategic knowledge management practices on organizational competitiveness. The study carried out correlation analysis between the major variables of the study. Knowledge management policy was positively and significantly correlated with organizational competitiveness ($r = .432, p = 0.00, \alpha = 0.05$). The positive correlation means that organization having well prepared knowledge management policy document experienced improved competitiveness as compared to firms with poorly prepared knowledge management policies. Knowledge generation was positively and significantly correlated with the organizational competitiveness ($r = .391, p = .001, \alpha = 0.05$). The positive correlation means that organizations with high rate of knowledge generation also experienced improved organizational competitiveness. This study is supported by a study by (Darroch & McNaughton, 2002) that concluded that through the establishment of strategies and policies for the use of knowledge, KM has been identified as an important element to generate creativity and boost innovation and competitiveness by extension.

Knowledge application was significant and positively correlated with organizational competitiveness ($r = .321, p = 0.019, \alpha = 0.05$). The positive association between knowledge application and organizational competitiveness could be explained by the fact that when organization applies its knowledge assets in production process it's expected that the knowledge can be converted into unique products and processes. The correlation between knowledge transfer and organizational competitiveness was significant ($r = .712, p = .000, \alpha = 0.05$). The strong positive association between knowledge transfer and organizational competitiveness could be explained by the fact that when knowledge asset is shared among employees it is possible they could use the knowledge shared to improve organizational product and process. Knowledge organization was positively and significantly correlated with organizational innovation ($r = .366, p = .002, \alpha = 0.05$). The association between knowledge organization and organizational competitiveness was weak but positive. The positive correlation means than an organization with well-organized and stored knowledge assets is likely to experience improved competitiveness since organization of knowledge makes it possible to retrieve the assets if needed for the

purpose of improving organizational competitiveness. Finally, the correlation between organizational innovation and organizational competitiveness was positively and significantly correlated ($r = 0.852^{**}$, $p = .000$, $\alpha = .05$). This finding is similar to the study by Johns (2014) that found out Knowledge management not only created the value of intellectual assets but also enhance an employee's productivity and competitiveness of the employees.

Knowledge generation had a statistically significant influence on organizational competitiveness ($\beta_1 = .464$, $t = 8.566$, $p = .000$ and $\alpha = 0.05$), the null hypothesis that knowledge generation has no significant influence on organizational competitiveness was thus rejected. The influence was significant meaning knowledge generation was very important to achieve organizational competitiveness. The knowledge generated should be used for decision making concerning products, service delivery and process improvement hence organizational competitiveness. Further the coefficient is positive showing positive influence and a unitary change in knowledge generation leads to 0.464 units change in organizational competitiveness in the same direction of change as do the knowledge generation. This study is in agreement with studies by Hegazy and Ghorab (2014) who assessed the influence of knowledge management processes on organizational business processes' and employees' benefits at an academic institution finding that knowledge discovery was positively associated with business processes' effectiveness, and employees' learning, adaptability, and satisfaction.

Knowledge organization had statistically insignificant influence on organizational competitiveness ($\beta_2 = .063$, $t = 1.539$, $p = .129$ and $\alpha = 0.05$), the null hypothesis that knowledge organization has no significant influence on organizational competitiveness was thus accepted. The influence of knowledge organization on organizational competitiveness was not statistically significant. This could be explained by the fact that organization of knowledge does not necessary mean the knowledge assets will be utilized in decision making to improve a firms competitiveness as the codified knowledge could be lying idle due to inappropriateness of knowledge assets that are not actionable for improvement of organizational competitiveness. The influence was positive meaning a unitary change in knowledge organization is expected to lead to .063 units change in organizational competitiveness in the same direction. The findings are in congruence with

study by (Nawab, et al, 2015), that concluded that Knowledge organizing have significant but indirect impact on banking industry, and the results showed that these processes are contributing in the enhancement of innovation and competitiveness in banking industry

Knowledge transfer had a statistically significant influence on organizational competitiveness ($\beta_3 = 1.096$, $t = 6.199$, $p = .000$ and $\alpha = 0.05$), null hypothesis that knowledge transfer has no significant influence on organizational competitiveness was thus rejected. The influence of knowledge transfer on organizational competitiveness was statistically significant implying that the influence of knowledge transfer on organization was major since at the heart of any competitive advantage, a knowledge asset is required and this knowledge needs to be shared between those who have it or store it with those who need to use it to make decisions regarding organizational product innovation and competitive advantage gain. The external knowledge needs to be transferred and shared with managers concerned with improving organizational competitiveness. The influence is positive meaning a unitary increase in knowledge transfer within the organization leads to improved competitiveness by 1.096 units in the same direction. The results of the current study is supported by (Lin, 2007), that noted that employee willingness to donate knowledge enable the firm to improve innovation capability and firm competitiveness .

Knowledge application had a statistically significant influence on organizational competitiveness ($\beta_4 = 1.089$, $t = 12.964$, $p = .000$ and $\alpha = 0.05$), the null hypothesis that knowledge application has no significant influence on organizational competitiveness was thus rejected. The influence of knowledge application on organizational competitiveness was statistically significant implying that knowledge application is central to organizational competitiveness. This significant influence could be explained by the fact that it's not just enough to generate and transfer knowledge. The knowledge needs to be utilized by decision makers to improve organizational competitiveness. Further, the influence is positive meaning one unit change in knowledge application should lead to 1.089 units change in organizational competitiveness in the same direction. These results are supported by Gómez and Manzanares, (2004) who found that there is a

significant relationship among the performance of some firms and their efficiency in the transmission and application of existing knowledge.

Knowledge management policy had a statistically insignificant influence on organizational competitiveness ($\beta_5 = .045$, $t = 1.772$, $p = .082$ and $\alpha = 0.05$), the null hypothesis that knowledge management policy has no significant influence on organizational competitiveness was thus accepted. The influence of knowledge management policy on organizational competitiveness was also statistically insignificant meaning that knowledge management policy is not very important for any organization dreaming about improving its competitiveness. The knowledge management policy serves as a blue print on which other strategic knowledge management practices are based. Without a good policy on knowledge management, then other practices such as knowledge organization, Knowledge generation, knowledge application and knowledge transfer and would not be achieved easily. However, the influence is not a major one since just having the document itself does not translate to improved competitiveness unless implemented. The influence is also positive meaning a unitary change in the quality of knowledge management policy would influence organizational competitiveness by .045 units in the same direction. Study by Mwhia (2008) found similar results that showed that there was a very strong and significant relationship between knowledge management strategy and organizational competence.

Finally organizational innovation had a statistically significant influence on organizational competitiveness ($\beta_6 = 1.132$, $t = 9.014$, $p = .000$ and $\alpha = 0.05$), hence null hypothesis that organizational innovation has a significant influence on organizational competitiveness was thus rejected. The influence was statistically significant since any improvement in innovation in terms of products, market and processes should lead to superior customer value delivery through unique products and services that eventually results to improved competitiveness of a firm in the industry. Firms that are highly competitive are those that are experiencing high level of innovation. The influence was positive such that a unitary change in innovation leads to 1.132 units change in organizational competitiveness in the same direction. The study is in congruence with

study by Doğan (2016) on the effect of innovation on competitiveness noted that innovation being the basis of development and dynamism in all economies is also a determinant of competitiveness.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter provides a summary of findings, presents conclusions from the findings upon which recommendations are made, and then finally suggestions for further research. This study aimed to examine the influence of strategic knowledge management practises on organizational competitiveness of large scale manufacturing firms in Nakuru County, Kenya.

5.2 Summary of Findings

The study findings indicated that the organizational competitiveness could be attributed to strategic knowledge management practises that formed the independent variables of this study. The individual summaries of all the variables are presented in the following sub-section.

5.2.1 Knowledge Management Policy

Concerning the first objective, majority of responds supported the statement about variable knowledge management policy as being important by large scale manufacturing firms to improve organizational competitiveness. This is evidenced by high percentages of respondents who strongly agreed or just agreed with most statements on the likert scale about influence of knowledge generation on organizational competitiveness. Knowledge management policy was positively and significantly correlated with organizational innovation. The positive correlation means that organization having well prepared knowledge management policy document experienced improved competitiveness as compared to firms with poorly prepared knowledge management policies. Regression analysis showed that knowledge management policy had a statistically insignificant influence on organizational competitiveness. The influence was also statistically insignificant meaning that knowledge management policy is not very important for any organization dreaming about improving its innovativeness.

5.2.2 Knowledge Generation and Organizational Innovation

Concerning the second objective, majority of respondents supported the statement about variable knowledge generation as being by large scale manufacturing firms to improve organizational competitiveness. This is evidenced by high percentages of (83.5%) respondents who strongly agreed or just agreed with most statements on the likert scale about influence of knowledge generation on organizational competitiveness. The correlation between knowledge generation and organizational competitiveness was significant and positive signified by a mean of >4 . This moderate correlation suggests that when the management of large scale manufacturing firms in Nakuru improved knowledge generation, the organizational competitiveness improved greatly. Based on regression analysis, it was established that knowledge generation had a statistically significant influence on organizational competitiveness. Further the coefficient is positive showing positive influence and a unitary change in knowledge generation leads to change in organizational competitiveness in the same direction of change as do the knowledge generation.

5.2.3 Knowledge Application and Organizational Innovation

Statements about knowledge application were supported by most respondents as evidenced by high percentages of responses who agreed with the statements(89%). Knowledge application was positively and significantly correlated with organizational competitiveness. The positive association between knowledge application and organizational competitiveness could be explained by the fact that when organization applies its knowledge assets in production process it's expected that the knowledge can be converted into innovations like products and processes that further improves organizational competitiveness. Based on regression analysis, the researcher sought to analyze the influence of knowledge application on organizational competitiveness for the 15 large scale manufacturing firm in Nakuru County, Kenya. It was established that knowledge application had a statistically significant influence on organizational competitiveness. This significant influence could be explained by the fact that knowledge assets needs to be utilized by decision makers to improve organizational innovation and competitiveness. Further, the influence is positive such that one unit change in knowledge

application should lead to units change in organizational competitiveness in the same direction.

5.2.4 Knowledge Transfer and Organizational Innovation

Study findings about effectiveness of knowledge transfer in the large scale manufacturing firms in Nakuru received majority support from the respondents as being catalyst for organizational competitiveness. Correlation analysis showed that knowledge transfer was significant and positively correlated with organizational competitiveness. The strong positive association between knowledge transfer and organizational competitiveness could be explained by the fact that when knowledge asset is shared among employees it is possible they could use the knowledge shared to improve organizational competitiveness through means like product and process improvement. Based on regression analysis, it was established that knowledge transfer had a statistically significant influence on organizational competitiveness. The value β_3 was positive meaning a unitary increase in knowledge transfer within the organization leads to improved competitiveness in the same direction.

5.2.5 Knowledge Organization and Innovativeness of the Organization

Concerning fourth objective, Majority of respondents supported statements regarding effectiveness of knowledge organization in encouraging organizational innovativeness as evidenced by high percentages of respondents who agreed with different statements on the likert scale. The study findings from Pearson correlation revealed that the relationship between knowledge organization and organizational competitiveness was significant and positive such that an organization with well-organized and stored knowledge assets is likely to experience improved competitiveness since organization of knowledge makes it possible to retrieve the knowledge assets if needed for the purpose of improving organizational competitiveness. Also using regression analysis, it was established that knowledge organization had a statistically insignificant influence on organizational innovation.

5.2.6 Organizational Innovation and Organizational Competitiveness

Based on likert scale, majority of the respondents were of the opinion that organizational innovation leads to organizational innovation as evidenced by high percentage responses on each statement on organizational innovation. Further, regression analysis showed that organizational innovation had a statistically significant influence on organizational competitiveness hence null hypothesis that organizational innovational has a significant influence on organizational competitiveness was thus rejected. The influence was statistically significant since any improvement in innovation in terms of products, market and processes should lead to superior customer value delivery through unique products and services that eventually results to improved competitiveness of a firm in the industry. Firms that are highly competitive are those that are experiencing high level of innovation.

5.3 Conclusion

From the findings of the study, the following conclusions were made: Given positive correlation between knowledge generation and organizational competitiveness in large scale manufacturing firm in Nakuru and the rejection of null hypothesis, it was concluded that knowledge generation has a positive and major influence on organizational competitiveness. Given a positive relationship between knowledge organization and organizational competitiveness and the acceptance of null hypothesis, it was concluded that knowledge organization has a positive influences on organizational competitiveness; however the influence is not a significant one. The positive association between knowledge transfer and organizational competitiveness and the rejection of null hypothesis shows that knowledge transfer is very essential for improving organizational competitiveness and the study therefore concludes knowledge transfer has a significant influence on organizational competitiveness in large scale manufacturing firms in Nakuru County, Kenya. The positive correlation between knowledge application and organizational innovation as well as rejection of null hypothesis is an indication that knowledge application is very necessary for competitiveness in a firm. The study therefore concludes that knowledge application has a major significant influence on organizational competitiveness. The study findings showed that the association between knowledge management policy and organizational innovation was positive and the null

hypothesis was accepted meaning that knowledge management policy is necessary in improving organizational competitiveness; however the impact of knowledge management policy was not significant one. Finally the study established that organizational innovation has a significant effect on organizational competitiveness where null hypothesis was rejected meaning organizational innovation has a significant mediating effect on the relationship between strategic knowledge management and organizational competitiveness.

5.4 Recommendations

From the findings of the study and conclusions made, the study makes a number of recommendations. Given positive correlation between knowledge generation and organizational competitiveness in large scale manufacturing firm in Nakuru and the rejection of null hypothesis, the management of large scale manufacturing firms in Nakuru County should invest in knowledge generation activities like product research and involving consultants so as to create valuable knowledge stock which may be codified or tacit. The tacit knowledge can be generated by taking employees for further training and codified knowledge assets can be generated through means like organizational information system management.

Given a positive relationship between knowledge organization and organizational competitiveness and the acceptance of null hypothesis as well as the conclusions that knowledge organization has a positive influences on organizational competitiveness, The management boards of large scale manufacturing should invest in management information systems that ensures that codified knowledge generated is organised in a systematic way and stored in a form that makes retrieval easy. The knowledge assets need to be organised in a favourable way and stored in forms that discourages the loss of such assets and encourages utilization by decision makers in an organization. Knowledge can be stored in physical forms like books and reports or soft forms like in a computer document and files.

The positive association between knowledge transfer and organizational competitiveness and the rejection of null hypothesis shows that knowledge transfer is very essential for

improving organizational competitiveness. The management of large scale manufacturing firms in Nakuru County should come up with programmes for ensuring the sharing of knowledge assets of the firm. Codified knowledge can be transferred and shared among employees by allowing them access to stored knowledge assets existing in physical forms like reports or soft forms like computer files. Tacit knowledge can be transferred and shared by organizing seminars and workshops where individuals with tacit knowledge can share it with employees who need to use the knowledge to make innovation decisions in the organization.

The positive correlation between knowledge application and organizational competitiveness as well as rejection of null hypothesis is an indication that knowledge application is very necessary for innovation in a firm. The management and decision makers in large scale manufacturing firms should encourage the utilization of knowledge assets to improve organizational innovation. The management should adopt policies that encourage employees to be innovative by using knowledge assets to improve organizational competitiveness. The leadership should be transformational and motivation and rewards should be given to more innovative and competitive employees so encourage and reinforce innovative work behaviour among employees.

The study findings showed that the association between knowledge management policy and organizational innovation was positive and the null hypothesis was accepted meaning that knowledge management policy is necessary in improving organizational competitiveness, the researcher wishes to recommend to the management of large scale manufacturing firms to develop a detailed knowledge management policy that can serve as a basis for the other strategic knowledge management practises. The knowledge management policy should precede the other strategic knowledge management practises.

Since the study findings showed a positive and strong correlation between organizational innovation and organizational competitiveness and regression analysis rejected the null hypothesis, the study wishes to recommend to management of large scale manufacturing firms to prioritise issues of innovation in terms of product, market, process and administrative innovation so as to improve organizational competitiveness in large scale

manufacturing firms in Nakuru county. The firms should take advantage of strategic knowledge management practises by using knowledge generated to innovate so as to improve the competitiveness of the various firms.

The study limitations also bring in an important recommendation for any study that will target the general managers as part of the respondents. That they should use a different approach instead of questionnaires they should have a structured interview with them as they will ensure the researcher will be able to gather the kind of information needed to have a well deduced study.

5.5 Areas for Further Studies

The current study was confined to the influence of strategic knowledge management practises on organizational competitiveness in large scale manufacturing firms in Nakuru County, Kenya. Five strategic knowledge management practises were covered in this study. Future studies should be carried out with more strategic knowledge management practises in addition to the five practises covered in this study. The current study was also a survey of large scale manufacturing firms hence it has limited application in the manufacturing industry only and superficially large scale manufacturing firms'. Future studies can also go a step further by analysing all manufacturing firms in Nakuru including the large scale, medium scale and small scale to see if findings are comparable.

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APPENDICES

Appendix I: Introduction Letter

NAISIAE GLADYS NKARARO
JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
P.O. BOX 62000-00200,
NAIROBI, KENYA.

TO THE CHIEF EXECUTIVE OFFICER

Dear sir/madam

RE: REQUEST TO FILL A RESEARCH QUESTIONNAIRE

I am Ms. Naisiae Gladys Nkararo a student at Jomo Kenyatta University of Agriculture and Technology (JKUAT) pursuing Masters of Business Administration (Strategic Management). I intend to investigate the *“Influence of strategic knowledge management practices on organizational innovation in large scale manufacturing firms in Nakuru County, Kenya.”*

In order to complete the above research project, I kindly request your office to allow me to interview your staff using questionnaires for the purpose of collecting information towards the study. I assure you that the information given will be treated with utmost confidentiality and will not be used for any other purpose other than for the purpose of this project. Your positive response will be highly appreciated. Thank You.

Yours Sincerely,

Naisiae Gladys Nkararo

Appendix II: Questionnaire

This questionnaire is intended to collect data on the topic “*Influence of strategic knowledge management practices on organizational innovation in large scale manufacturing firms in Nakuru County, Kenya*” The Information is intended for academic purposes only and will not be divulged to any other person. Please complete all sections of this document. All questions are interrelated and are very important for the study.

(Kindly answer the questionnaire by ticking in the appropriate box)

SECTION A: GENERAL INFORMATION

1. Number of years the Institution has been in existence?

- Below 2 years ()
3-4 years ()
5-6 years ()
More than 6 years ()

2. Please indicate your Job Title _____

3. What is your gender?

- Male ()
Female ()

4 How long have you worked in this institution?

- Below 2 years ()
3-4 years ()
5-6 years ()
More than 6 years ()

SECTION B: KNOWLEDGE MANAGEMENT POLICY

1. Please indicate the extent to which you agree or disagree with each of the statements on **Knowledge Management policy** .Use a scale of 1 to 5 where 1 is strongly disagree,2 is disagree, 3 is neutral , 4 is Agree and 5 is strongly agree.

No	Knowledge Management Policy	SA	A	N	D	SD
1	The firm has an effective written knowledge management policy or strategy.					

2	The firm has an effective values system or culture intended to promote knowledge sharing.					
3	The firm has either policies or programs intended to improve workforce retention.					
4	The firm has policies for protection of valuable knowledge within the organization					
5	The firm knowledge management policy elaborates on knowledge sharing strategies among employees					
6	The policy on knowledge management has adequate strategies for knowledge generation and storage					
7	The knowledge management policy of the firm is accessible to all staff in the organization					
8	The firm knowledge management policy has strategies for utilization of the knowledge generated					

SECTION C: KNOWLEDGE GENERATION

2. Please indicate the extent to which you agree or disagree with each of the statements on **Knowledge generation**. Use a scale of 1 to 5 where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is Agree and 5 is strongly agree.

No	Knowledge Generation	SA	A	N	D	SD
1	The firm has procedures for acquiring knowledge about the customers					
2	The firm has procedures for generating new knowledge from existing knowledge					
3	The firm has procedures for distributing knowledge throughout the organization					
4	The firm has procedures for acquiring knowledge					

	about new products/services within our industry					
5	The firm has procedures for transferring organizational knowledge to individuals					
6	The firm has procedures for absorbing knowledge from individuals into the organization					
7	The firm has procedures for integrating different sources and types of knowledge					
8	The firm has procedures for organizing (store/file) knowledge					

SECTION D: KNOWLEDGE TRANSFER

3. Please indicate the extent to which you agree or disagree with each of the statements on **Knowledge transfer**. Use a scale of 1 to 5 where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is Agree and 5 is strongly agree.

No	Knowledge Transfer	SA	A	N	D	SD
1	The firm has a culture of knowledge sharing among employees					
2	Information system allows and encourages knowledge sharing among staff					
3	The firm gives motivation to encourage knowledge sharing among staff					
4	The firm encourages sharing of knowledge and experience with other staff through special topic reports					
5	The firm shares knowledge and experience with others through journals, diaries etc.					
6	The firm is stored in a way that encourages sharing among staff					
7	The firm encourages workers to continue their Education by providing funding for work-related					

	courses and on job training.					
8	The firm facilitates the sharing of knowledge and information by accessing directories or expertise locators to find subject-matter experts					
9	The firm facilitates virtual knowledge-sharing via Communities of Practice or team not located in the same geographical area.					

SECTION E: KNOWLEDGE APPLICATION

4. Please indicate the extent to which you agree or disagree with each of the statements on **Knowledge Application**. Use a scale of 1 to 5 where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is Agree and 5 is strongly agree.

	Knowledge Application	SA	A	N	D	SD
1	The firm processes for using knowledge in development of new products/services					
2	The firm has processes for using knowledge to solve new problems					
3	The firm uses knowledge to improve efficiency					
4	The firm uses knowledge to adjust strategic direction					
5	The firm has processes to protect knowledge from inappropriate use inside the organization					
6	The firm has processes to protect knowledge from inappropriate use outside the organization					
7	The firm has elaborate policies procedures for protecting trade secrets					
8	The firm values and protects knowledge embedded in individuals					

SECTION F: KNOWLEDGE ORGANIZATION

4. Please indicate the extent to which you agree or disagree with each of the statements on **Knowledge Organization**. Use a scale of 1 to 5 where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is Agree and 5 is strongly agree.

	Knowledge organization	SA	A	N	D	SD
1	The firm has categorized knowledge into tacit and explicit knowledge					
2	The firm uses computer technology to organize and store knowledge					
3	The form of knowledge organization in the firm enables easy sharing of the same					
4	The firm has processes used for knowledge dissemination and feedback using information technology					
5	The management takes the knowledge organization seriously					
6	The knowledge is stored both in soft copy and hard copy					
7	Knowledge organization format encourages innovation in the organization.					

SECTION G: ORGANIZATIONAL INNOVATION

5. Please indicate the extent to which you agree or disagree with each of the statements on **organizational innovation** due to knowledge management. Use a scale of 1 to 5 where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is Agree and 5 is strongly agree.

No	Organizational Innovation	SA	A	N	D	SD
	Product innovation					
1	The firm has enhanced goods quality using knowledge resources					
2	The number of new or improved products and services launched to the market is superior to the average in the					

	industry					
3	The firm uses knowledge management to widen the line of products without increasing costs					
4	The firm has been able to continuously improve products due to market research					
	Process innovation	SA	A	N	D	SD
5	Through the use of knowledge management practices, the firm has prevented duplicate or redundant operations.					
6	The knowledge about new methods of serving customers that are more efficient has been implemented continuously					
7	In the organization, there is improved operational performance through collaborative efforts of Communities of Practice.					
8	Knowledge management has enabled the firm to minimize the cost of production greatly					
	Administrative innovation	SA	A	N	D	SD
9	The firm has been able to improve the management structure using external knowledge sources					
10	Application of knowledge management practices in the firm provides evidence of organizational reform and transformation.					
11	The organizational structure is flexible and encourages improved performance among the staff					
	Market innovation	SA	A	N	D	SD
12	The firm has used knowledge about prospective customer needs to expand the existing products into new untapped markets					
13	The firm has used research knowledge to identify new uses of the current products					
14	The firm uses knowledge management to improve the performance of sales personnel					

SECTION H: ORGANIZATIONAL COMPETITIVENESS

6. Please indicate the extent to which you agree or disagree with each of the statements on **Organizational Competitiveness** due to knowledge management. Use a scale of 1 to 5 where 1 is strongly disagree, 2 is disagree, 3 is neutral , 4 is Agree and 5 is strongly agree.

Statements on competitiveness	SA	A	N	D	D	SD
The firm is producing products that are of superior value						
The firm has achieved competitiveness through adoption of organic organizational structure						
The firms efficiency has improved greatly since adoption of strategic knowledge management						
The firm has been actively involved in cost cutting decisions						
The firm is currently a cost leader in the industry						
The products of the firm are very distinct from those of competitors						
The firm has the latest manufacturing technology which is very efficient						

Appendix III: Large scale manufacturing firms in Nakuru County

1. Comply Industries Ltd.
2. Fontana Limited
3. Gone Fishing
4. Happy Cow Ltd.
5. Kapi Ltd
6. Menengai Oil Refineries Ltd
7. Mutsimoto Motor Company
8. Nakuru Plastics
9. Njoro Canning Factory (Kenya) Ltd
10. Bedi Investment Limited
11. Reliable Concrete Works Ltd
12. Shayona Timber Ltd
13. Spin Knit Limited
14. Turaco Limited
15. Valley Confectionery Ltd

Source: Kenya Association of Manufacturers