

**ORGANISATIONAL FACTORS AFFECTING KNOWLEDGE
MANAGEMENT PRACTICES IN SELECTED KENYAN BANKS**

BY

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THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER
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DECLARATION**DECLARATION**

This research project is my original work and has not been presented for the award of degree in any other university or institution for any other purpose.

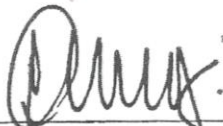
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DEDICATION

This research project is dedicated to my late Father Mr. Lukas Otuoma, and my mother Ziprina. Above all I give thanks to the Almighty God for the sound health throughout the entire process.

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ABSTRACT

Knowledge is a complex asset that must be managed in a totally different way unlike other resources. Most organizations in the developed and the developing world, are opting for change in the management, through improving creation of new ideas and developing a best environment for the creation of envisioned ideas. Hence the need for the recognition of knowledge management practices in organizations. The purpose of the study was to examine factors affecting knowledge management practices in selected banks in the banking sector in Kenya. The study was conducted in four commercial banks (Kenya Commercial Bank, Standard Chartered Bank, Cooperative Bank and Equity Bank) located within Nairobi County. The study employed descriptive survey research design to determine the extent to which knowledge management practices have been adopted. One hundred and six (106) employees and management of selected banks formed the target population of the study. Stratified random sampling was used to make inferences of the intended population from the targeted population. Data was obtained through administering questionnaires to employees in the four commercial banks. Descriptive statistics and inferential statistics were used to analyze the data. The research established that knowledge management practices have a crucial influence on commercial banks. The results of correlation analysis of ($r= 0.91$), which showed a strong positive relationship between organization culture and knowledge management. Also the research findings also showed that organizational culture affects individuals' response to different situations and their interpretation of the organization surrounding environment. For example, the result outcome showed that participants strongly agreed that team collaboration, experimentation and autonomy affect knowledge management with means of 4.3143, 4.2860, and 4.5740 respectively. The study further suggests that flexible organizational structures assist to achieve decentralization of decision-making process by facilitating the communication process at all organization levels. This is supported by the effect in which organizational culture has on individuals' response to different situations. The study also established that the internal structure and relationships prevailing in the organization have a significant effect on knowledge and that, effective ICT infrastructure is crucial in facilitating knowledge management within an organization. This is supported by the results obtained of multiple linear regression model output, which showed a linear relationship between Knowledge management practices and Information Technology. A unit increase in Information Technology led to an increase of 0.140 in Knowledge Management practices. Consequently, it is recommended that banking institutions need to include Knowledge Management practices as part of their long term corporate strategy. They also need to employ organizational cultures that enhance autonomy, trust and values which have a strong impact on the communication.

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LIST OF ABBREVIATIONS AND ACRONYMS

CBD: Central Business District

CBK: Central Bank of Kenya

HR: Human Resource

ICT: Information and Communication Technology

KM: Knowledge Management

KMP: Knowledge Management Practices

NACOSTI: The National Commission for Science, Technology and Innovation

RBT: Resource-Based Theory

SPSS: Statistical Package for Social Sciences

GoK: Government of Kenya

KBV: Knowledge Based View

KMP: Knowledge Management Practices

NCC: Nairobi City Council

OKM: Organizational Knowledge Management

RBV: Resource Based View

CBR: Computer Business Research

NCC: Nairobi City County

CEO: Chief Executive Officer

OPERATIONAL DEFINATION OF TERMS

This section defines key concepts and terms that are used in this study.

Knowledge

Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts, skills, or objects (Pardos and Nam, 2020).

Knowledge Management

Knowledge management is the process of creating, sharing, using and managing the knowledge and information of an organization (Audretsch *et al*, 2020). It refers to a multidisciplinary approach to achieve organizational objectives by making the best use of knowledge.

Tacit Knowledge

Tacit knowledge has been defined as personal, internal or interior knowledge deeply rooted in an individual's experiences, wisdom, ideas, norms and values and emotions (Sanford, Schwartz and Khan, 2020). It resides in the minds of the *knowers* and difficult to replicate, making the *tacitness* the property of the *knower*.

Explicit Knowledge

Explicit knowledge is the knowledge that is found outside the minds of individuals (Zhang, Jiang and Zhao, 2021). Tiwana (2008) define explicit knowledge as information that is captured in the form of records, databases, websites and charts and this knowledge can easily be expressed in words, numbers and symbols.

Implicit Knowledge

Implicit knowledge is knowledge that can be articulated but is yet to be codified and pronounced and can only be implied by or inferred from observable behavior or performance (Waights Hickman, 2020). Implicit knowledge can be termed as that

which is yet to be “put together” either by concept advancement or expressions, it is between explicit and tacit knowledge.

Knowledge Acquisition

Knowledge acquisition is the process of extracting structures and organizing knowledge from various sources of human experts and is also considered as the process of adding new knowledge and to change which was anonymously acquired to the knowledge base. It is mainly used in the system development (Ito, Leung and Huang, 2020).

Knowledge Creation

It is the formation of new ideas through interactions between explicit and tacit knowledge in individual human minds (Cai et al, 2021). As defined by Ikujiro Nonaka, it consists of socialization (tacit to tacit), externalization (tacit to explicit), combination (explicit to explicit), and internalization (explicit to tacit).

Knowledge Conversion

Ariani and Rahmawati (2020) posits knowledge conversion as a social system that enables individuals with diverse knowledge to interact and facilitate creation of new knowledge which nurtures the value and extent of both explicit and tacit knowledge.

Knowledge Storing and Sharing

Knowledge storing 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 (Spuzic, 2020). 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 (Karadsheh, Mansour, Alhawari, Azar & El-Bathy, 2009)

CHAPTER ONE

INTRODUCTION

1.0 Introduction

1.1 Background to the Study

Increased globalization and fluidity of boundaries driven by the advent of technological advances has altered the economic definition of borders and distances (Audretsch, 2007). In the present age commonly referred to as the knowledge age, organizations are increasingly witnessing dynamic environments with change and evolution amongst the challenging contexts. Organizations are making every effort to achieve economic supremacy in addition to their endeavor to remain competitive in the global market through increased efficiencies and lean production (Forghani & Tavasoli, 2017). The advent of technology has availed unlimited sources of knowledge to practitioners and academia with pundits signaling the dawn of the Knowledge Age supplanting the industrial era.

Throughout the world, organizations are facing a universal challenge consequential from rapid change in a new knowledge economy (Zwain, Teong & Othman, 2012). The resultant effect is that organizations that fail to keep up with this rapid global complexities and challenging business competitiveness will be left behind to grope in its unpreparedness. A greater command on knowledge resource base therefore becomes imperative to address current unpredictable business challenges.

Intellectual and intangible assets regarded as knowledge are viewed as critical factors in organizational competitiveness. Serenko, Bontis and Hull (2015) argues that individuals, organizations and countries own intellectual capital that needs to be

acquired and applied in order to achieve organizational objectives. The ability to create and disseminate such knowledge become crucial in today's knowledge era. This knowledge should be embedded in the organization's products and services, business processes and in the minds and hearts of employees. Hence organizations that strive to be successful must acquire adequate knowledge and recognize such knowledge as a critical factor to their competitiveness (Majidi, Radfar & Toluoei, 2016; Denning, 2006).

Due to the advancement of ICT, diverse organizational environment and high complexity in the economy, there has been need for organizations to adopt thorough KM practices in order to be at par with organizational change and development. Knowledge is at the center of effectiveness and efficiency of organizations, which ultimately influences the overall performance of a firm (Murthy & Nayak, 2007). Knowledge has been recognized as a resourceful asset in the operation of a firm, as stipulated by Uriate (2008), as important as capital in an organization, as it influences organizational performance and sustainability of the organization in a competitive environment.

According to Rasula, Vuksic and Stemberger (2012), the combination of the information possessed by an individual and practising the same can be defined as knowledge. This is to mean that without implementing the information, knowledge is useless. The management of the knowledge is therefore what guarantees competitive advantage and success of the operations in an organization especially in the modern times where knowledge is held as a prime asset of decision making in a company. Knowledge Management (KM) is defined as the discipline that allows individuals,

teams, organization and communities, more collectively and systematically capture, store, share and apply their knowledge, to achieve their objectives (Kemboi, 2013). Bounfour (2003) refers to knowledge management as the arrangement of philosophy, systems and specific and administrative gadgets, laid out towards making, granting, utilizing information and data inside and around an association

KM has emerged as one of the most important areas in management practices and has been established as a basic resource for developing firms and global economies. KM attempts to build a range of strategies to facilitate the definition, identification, capture, preservation and dissemination of knowledge across an organizational community (Radomir *et al.*, 2009). It focuses on building a culture of collaboration that enriches the firm's knowledge base. This practice of managing the acquired knowledge is aimed at assisting an institution to achieve a competitive advantage over the competitors. To remain competitive in the future, organizations will need to abandon their ideas of information hoarding and embrace knowledge sharing. Competitive success was based less on how strategically physical and financial resources are allocated, and more on how strategically intellectual capital is managed -- from capturing, coding and disseminating information, to acquiring new competencies through training and development, and to re-engineering business processes.

According to Shih, Chang and Lin, (2010) banking sector is a knowledge-intensive sector where knowledge is exchanged more than products and services. As such, management of knowledge in banks really matters like in other knowledge-based organizations. The role played by commercial banks is indispensable and increasingly important for economic development. Banks are usually recognized for the

contribution made in the economic activities, innovation, employment and more so in wealth creation for the country (Ongore & Kusa, 2013) hence their performance is critical not only to the owners but also other stakeholders. Competition from an increasing number of banks in a country requires commercial banks to distinguish themselves on the ability to apply and converting leveraged knowledge. By so doing, banks are assured competitive advantage since their business is not only handling money but also driven and sustained by the information (Kinyua, Muathe & Kilika, 2015).

In the recent past, competitive advantage has become an important component of management decisions. Organizations are increasingly competing amongst themselves to attain an edge over their competitors. This is can be attributed to the economic environment which is characterized by economic volatility, high employee turnover, global competition, and rapid changes. A long-term competitive advantage for any country, industry, or company, is now harder to obtain because of the fact that neither money nor technology can, for any length of time, offset the growing imbalances in labour resources. Companies can no longer expect the products and practices that made them successful in the past to keep them viable in the future. Only those organizations that identify a unique way of operating shall survive the intense competition (Radomir *et al.*, 2009). One of the unique ways of operating maybe adoption and implementation of knowledge management practices. As a result, the current study will, therefore, identify various factors that influence knowledge management practice among selected commercial banks.

Radomir *et al.*, (2009) noted that modern business organization couldn't compete effectively in the marketplace without skilled managers and employees and without methods for managing their employees' knowledge. Nor can it effectively compete in the marketplace without implementing the "right" processes making use of the "right" technologies, including Information Technology. This realization has led to the emergence of a key practice in organizational management of data and information within the organization popularly known as Knowledge Management.

In view of these trends, and recognizing that knowledge has great potential value and because there is a corresponding failure to fully exploit it, some corporations have embarked on comprehensive knowledge management programs (Radomir *et al.*, 2009). If an organization wants to begin managing knowledge as a resource, what should it take into consideration? The organization needs to design and install procedures and processes to create, protect, and use known knowledge while articulating the purpose and nature of managing knowledge as a resource and embodying it in other initiatives and programs. In addition, anyone considering a foray into the knowledge management arena needs to plan and build environments that will allow employees to feel safe to discover and release their own tacit knowledge.

According to Davenport and Vopel (2001), knowledge management systems administer the skills and competencies that lie within an organization and allow them to blossom by freeing people to be the best that they can be. Financial organizations manage vast data flows varying from the information about customers, their suppliers, their own employees, regulatory authorities, and government among others. To ensure

competitiveness and increase the quality of customer support, banks are introducing a number of knowledge management systems that assist them to acquire necessary information in market changes while at the same time preserve the acquired knowledge within the organization. (Mizintseva *et al*, 2009). Despite Knowledge Management system being taunted as a salient strategy to achieve competitive advantage, the adoption of the KM as a competitive advantage strategy among the commercial banks in Kenya has not taken center stage and to some extent has been rather slow. And therefore, this study sought to establish the factors that influence the adoption of knowledge management practices in selected banks in Nairobi, Kenya.

1.2 Statement of the Problem

Knowledge management is essential in the functions of an organization, as it ensures the creation and dissemination of knowledge efficiently in an organization. In order to ensure the organization meets its objective, it must first ensure there are various practices in the organization that enable knowledge in an organization to be more available and ensures all the employees have access to it. Sheffield (2008) identified KM as a complex set of systems and processes.

Previous studies by have shown how KM attempts to build a range of strategies to facilitate the definition, identification, capture, preservation and dissemination of knowledge across an organizational community (Radomir *et al.*, 2009). Organizations are increasingly competing amongst themselves to attain an edge over their competitors. A long-term competitive advantage for any country, industry, or company, is now harder to obtain because of the fact that neither money nor technology can, for any length of time, offset the growing imbalances in labour

resources. Only those organizations that identify a unique way of operating shall survive the intense competition (Radomir *et al.*, 2009).

A study by Shih emphasized the fact that knowledge in banks really matters like in other knowledge-based organizations. The banking sector is a knowledge-intensive sector where knowledge is exchanged more than products and services. Free entry to the markets has seen many commercial banks join the financial market, new innovative products and services are being released from time to time (Saini, 2013). Many strategies have been employed to try and maximize owners' wealth in the world where competition continues to intensify.

Although, technology enhances innovation among commercial banks, the entrance of microfinance institutions and savings and credit cooperative societies have intensified the demand for product and service innovation among commercial banks (Cytton Investment, 2015). Customers' expectations keep on changing as the literacy level rises and hence banks have to rethink through their knowledge process to meet their demands. In the recent past, the banking industry has witnessed three cases of banks; Imperial, Dubai and Chase bank being placed under receivership due to corruption and mismanagement in the firm. Hence the GOK through CBK has strengthened the banking regulations, especially the liquidity requirements, cash reserve ratio in the move to increase capital adequacy and more interestingly the capping of interest rate of 4% basis point above Kenya Bank Reference Rate (Njomo, 2016).

A study by Chia-Nan and Huei-Huang (2016) on KM capability and organizational effectiveness in Taiwanese public entity and the mediator role of organizational commitment, established that KM practices are essential to achieve the organizational effectiveness. Another study to investigated influence of KM effectiveness in the business process of hospitals and financial firms in China, established that implementation of KM as part of organizational strategy ensures high productivity levels in business processes (Shin-Yuan, Tsai et al, 2015). Khuram (2016) studied the integration between knowledge strategy and KM process on organizational creativity and performance of listed firms in India; the study established that KM is critical to ensure survival, integrity and competitiveness in a rapidly changing environment

The previous studies have not broadly addressed the organizational factors affecting KM practices within the commercial banks. This study sought to fill this knowledge gap by answering the research questions; what is the extent of the KM practices within the selected commercial banks in Kenya? The researcher believes that such a framework will help banks to manage useful knowledge in a more harmonized and structured manner to improve their performance.

1.3 General Objective

The general objective was to establish the effect of knowledge management on the performance of commercial banks in Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives:

- i.To establish the effect of organizational culture on knowledge management practices in selected Kenyan banks.
- ii.To determine the effect of organizational structure on knowledge management practices in selected Kenyan banks
- iii.To assess the effect of Information Technology on knowledge management practices in selected Kenyan banks.

1.5 Research Hypotheses

The study was guided by the following null hypotheses:

H₀₁: Organization culture has no statistical significance on knowledge management practices in selected Kenyan banks.

H₀₂: Organization structure has no statistical significance on knowledge management practices in selected Kenyan banks.

H₀₃: Information Technology has no statistical significance on knowledge management practices in selected Kenyan banks.

1.6 Significance of the Study

This study will offer valuable contribution to theory, policy formulation and practice. First the study will add value to the body of strategic management discipline especially in the more demanding concept of competitive advantage and will form the basis of further research by identifying the knowledge gap that arises from this study. It will be essential to the banking institutions, to enable them to gauge the importance of KM implementation, which will help them be able to identify the inefficiency and improvement opportunities. The scholars and researchers will benefit from the study, as the findings will provide comprehensive insights and create new knowledge on the KM practices. The study will also expand the literature on the body of KM and firms' performance.

In addition, the study has provided a basis for understanding the influence of human capital repository and firm's culture on the link between knowledge management and performance. The findings of the study would consequently be relevant for policy formulation in selected commercial banks in Kenya. Indeed, this study would ultimately facilitate efficient and effective utilization of knowledge resources resulting in enhanced performance.

The findings of the study will be shared with the selected banks for their own use to streamline knowledge management strategies, policy formulation and efficiency. These areas of interest are key to the development of the banks in Kenya. The study will highlight the bottlenecks that are faced by several banks in this country and it will offer suggestions for mitigation measures to be replicated to other banks across the region. The study will also suggest methodologies in the application of knowledge

management practices within the banking sector. The recommendations and the findings of the study will make a big contribution to the existing knowledge of the strategies to be used by the firms and to retain their knowledge of the available literature on knowledge management. Good knowledge management practices can be used by banking institutions to help them achieve a competitive advantage.

The study findings will provide banks with the information they need to come up with the best way to raise awareness among the high level management team and the rest of the employees

1.7 Scope of the Study

The study focused on the organizational factors affecting Knowledge Management practices in selected banks in Kenya. This study was delimited to selected commercial banks in Kenya. Commercial Banks were chosen because they are knowledge-intensive (Shih *et al.*, 2010), and as such, they one of the "cutting edge" of KM applications in Kenya. Commercial banks rely heavily on its unique knowledge as an input and produces innovative bank products. The variables of the study encompassed Organizational culture, Organizational structure and Information Technology as the explanatory and explained variables respectively.

The unit of observation of the five functional areas in any organization; human resource, finance, marketing, information communication and operations were examined. The heads of the functional areas that were identified are part of branch managers that operated at the branches in Nairobi. The study was carried out in the period between July and October 2019

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter takes a review of the literature in relation to factors influencing knowledge management practices among selected banks. Specifically, the review is conducted in relation to the research objectives. These include organizational structure and knowledge management practices; organization structure and knowledge management practices; as well as Information Technology and Knowledge Management practices. Theoretical and conceptual frameworks are also discussed in this chapter.

2.2 Knowledge Management

The concept of Knowledge Management is relatively a new field in research as it is in its definition. Ferreira (2018) avows Knowledge Management as the process of capturing, distributing, and effectively consuming that knowledge. Knowledge management incorporates the discipline that encourages an integrated approach to identifying, capturing, assessing, retrieving, and sharing organization's information assets that include; databases, documents, policies, procedures, and worker's expertise and experience. This definition was further advanced by (King 2009) who viewed Knowledge Management as preparing, organizing and effectively controlling the systems, processes and people in the organization to safeguard knowledge related assets for improvement of organization's performance.

Knowledge in itself, known to be intrinsically uncertain, symmetric and subjective, makes knowledge management activities within knowledge-based economies more difficult to imitate by competitors (Mach *et al.*, 2020). However, knowledge sharing throughout the organization enhances existing organizational business processes, introduces more efficient and effective business methods and removes redundant processes (Henkel *et al.*, 2019). (Springer 2018) avows that organizational competitiveness is directly impacted by its ability to create, identify, share and apply knowledge in agreement with (Alavi and Leidner 2001) who suggests that in contemporary organizations that knowledge is indispensable for firm's competitiveness.

The World Bank (2020) asserts that industrial capital and land is no longer sufficient to create wealth in organizations, but that knowledge management has become a fundamental source of wealth creation (Laurell and Arellano, 2020). World Bank argues that countries are anxious to adapt systems and programs that promote knowledge sharing but lack the tools and the experience to do so. No wonder when James Wolfensohn became the president of World Bank in 1995, he focused on the World Bank's role in spreading knowledge about development and encouraged the advancement of community of practices that brings together groups of individuals with common interest or knowledge to enhance the social nature of learning within organizations, which presents an alternative method to the outmoded vertical transmission of knowledge (Friesen, 2017). The World Bank propositions are supported by Mafongoya and Ajayi (2017) who argue that knowledge is gradually becoming the most important element of production beyond the traditional factors such as labor, land and capital.

Ferreira (2018) cites knowledge management as the process of generating, organizing, storing, distributing and applying knowledge in organizations, while according to Raudeliūnienė and Jakubavičius (2018) knowledge management comprises of four processes, namely: knowledge generation; knowledge capture; knowledge codification and knowledge transfer. These are briefly elaborated as: Knowledge generation, which includes all activities that discover, new knowledge; knowledge capture, which involves continuous scanning, organizing, and packaging of knowledge after it has been generated; knowledge codification, which is their presentation of knowledge in a manner that can easily be accessed and used; and knowledge transfer, involves transmitting knowledge from one person or group to another person or group, and the absorption of that knowledge.

Knowledge Management is a concept that dates back to the ancient philosophy which gained significance in the social and psychological sciences in the 1950s. The use of KM in business is however more recent, emerging in the 1980s (Davenport and Vopel, 2001). Rusakova and Kovba (2018) define KM as a set of practices in an organization aimed at discovering and harnessing an organization intellectual resource- fully utilizing the intellects of the organization's people. Knowledge management is also considered as the process of knowledge creation and the “strategy of getting the right knowledge to the right people at the right time” (Chatterjee, Pereira and Sarkar, 2018). Rastogi (2000) defines KM as a systematic and integrative process of coordinating organization-wide activities of acquiring, creating, storing, sharing, diffusing, developing, and deploying knowledge by individuals and groups in pursuit of major organizational goals. It is the process through which organizations

create and use their institutional and collective knowledge by incorporating organizational learning, knowledge production, and knowledge distribution.

Knowledge Management is a systematic discipline and set of approaches to enable information and knowledge to grow, flow and create value in an organization. This involves people, information, and workflows, enabling tools, best practices, alliances and communities of practice. The knowledge management process implies the development and the use of knowledge within the firm and finding a way of putting knowledge into action to improve organizational performance (Jakubavičius, 2018)

Shujahat (2017) concludes that when a company wants to implement the knowledge management process, it is necessary to find out who are the persons that have the capability to “create, share, and use the knowledge so as to obtain the aimed results”. Furthermore, it is imperative to encourage some employees to create and share knowledge, and others, or even the same persons, to learn and use the knowledge, making it possible to apply the collective, explicit and tacit, knowledge to the entire workforce. There are two fundamental approaches to knowledge management according to Alavi, Kayworth, and Leidner (2006): the process approach and the practice approach.

The process approach attempts to codify organizational knowledge through formalized controls, processes, and technologies. The approach frequently involves the use of information technologies, such as intranets, data warehousing, knowledge repositories, decision support tools, and groupware to enhance the quality and speed of knowledge creation and distribution in the organizations. In contrast, the practice approach to knowledge management focus is to build social environments or

communities of practice necessary to facilitate the sharing of tacit understanding. These communities are informal social groups that meet regularly to share ideas, insights, and best practices (Barão, Rocha and Pereira, 2017).

2.2.1 Knowledge Management Practices

In this era of the knowledge-based economy, the use of knowledge has become crucial to organization's survival and success in competitive environment, problem-solving, decision making, organizational performance, enhancements and innovation. Knowledge according to Mach *et al*, (2020) is the enemy of disease hence has a bigger impact on health and disease than any drug or technology likely to be introduced in the next decade. Studies such as those of Chen and Huang (2009) and Fugate *et al*. (2010) confirm that knowledge management process has positive effect on operational and organizational performance, however; a study by Wissensvernetzung (2003) show that 20-30% of the processes fail.

The more sophisticated an organization's understanding of knowledge, however, the less obvious it is what it should actually *do*. What exactly do process- or practice-based knowledge management look like? How can they be measured? How do organizations know whether they are working?

Knowledge is intangible and cannot be managed directly. Malone (2007), a Knowledge SIG committee member, illustrates this with the wheelbarrow test. If knowledge was a tangible thing that could be managed directly, it could be put in a wheelbarrow. Even people with an extreme structural perspective would struggle with the idea that can put knowledge in a wheelbarrow!

In practice, good knowledge management is mostly about creating an environment where people want to share what they know. It includes HR interventions, networking and giving people time to talk to each other (Oliva and Kotabe, 2019).

The effective implementation of Knowledge Management (KM) can reap great rewards. A decrease in expenses will take place even if an increase in revenue does not occur. However, the reality is that not all businesses are capable of building successful KM databases and most of the issues lie with organizational arrangement (Velasquez and Lara, 2017).

2.3 Organizational Culture and Knowledge Management Practices

Evans (2012) describes Organizational Culture as flexibility, fuzzy structures, extensive contacts, emphasis on learning, triggering creativity, smoothness of roles and job description, environment enabling working and learning in a group, clearly defined values, openness to diversity, and clearly defined requirements for employees, flexibility and ancillary leadership. Studies in knowledge management today underscore the inseparable relationship between knowledge management and organizational (Abdi et al, 2018). Organizational culture is a set of values, beliefs, norms, meanings and procedures shared by organization members (Lubis and Hanum, 2020). Knowledge sharing is affected by the degree to which members have frequent values and a shared context for sharing knowledge, in the form of widespread experiences, vocabulary, or academic background. These meanings and values are determined by one's essential assumptions, which are the building blocks of culture (Schein, 2010). An organizational culture shaped by the means of organization members, organization moral standards, by the employment rights given to

employees, and by the type of structure used by the organization to run the organization. Like organization structure, organizational culture shapes and controls the behaviors in the organization. Organizational culture affects individuals' response to different situations and their interpretation of the organization surrounding environment (Arditi and Damci, 2017)

Organizational Culture acts as a barrier to knowledge – sharing and need to change to become more supportive of it (Lubis and Hanum, 2020). Organizational culture is a very important factor in effective knowledge management. An effective organizational culture can have a stimulating role by providing a suitable environment for knowledge exchange and supporting knowledge activities (Franco *et al.*, 2019). An organization must have a powerful culture in which values, trust, openness and sociability to stimulate people's interaction and knowledge sharing (Ngoc, 2005). Knowledge transfer requires that an individual or a group cooperate with others to share knowledge and achieve mutual benefits (Peng, Zhang and Tang, 2019). Knowledge is the result of interpreting information based on one's understanding. It is influenced by the personality of its holder since it is based on judgment and intuition. Knowledge incorporates beliefs, attitude and behavior Kim, S. S., & Kim, Y. J. (2017). The effect of compliance knowledge and compliance support systems on information security compliance behavior. *Journal of Knowledge Management*. (Lee and Yang, 2000).

Gibson (2005) stated that organizations have distinct personalities and that these personalities are shaped largely by its top executives, for example, a tyrannical and autocratic executive team is able to create a culture that is filled with fear. Gibson et.al. (2003) identified two major aspects of culture, which are strong culture and weak culture. Strong culture is characterized by employees sharing core values; the more employees share and accept the core values the stronger the culture is and the more influential it is on behavior and the more employees do not share and accept the core values the weaker the culture is and the less influential it is on behavior (López-Rodríguez, Cristancho-Triana and Amaya-Téllez, 2020). Mc Shane *et al*, (2005) also supports the argument of Gibson et al, (2003) and went further to say that weak culture is when the dominant values are short-lived and held mainly by a few people at the top of the organization. Organizational culture is the pervasive system of values, beliefs, and norms that exists and can encourage and discourage effectiveness performance it is important, therefore, to note that, it is corporate/organizational culture that makes an organization tops among its competitors (Gibson et al., 2005).

Evans, (2012) describes culture supporting knowledge management as aggressive aims of organization favorable knowledge management, proactive goals aiming at change of environment, strong and team culture favorable ideas exchange, effective leadership supporting changes and teams work, openness and honesty, high-trust culture for common learning, expanded need for education and creativity, general belief in the value of learning, belief that excellent customer service must be accompanied by high level of knowledge, knowledge is the key element of sale, service and quality. Equal treatment of all organization's beneficiaries, systematic thinking as the basis of environment perception, belief in the ability to influence the

environment, monitoring of the environment, creating mutual vision, openness, honesty and full engagement inefficient communication, perceiving employee as an individual willing to learn, attention to diversity, climate for experimenting, belief inefficiency of teamwork, comprehensive support for learning (Evans, 2012). Today, knowledge-sharing is widely-held to be inherently necessary to the health of most enterprises. Willingness to share is positively related to profitability and productivity and negatively related to labour cost. Knowledge-sharing is positively linked to growth and innovation, bottom-line savings, increased customer satisfaction, increased shareholder value and learning (Kim, 2018).

Gold, Malhotra and Segars (2002) view organization culture as the most significant factor in effective knowledge management. According to Chen (2013) if health organization management deploys knowledge management practices without consideration of its users' culture the overall success of the initiative was impeded severely. The author finds culture as the greatest barrier to the success of any knowledge management solution in an organization. Sunassee and Sewry (2002) support this and quotes case studies where knowledge management initiatives have failed because of improper management of culture. Alam et al., (2009) add that knowledge comes from people and their relationship and experiences with each other; however, developing a culture that embraces sharing through the collective intelligence and knowledge of people brings challenges. According to Megdadi et al., (2012) culture plays a vital role in any organization. He adds that where people in an organization are afraid of sharing their knowledge, implementation stalls. Wong and Aspinwall (2004) refer to different studies that emphasize the importance of culture being 'knowledge friendly'. Rubenstein-Matano et al (2000) also cite numerous

examples where knowledge management implementation has failed because the approach was incompatible with the culture therein. Er-ming et al (2006) in their research established that top management such as superiors and managers play a role in establishing, building and promoting a culture of trust to enhance knowledge sharing. Sensuse et al., (2018) confirms through research studies that support and commitment from top management and employees in initiating a knowledge culture enables success in the knowledge management implementation. Studies show that knowledge management initiatives will fail without the cultural element of trust. It is therefore extremely essential to extensively stimulate trust in an environment that allows workers to share information. This is supported by Mathew and Rodrigues, (2019) whose research studies of Critical success factors of knowledge management revealed that attempts to implement knowledge management failed due to lack of appropriate cultural context that would nurture trust, openness, cooperation and thirst for knowledge.

According to Janz and Prasarnphanich (2003), effective organization culture provides support and incentives as well as encourages knowledge related activities by creating suitable environments for knowledge accessibility. Oliver and Kandadi (2006) add that organization culture influences the knowledge related behaviors of individuals, teams, units and organization as a whole because it importantly influences the determination of which knowledge is appropriate to share, with whom and when. Rahman et al., (2018) however, view culture as either a major catalyst or a major hindrance to knowledge creation and sharing. Sharrat and Usoro (2011) say that culture should be developed that is based on trust and integrity so as to minimize knowledge hoarding. This is confirmed by Yusuf and Wanjau (2014) who add that an

organization must have a strong culture that values trust, openness and sociability to stimulate people's interactions and knowledge sharing. Debowisk (2006) affirms that during innovation, from the initial creative idea to the experimentation and sharing, an effective knowledge culture encourages people to look for opportunities to work towards creative alternatives. Smith and Lumba (2008) however, state that an organization that operates in a culture that is receptive to knowledge generation and sharing would be more receptive to knowledge management practices.

According to Chen (2013), healthcare industry there exists culture mix from doctors, nurses, pharmacists, biochemists among others and then the administrative staff. Health knowledge experts exercising knowledge sharing may have conflict with individual mindsets. The author says that medical practitioners do not necessarily believe in the sharing of knowledge hence may present a challenge to the success of knowledge management. Ryu et al., (2003) add that healthcare provider norms have an effect on knowledge sharing behavior, adoption and use of knowledge management practices. Chen (2013) however, says that organization culture in operation is strongly tied to long-standing medical practices and methodologies citing the existing custom whereby medical practices have relied upon practitioners as knowledge experts providing diagnoses and treatments rather than knowledge databases.

2.4 Organizational Structure and Knowledge Management

Various taxonomies of knowledge and knowledge management exist, knowledge is defined as any data, skill, context, or information that enables high-quality decision making and problem-solving to occur. Knowledge management then is any process either formal policy or informal personal methods that facilitate the capture,

distribution, creation and application of knowledge for decision making. This decision making may be at the tactical level of day-to-day operations performed by an employee or at a more strategic level of developing organizational strategy by upper-level management and every level of decision making in between (Dias and Ierapetritou, 2017). Effective knowledge management ensures that every employee has access to appropriate and the highest quality of information available at the time when a decision needs to be made. The presence of a “knowledge culture” is critical to the success of knowledge management within an organization (Nahm, Vonderembse, and Koufteros, 2004) as it signals a managerial commitment to knowledge management initiatives and promotes sharing of tacit knowledge for higher quality decision-making. Organizational culture is formed and reinforced through the interrelated elements of strategy, structure, people and process (Sanchez, 2004).

People work within the organizational structure that supports organizational processes to accomplish the overall business strategy. While the organizational structure and corporate culture are interrelated, both have been identified as necessary elements for knowledge management initiative success (Giampaoli, Ciambotti and Bontis, 2017). Traditional hierarchical management structures, allow vertical knowledge transfer through typical chain-of-command but inhibit horizontal knowledge transfer that must cross the organization’s functional boundaries. Increasing competition and ever-shortening rates of technological change necessitate the better transfer of knowledge across organizational boundaries with organizational structure identified as one of five factors attributing to knowledge transfer performance.

The development of knowledge teams composed of knowledge workers from cross-functional areas of the organization is a first step towards developing a fully distributed knowledge transfer system (both vertical and horizontal) within the organization. Cross-functional team members provide knowledge sharing from their knowledge team back to their original functional areas (Akgün *et al.*, 2017). However, the scope of teams is limited to the organizational problem assigned to the team and results in limited knowledge sharing throughout the organization. The idea of teams and knowledge sharing must be extended to include all aspects of the organization. Knowledge organization composed of knowledge groups composed of knowledge teams, which are built from knowledge workers selected for participation on a knowledge team due to their tacit knowledge and skills. Ideally, the knowledge workers on any knowledge team come from different organizational (and educational) backgrounds and will bring a diversity of tacit knowledge and skills to the team (Walzak, 2006).

Adoption of a new organizational structure (the “knowledge organization”) or managerial methodology (“knowledge culture”) faces resistance within the organization (Goh, 2003). Resistance to change may be minimized by reducing the perception of change for the stakeholders. Initially, the knowledge team management structure may be aligned to an existing hierarchical management structure by aligning the knowledge groups with the existing functional areas of the organization including accounting, marketing, production, and research similar to the idea of communities of practice. Knowledge teams or intermediate groups of knowledge communities are then aligned with the subdivisions within each functional area (Cui *et al.*, 2019).

The recognition of individual personnel as knowledge workers will promote the development of new knowledge teams to address an organization's opportunities and consequently will facilitate the development of knowledge team communities that are diverse and more focused on knowledge-oriented problem-solving. Knowledge workers are expected to share and utilize knowledge with other team members to produce the highest quality decisions. New knowledge teams and groups must be promoted to develop around product lines or other core competencies of the enterprise as opposed to functional area team composition. Knowledge teams should be created dynamically to take advantage of an organization's business opportunities or new business strategies (Walczak, 2005). Over time, the idea of an accounting (or other functional) branch of the organization was replaced by communities of knowledge workers that have knowledge/expertise in accounting and may thus utilize other tacit knowledge to specialize in functional capabilities within a knowledge group. Communities of practice will still be an important element within the knowledge organization structure to enable knowledge team members to interact with members of other knowledge teams with similar interests and competencies and further promote inter-team knowledge sharing. Furthermore, communities of practice have been identified as a strategy to improve organizational performance through enhanced knowledge sharing (Lesser and Storck, 2001).

Knowledge teams that identify the need for specific knowledge such as accounting or marketing would then recruit knowledge workers that had the desired tacit knowledge to join the team (from a dissolving team that has already accomplished its primary purpose or from a team that did not have a current need for the requested knowledge worker's tacit knowledge). The role of a knowledge librarian or expertise locator

system can facilitate the identification and location of knowledge workers with desired tacit knowledge and skills. This section has described a new organizational knowledge structure. Initial implementation of knowledge teams and knowledge groups may be aligned to traditional organizational hierarchies to overcome corporate culture shift resistance. The knowledge groups are eventually aligned to core competencies and projects instead of by more traditional functional divisions. However, communities of practice related to functional interests/areas should still be promoted within the new knowledge organization to further promote inter-group knowledge sharing (Walczak, 2005).

Sharrat and Usoro (2011) state that organizations with centralized bureaucratic management can stifle the creation of new knowledge whereas a flexible decentralized organizational structure encourages knowledge sharing particularly of tacit nature. This is supported by Beijerse, (2000) who describes a company “3M” as having encouraged innovation and knowledge sharing by flattening their structure and decentralizing the decision making process.

According to Sharrat and Usoro (2011), organizations that rely on quick and adaptive responses as a competitive advantage need a flat organizational structure and short lines of communication among and between employees and management thus allowing employees to make important decisions at all levels. Gold *et al.*, (2000) confirm and states that a team-based non-hierarchical, self-organizing organizational structure is the most effective for knowledge management practice. This is supported by Claver-Cortes *et al.*, (2007) who states that a flexible organizational structure has an important role in the successful knowledge management implementation. The

author further suggests that flexible organizational structures assist to achieve decentralization of decision-making process by facilitating the communication process at all organization levels. Yusuf and Wanjau (2014) emphasize that organization structure characterized by positive decision making, ease of information flow and cross-functional teams contribute positively to knowledge sharing.

According to Wang and Ahmed (2003), the structure of knowledge-based organizations must be created in higher levels of structural dimensions to include trust-based relationship, externally-oriented interactive relationship, and emotional-inclusive relationship. Herrmann (2011) however states that an organization that is badly role-modelled by those highest in the organizations hierarchy can hinder knowledge management. The study emphasizes that high ranking staff may consider themselves to be more important than others thus manifesting in not sharing information.

According to Hermann (2011), most organizations in Africa are hierarchical structured hence staff are influenced by the line manager's behavior, with the high ranking members of the organization being viewed as unreliable. Unreliability and non-cooperation within an organization hierarchy make it difficult to implement knowledge management. Van den (2003) however states that constant interaction and two-way exchanges of knowledge and experience between individuals within the organization assists creation and sharing of knowledge. Edwards, Hall and Shaw (2005) confirm and add that in hospitals, healthcare providers that are involved in adjacent or connecting activities must be able to share knowledge especially where their knowledge overlap. The study states that in knowledge management practice,

there needs to have an overseer such as in management, leadership and facilitation of the same and also appropriate communication channels so as to harmonize implementation.

2.5 Technology and Knowledge Management Practices

Technology is the combination of techniques, skills, methods, and processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation (Benjamin *et al.*, 2019). Technology has many effects. Technology has helped develop more advanced economies and has allowed the rise of a leisure class. Technology has different attributes (Darban and Polites, 2020) which include:

1. Ubiquity

Ubiquity is the state or capacity of being everywhere. Because of the power of technology, we have access to google docs, iCloud and drop box anytime (Darban and Polites, 2020).

2. Magnification

With the onset of lightning-speed information sharing, everyone who has access to information is given the right to share his/her opinion about it. Issues are magnified: by the media, by internet posts, and by individual people (Ibrahim, 2018). A single picture posted online can become a matter of public debate and government concern.

3. Accessibility

Ever since the internet started, people were able to access any information and communicate with other people (Ibrahim, 2018). With the help of technology, information can be found just by typing into a search engine.

4. Reproducibility

Modern day technology gave rise to the quick reproduction and distribution of messages and data – and communication is no exception to this inseparable aspect of advancement. With the advancement brought about by technological innovations, information can easily be reproduced and distributed with no cost at all most of the time (Darban and Polites, 2020).

5. Lack of Accountability/ Disposability

With the amount of content that flows in to the Social network sites and the instantness of sharing content, posts can be easily covered up with new stuff. As an effect, some people tend to express themselves in a “disposable” way (Benjamin *et al.*, 2019).

6. Spatiality

Technology has given access to anything or anywhere in the world at a click of the button. People can now communicate with foreigners without having to go through an airport security scanner (Li *et al.*, 2021). The internet has now remove those boundaries and allow people to talk using video chat applications and other social networking sites.

7. Surveillability

Technology has invented a way to keep track of itself, and with its boundless storage of data, this could spiral out of control. Internet users should not to supply any information that could be potentially incriminating network sites (Li *et al.*, 2021). On the other hand, it is up to the society to support this kind of culture, of upholding this surveillance mentality on others.

8. Shifting of relationships

Technological advancements have paved the way for a more interconnected social landscape. Heightened communication provides an avenue by which dialogue can occur between and among people, making apparent the concept of globalization coined as the “flattening of the world” (Benjamin *et al.*, 2019).

Many organizations in the corporate sector look to Knowledge Management as a solution to the new challenges of the information age. Knowledge and information are becoming crucial core assets for businesses, who have to learn to handle these assets in new ways. Traditional accounting and monitoring systems designed to deal with tangible inputs and outputs are no longer adequate. Instead, organizations now find that they have to share information internally more efficiently and learn to adapt more quickly to external circumstances in order to retain their competitive advantage. In response to this situation, the first generation of Knowledge Management strategies aims to improve knowledge sharing within organizations (Ceptureanu *et al.*, 2017). Two stage analysis of successful change implementation of knowledge management strategies in energy companies from Romania. *Energies*, 10(12), 1965. In the rapidly changing environment and the high technology atmosphere of the 21st century, organizations are becoming more innovative than ever before. Most organizations in the developed and the developing world are opting for a change in management and are looking for ways to improve their ability to create new ideas and to develop the best environment for the creation of ideas.

Knowledge management is now recognized as an organization's most valuable asset. Because knowledge is a complex asset, it must be managed in a different way unlike other resources (Mosoti and Masheka, 2010). The first generation of Knowledge Management was very focused on Information Technology and Systems; technical tools were used to collect and codify existing knowledge in order to make the organization run more smoothly.

A 'second generation' of Knowledge Management strategies has now emerged, which focuses more on organizational processes and the creation of new knowledge in order to keep the organization one step ahead of its competitors. For example, the most successful organizations are shifting from strategies based on prediction to strategies based on anticipation of surprises (Ouriques *et al.*, 2019). They are shifting from management based on compliance to management based on self-control and self-organization. They are also shifting from utilization of already known knowledge to the creation of new knowledge from pure technology Knowledge Management applications to also include process applications. When and how these shifts should be undertaken depends on the type of organization in question (Deephouse *et al.*, 2017). The importance of Knowledge Management has been widely promoted and recognized, although it seems that few organizations are truly capable of leveraging and managing knowledge in their organizations.

According to Storey and Barnett (2000), a significant proportion of Knowledge Management initiatives will fail because implementing Knowledge Management is not a piecemeal and easy task that organizations can undertake. It involves the support of technological infrastructure, a change in organizational culture and the

management of different types of knowledge. Although formulating a consistent strategy is a difficult task for any management team, making that strategy work implementing it throughout the organization is even more difficult. A myriad of factors can potentially affect the process by which strategic plans are turned into organizational action. Unlike strategy formulation, strategy implementation is often seen as something of a craft, rather than a science, and its research history has previously been described as fragmented and eclectic (Hrebiniak, 2006).

Knowledge Management is about knowledge sharing amongst people in the organization, technologies that help the sharing and mechanisms for bringing new knowledge into the organization (Biletska, 2021). Malhotra (2005) notes that despite the increasing sophistication of Knowledge Management technologies, there are increasing failures of Knowledge Management technology implementations. It is important to note that such failures result from the knowledge gaps between technology inputs, knowledge processes, and business performance.

Business organizations and companies spend less on technology and are not leaders in adoption of most hyped Real-Time Enterprises technologies succeed where others fail. The Real-Time Enterprise which is considered the epitome of the agile adaptive and responsive enterprise capable of anticipating surprise; hence the attempt to reconcile its sense making and information processing capabilities is all the more interesting (Panayotova, 2017). Management and coordination of diverse technology architectures, data architectures and system architectures pose obvious knowledge management challenges (Malhotra, 2005). Such challenges result from the need for integrating diverse technologies, computer programs, and data sources across internal business processes.

These challenges are compounded manifold by the concurrent need for simultaneously adapting enterprise architectures to keep up with changes in the external business environment. For this to happen, changes in the existing technologies or their replacement with newer technologies must be done. Growing business enterprises often have too much (unprocessed) data and (processed) information and too many technologies (Malhotra, 2005). However, for most high-risk and high-return strategic decisions, timely information is often unavailable as more and more of such information is external in nature.

As a result, most organizations have incomplete knowledge of explicit and tacit data, information and decision models available within the enterprise. In other words, often they may not know if the available data, information and decision models are indeed up to speed with the radical discontinuous changes in the business environment (Malhotra, 2005) Forehand (2002) presentation of a typology of work settings distinguishes between four different types of organizations process, systems, network and competence-based on the different levels of interdependence and complexity that are required in different work situations. For example, the competency model describes a workplace that is highly reliant on individual expertise low level of interdependence in order to carry out evaluation and judgment-oriented work high level of interpretation. The “network” model denotes a workplace that depends on fluid deployment of flexible teams high level of interdependence in order to improvise and meet new challenges as they arise high level of interpretation. Different work settings require different ways of handling and processing information to create the necessary knowledge (Schwartz *et al.*, 2019).

2.6 Theoretical Review of Literature Framework

Several theories have given the rationale on Knowledge Management. This study is anchored on-the Knowledge Management theory, the theory of Organizational Epistemology, Knowledge Spiral theory and Resource Based View of the Firm theory. It is critical that KM practices is based on a solid theoretical foundation, as stipulated by Dalkir (2011), the theoretical framework provides a significant view on the variable of the study.

2.6.1 Knowledge Management Theory

The theoretical assumptions in this theory are based on the notion of knowledge sharing as a core element of knowledge management. It explains the concept of trust in knowledge sharing. According to Ardichvili et al., (2003), different kinds of trust need to be present for efficient knowledge sharing to be possible. This theory states that efficient knowledge sharing requires clarity of roles. From this perspective, teams and networks comprise of interconnections between human and non-human actors - documents, devices and people. This theory stresses that one of the main influential factors in knowledge sharing is the existing of an organizational culture that supports effective sharing of knowledge. While culture is seen as a key barrier to success of knowledge management implementation, knowledge is one of the most important aspects of organizational culture (Vesga Rodríguez et al., 2020).

According to Qazi, Miralam and Bhalla (2017), organizational culture defines the range of autonomy, trust and values which have a strong impact on the communication, the sharing of knowledge and the innovativeness of an organization. The author states that “knowledge is as much cultural as it is technical”. The theory

sites common language as a tool that needs to be acceptable by other employees to ensure tacit knowledge is well made explicit. Tracy et al., (2005) add that the transfer of tacit knowledge into explicit knowledge (within the individual) and the transfer of explicit knowledge between people (within or between organizations) are the two actions underlying knowledge management theory. This theory also views knowledge management as dependent on the commitment of top management, without which knowledge management initiative is ineffective.

2.6.2 Theory of Organizational Epistemology

The theory of organizational epistemology was developed by Von Krogh and Roos (1995). The theory was one of the first theory on KM that distinguished the social knowledge and individual knowledge. The theory stipulated that knowledge reside on both the individual of the organization and the social level of the individuals working in the organization. The theory defined knowledge as everything that is known by the individual in the organization. Unlike the cognitive perspective where the knowledge is viewed as an abstract entity within the organization, this theory provides a clear concept on the tacit knowledge, which is very difficult to abstract out of someone and make more concrete.

Theory has also reinforced based on the theory of epistemology, it is believed that KM implementation requires a link between the knowledge and those who are knowledgeable about the activities and the functions in the organization, between the knowledge and those individuals in the organization who wish to know about them, and knowers and the need or wish to know. This theory is essential in the research study as it provides the basis of KM practices, distinguishes between the concept of

the knowledge based on the individual and organizational perspectives. The discovery of the different forms of the knowledge, relationships that occurs between the knowledge types and objects has created a significant basis on the implementation of KM practices.

2.6.3 Knowledge Spiral Theory

The knowledge spiral theory was developed by Nonaka and Takeuch (1995). The theory focuses on the knowledge spirals that explain on the transformation tacit knowledge into explicit knowledge based on the individuals of the organization, group of the organization and the organizational learning and innovation (Dakri, 2011). The theory established four modes of knowledge conversion from tacit knowledge to tacit knowledge - a process of socialization; from tacit knowledge to explicit knowledge - process of externalization; from explicit knowledge to explicit knowledge - a process of combination and from explicit knowledge to tacit knowledge - a process of internalization (Dakir, 2011). Hence, the acronym coined for this conversion is, the SECI model. The SECI model of knowledge dimensions is a model of knowledge creation that explains how tacit and explicit knowledge are converted into organizational knowledge.

The provision of the four modes of knowledge conversion gives a clear understanding and articulation of the implementation of the KM practices in the organization. Thus, the theory is essential as it provides a clear basis on the transformation and integration of the knowledge that will create a link to foster the implementation of KM practices.

2.6.4 Resource Based View

Resource Based View (RBV) theory was developed by Penrose (1959). Other authors who have made significant contributions to the theory include Teece (2000). The theory rests on the premise that an organization is a broader set of resources and the growth of an organization involves the exploitation of existing resources and the development of new ones. Symeonidou and Nicolaou (2018), posits that human capital is not entirely specialized and can therefore be redeployed to allow the firm's diversification into new products and services. Further the theory recognizes the transferability of a firm's resources and capabilities as a critical determinant of their capacity to advance sustainable competitive advantage (Gupta *et al.*, 2018). It advances that an organization's success is due to the total assets, resources and capabilities which it owns. These resources and capabilities enable the organization to achieve sustained competitive advantage.

The Resource Based View of the firm focuses specially on the inside of the firm, its resources and capabilities, to explain the profit and value of the organization (Penrose, 1980; Wernerfelt, 1984; Grant, 1991; Peteraf, 1993; Makhija, 2003). This theory is applied to explain differences in performance within an industry (Hoopes, Madsen & Walker, 2003). The Resource Based View of the firm states that differences in performance happen when well successful organizations possess valuable resources that others do not have, allowing them to obtain a rent in its quasi-monopolist form (Wernerfelt, 1984). Valuable company resources and capabilities must be difficult to imitate, and not acquired or replaced easily by competitors. Resources that are valuable and unique to the organization enable the enterprise to generate profits and a sustainable competitive advantage (Pesic, 2007) which enhances organizational performance.

This study is also derived from the theoretical foundation of Resource Based View (RBV) of the firm and Knowledge Based View (KBV). The RBV describes the role of resources and dynamic capabilities in an organization's value creation process and achievement of sustainable competitive advantage that is critical in superior performance and better economic returns (Barney, 1991; Wernerfelt, 1984). The RBV specifies that it is difficult to imitate resources that are tacit and socially complex and are specific to the organization and not widely shared or distributed among firms. Superior performance of any organization, on the other hand, will be dependent upon how the firm harnesses its resources and utilizes them to the realization of the firm's operational targets and in essence its strategic objectives.

Based on this principle of RBV, KBV declared knowledge as one of the most important resource, as important as capital, that assists an organization in creating and enhancing competitive advantage, a prerequisite for superior performance (Pereira & Bamel, 2021). In this perspective the wealth of knowledge that an organization possesses is a crucial resource for competitive advantage and ultimately superior performance, and KM thus focuses on the practices for knowledge creation and capture, sharing and enrichment, storage and retrieval as well as dissemination of this knowledge for use and re-use on the strong need to maintain a link between knowledge objects and those who are knowledgeable about them such as the experts and experienced users.

2.6.5 Empirical Review of Literature

Several researchers both locally and globally have shown interest on KM practices and organizational performance in recent studies. The KM practices has been the new

management trend and has attracted the interest of scholars. Among the deliberated areas of KM practices, the relationship between KM practices and commercial bank's performance is an area that has attracted scholars' interest.

Globally, Chia-Nan and Huei-Huang (2016) did a research study on KM capability and organizational effectiveness in Taiwanese public entity and the mediator role of organizational commitment. The objective of this study was to determine how organizational factors are affecting knowledge management practices in selected banks in Kenya. The study used a descriptive research survey to carry out the research on the banks and the structured questionnaire was employed to collect data from the banks. The study further revealed the top management within the bank's involvement plays a bigger role in the implementation of KM infrastructure especially through internet-enabled platforms that engages the knowledge workers in "peer-to-peer" knowledge sharing across organizational and company boundaries.

Shin-Huan *et al.* (2015) studied on KM enablers, KM effectiveness, and the mediating effect on the business process outcome. The study objective was to determine the influence of the KM effectiveness in the business process of the hospitals and the financial firms in China. The study adopted a descriptive survey research to carry out the research, and structured questionnaire was used to collect data on the financial firms and the hospitals in China. The study with 72 percent response recognized Knowledge Management Infrastructure (KMI) and KM capabilities had a positive influence in the business processes outcome of the survey firms. The study further demonstrated that the KM infrastructures and Knowledge Management Capabilities (KMC) enhance market relationship through improvement

of the business process outcome to deliver the value of KM practices. The main gap with this study is that it did not relate the focus on the relationship between KM practices and performance

Khuram, (2016) studied the integration between knowledge strategy and KM process on organizational creativity and performance of the listed firms in India, in which the study aimed on establishing the relationship between knowledge strategy and KM implementation on the organizational creativity and performance in the listed firms in India. The study employed a descriptive survey research study and semi-structured questionnaire was adopted as the data collection instrument on the population of the study.

With 66.67 percent response rate, the study established a significant relationship between knowledge strategy and KM process on the creativity and performance of the surveyed firms. The study revealed KM strategy influences the KM capabilities that lead to the organization creativity and organizational performance, although no significant impact was established on the human-oriented KM strategy and organizational performance. However, the study focused on knowledge strategy and creativity. The scope was on listed firms, whereas this study will focus on a public corporation.

Locally, Karani (2015) studied on the effect of KM practices on performance of mobile telephone companies in Kenya. The main objective of the study was to examine the effect of KM practices on organizational performance of mobile telephone companies in Kenya. The study adopted a descriptive survey research

design. The population of the study entailed all the 21 mobile telephones companies in Kenya and used structured questionnaire as the data collection instrument. The data were analyzed with the use of descriptive statistics, such as tables, frequency, mean and standard deviation. With 86 percent response rate, the study established that KM practices influence organization performance in various ways that lead to better decision making, improved customer service, reduced operational costs and enhancing the competitiveness of the organization. The study further concluded that KM practices are essential in the sustainability, efficiency, and effectiveness of the operations of the organization. The main gap with this study was the focus on mobile telephone firms whose operational context is different from public corporations.

Wanjiku (2013) studied KM practices of selected non-profit organization in the health sector in Nairobi County. The study aimed to establish on the extent of KM practices on selected non-profit organization in Nairobi County. The study employed a cross sectional research design and the population of the study entailed the management of all the non- profit health organization, in which the structured questionnaire was used to collect the data from the population of study. The data was analyzed through the use of descriptive statistics, for example tables, frequency, mean and standard deviation. With 69.18 percent response rate, the research findings established that KM related practices are well established within the non-profit health organization. However, it was also established that the role of leadership in enhancing KM practices was very limited. The study further revealed that KM practices have led to favorable organizational culture, intellectual capital and improved operational performance. The gap with this study was the focus on the extent of KM practices but not on the relationship between KM and organizational performance.

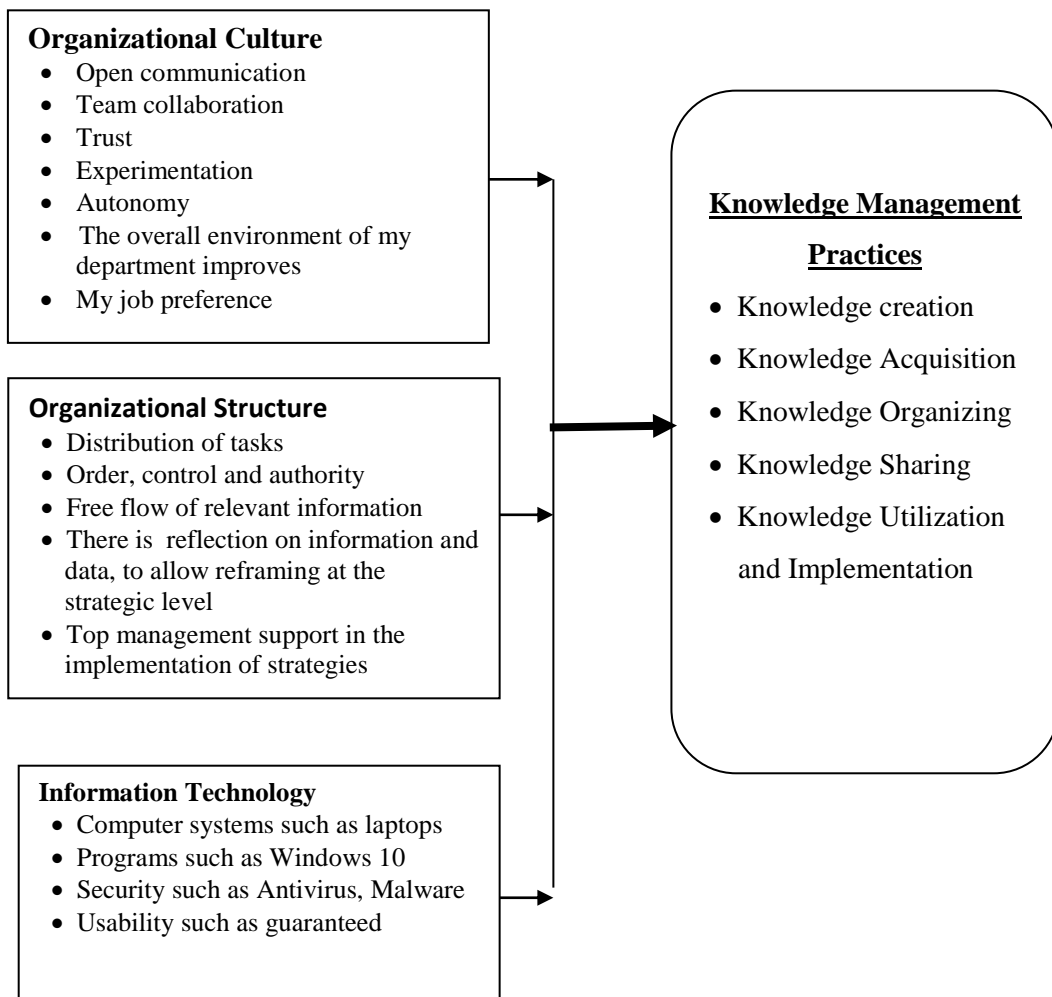
Milka Chebii (2017) and Owino (2012) in their study on the influence of institutionalization of KM in commercial enterprises in Kenya. The study aim was to establish the extent of the application of KM practices in the commercial enterprises in Kenya. The study adopted cross sectional descriptive research design and the population of the study entailed the manufacturing and commercial firms in Nairobi, in which the study used stratified random sampling techniques were 60 managers were selected from the manufacturing enterprises operating in Nairobi. The study used semi-structured questionnaire to collect the data from the sampled population and the data were analyzed by use descriptive statistics, such as tables, frequency, mean and standard deviation. With 64 percent response rate, the research findings established the organizational; practices and technological infrastructures are very critical in the institutionalization of KM practices in the manufacturing enterprises. The study revealed, there was lack of management support for the implementation of KM practices in the organization. The gap with this study was the focus on implementation of organizational KM practices with a skew to manufacturing enterprises. This is contextually different from that of public corporations.

Ahmed, Fiaz, and Shoiab (2015) study empirically focused on the influence of knowledge management practices on organizational performance. The study target population was the banking sector in Pakistan. The study methodology involved a survey design, questionnaires and descriptive statistics. The study established that through knowledge management practices the organization is able to provide quality services to its clients utilize its resources efficiently, gain more profit hence improve its overall performance.

2.7 Conceptual Framework

The conceptual framework below explains the presumed relationship between independent and dependent variables. The study assumes that Organizational Culture, Organizational Structures as well as Information Technology influence Knowledge Management practices in commercial banks.

The conceptual framework presents the relationship between the independent and dependent variables of the study. The framework shows those factors (organizational culture, structures and technology) which are the independent variables, influence knowledge management practices, which is the dependent variable. The study assumes that effective knowledge management practices are influenced by strong organizational culture, structure and high level of information technology adoption.

Independent Variables**Dependent Variable**

Source: Researcher, 2019.

Figure 2.1: Conceptual Framework of the effects of Knowledge Management in Commercial Banks in Kenya

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this study was to investigate factors influencing Knowledge Management practices in selected commercial banks in Nairobi. This chapter outlines how the research was conducted. It focused on the research design, target population, sample size and sampling procedures.

3.2 Research Design

Explanatory research was used to connect ideas and to understand cause and effect. It may be thought of as understanding a phenomenon in terms of conditional statements in the form, “If X, and then Y.” Explanatory research was conducted in order to help in finding the problem that has not been studied before in-depth. It was used as a measure to understand organizational factors on knowledge management and its influence on the existing norms, and assumptions within the selected banks in Kenya. The purpose of the research design used was to help in understanding the problem efficiently.

3.2 Study Area

(Gill 2011:355) points out, that it's important for a researcher to identify the study location before the study commences. By planning and putting more attention to details can make work easier for the researcher. The study was conducted in four commercial banks within Nairobi County, Kenya. These included: Kenya Commercial Bank, Standard Chartered Bank, Cooperative Bank and Equity Bank. Since most commercial banks head offices are within Nairobi County, conducting the study within Nairobi was viable due to the sample size targeted.

3.3 Target Population

Mugenda and Mugenda (2003:365) state that, the population can be defined as an entire group of objects, events and individuals that have a common observable characteristic. Kombo (2009:354) also defines population as an entire group of persons with at least one common characteristic. The total population of interest was composed of all the 106 management and employees working in four selected banks within Nairobi.

The unit of observation was the five functional areas in an organization; human resource, finance, marketing, information communication and operations. The four commercial banks were chosen since they are tier 1 banks in Kenya. They are considered by Central Bank of Kenya to be safe and have control of almost 50% of Kenyan Banking sector.

Table 3 1: Population Distribution of Banks in Kenya

No	Banks	Sample size	Sample population
1	Kenya Commercial Bank	15	26
2	Standard Chartered Bank	7	26
3	Cooperative Bank	15	26
4	Equity Bank	16	28
	Total	53	106

Source: Survey Data, 2019

3.4 Sampling and Sample Size

3.4.1 Sampling Frame

Stratified random sampling was used to make inferences of the intended population from the targeted population. This was due to lack of a sampling frame for the management and employees working in the selected banks. Stratified random sampling was used because it enabled a sample population that best represented the target population to be obtained, ensuring each sub group of interest is represented.

3.4.2 Sampling Technique

Stratified random sampling was used to ensure that the sub-groups within the population were included (Smith, 2002). The sub-groups included the staff from human resource, finance and marketing, heads of sections and the operation staff. Simple random sampling was then used to select the required number of participants from each stratum

3.4.3 Sample Size

The sample size was the exact number of elements that was subjected to research questions (Kothari, 2011). In order to determine the sample size of the study, the following formula as given by Kothari (2011) was used:

$$n = \frac{(Z^2 pq)}{d^2}$$

Where: n = the desired sample size when the target population is < 10,000.

Z = standardized normal deviations at a confidence level of 95% which was 1.96.

p = the proportion in the target population that assumes the characteristics being sought. In this study, a 50:50 basis was assumed which is a probability of 50% (0.5).

q = The balance from p to add up to 100%. That is $1-P$, which in this case was $1 - 50\%$ (0.5).

d = Significance level of the measure was 0.095.

As such the sample for this study was derived as follows: $n = \frac{(1.96^2 * 0.5 * 0.5)}{0.095^2} = 106$.

For this study, the sample population was 106 employees working from all the four selected banks within the central business district.

3.5 Data Collection

3.5.1 Data Types

A structured questionnaire were used to collect the data and it allowed respondents to answer structured questions. Structured questions were used because they offer an increased respondent rate and are easily coded and analyzed (Saunders, *et al*, 2009). Respondents was assured of confidentiality and anonymity.

3.5.2 Collection Instruments

The instrument used was a 5 Point Likert scale from strongly disagree to strongly agree. The first part of the questionnaire obtained a general information about the respondent. The second part established factors influencing knowledge management practices which included; organizational culture, organizational structures and technology.

3.5.3 Data Collection Procedures

Permission was sought from the Ministry of Higher Education, Science and Technology through the NACOSTI which provided research license before the data was collected. Permission was also sought from the City County of Nairobi. A questionnaire was used as the main research tool for this study. Bank employees who were sampled for the study were asked the same questions in the same order. The questionnaire contained both open and closed questions. It was standardized and completely predetermined.

3.6 Validity and Reliability of the Instruments

Validity refers to the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Mugenda and Mugenda, 1999). There are various types of validity; content, construct and criterion validity. Content validity indicates the extent to which items adequately measure or represent the content of the property or trait that the researcher wishes to measure. To ensure this kind of validity is achieved, the researcher ensured that subject matter expert review, particularly from the supervisors in the development of research instruments, is adhered.

In addition, Construct validity indicates the extent to which a measurement method accurately represents a construct. To achieve this kind of validity, the researcher used the correlation test. Generally, the researcher constructed questions and proofread while making comparison to the study objectives. The researcher then consulted from time to time the Academic Supervisors to ascertain that the instruments are valid for the study.

On the other hand, Kothari (2004) states that the reliability of the questionnaires' test refers to the ability of that test to consistently yield the same results when repeated measurements are taken of the same individual under the same conditions. According to this study reliability, therefore, implies the degree to which a research instrument yields consistent results or data after repeated trials. To test reliability, a pilot study was carried out with twenty questionnaires from other banks within the county after which split-half method was applied to determine a reliability index through Pearson's Product Moment Coefficient Correlation. A reliability index of 0.80 was considered ideal for the study.

3.7 Data Analysis and Presentation

After the data was collected, it was examined for completeness, consistency and reliability. Descriptive statistics techniques was used to analyze the quantitative data and these included frequencies, means, standard deviation and percentages. The data was presented in form of tables and graphical presentations such as pie charts and bar Figures. Statistical Package for Social Sciences (SPSS) program aided in analyzing the data whereby the raw data was converted and output generated in form of tables and graphs for easy interpretation and discussion of study findings. Furthermore, inferential statistics was used for testing the hypotheses. In this case, a multiple regression model at a significance level of 0.05 was used.

3.7.1 Measurements of Variables

Table 3.2 : Measurements of Variables

Research Objectives	Variable	Indicators	Measurement Scale	Type of Analysis
i. To establish the effect of organizational culture on knowledge management practices in commercial banks in Kenya.	Organizational culture	<ul style="list-style-type: none"> • Open communication • Team collaboration • Trust • Experimentation • Autonomy • The overall environment of my department improves • My job preference 	Nominal	Descriptive
ii. To determine the effect of organizational structure on knowledge management practices in commercial banks in Kenya	Organizational structure	<ul style="list-style-type: none"> • Distribution of tasks • Order, control and authority • Free flow of relevant information • There is reflection on information and data, to allow reframing at the strategic level • Top management support in the implementation of strategies 	Nominal	Descriptive
iii. To assess the effect of Information Technology on knowledge management practices in commercial banks in Kenya	Information Technology	<ul style="list-style-type: none"> • Computer systems such as laptops • Programs such as Windows 10 • Security such as Antivirus, Malware • Usability such as guaranteed 	Nominal	Descriptive

Correlation Analysis as a step to Multiple Analysis

Multiple regression generally explains the relationship between multiple independent or predictor variables and one dependent or criterion variable. A dependent variable is modelled as a function of several independent variables with corresponding coefficients, along with the constant term. Multiple regression requires two or more predictor variables, and this is why it is called multiple regression

It is a flexible method of data analysis that may be appropriate whenever a quantitative variable (the dependent or criterion variable) is to be examined in relationship to any other factors (expressed as independent or predictor variables). This model was suitable for this study if the following assumptions are made: Linear relationship (where the outcome variable Y has a roughly linear relationship with the explanatory variable X); homoscedasticity (where for each value of X, the distribution of residuals has the same variance) and finally, independent errors (Implying that residuals/errors should be uncorrelated).

A multiple regression equation for predicting y (knowledge management practices) can be expressed as follows:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

Where; y = Knowledge management practices,

x_1 = Organizational Culture

x_2 = Organizational Structures

x_3 = Information Technology

β_0 = constant

β_1 = Regression parameter for organizational Culture

β_2 = Regression parameter for organizational Structures

β_3 = Regression parameter for technology

ε = Error term

Assumption of Regression Analysis

For any regression model, assumptions of the model must be met for the data to fit in the model (Olive, 2017). Multiple linear regression has its own assumptions (Park and Klabjan, 2020) also which includes:

There should be a proper specification of the model in multiple regression. This means that only relevant variables must be included in the model and the model should be reliable.

Linearity must be assumed; there should be a linear relationship between the response and predictor variables. Normality must also be assumed in multiple regression. This means that in multiple regression, variables must have a normal distribution. Homoscedasticity must be assumed; the variance is constant across all levels of the predicted variable.

3.8 Ethical Considerations

Permission to carry out the study was sought from the relevant authority i.e. NACOSTI gave out *Research License No. 111223* as attached on the Appendix and Nairobi City County. The nature and the purpose of the research was explained to the respondents by the researcher. The individuals' right and personal integrity was greatly respected during the research. During the course of the data collection, the

respondents were assured of anonymity, confidentiality and they were assured of their ability to withdraw from the study at any time if they wish to do so. No names or personal identification numbers was reflect on the questionnaires except the numbering for questionnaires, whose single purpose was for identification of data during data editing.

3.9 Limitations and Delimitations of the Study

This study sought to investigate the organizational factors affecting Knowledge Management practices in selected banks in Kenya. In carrying out this study the researcher experienced difficulties in accessing the target respondents particularly due to policy requirements and the nature of their positions. This limitation was mitigated through the use of the research permit from the National Commission for Science, Technology and Innovation (NACOSTI) and consent from Nairobi City County and placing appointments with the concerned managers.

The researcher also encountered a challenge as a result of the sensitive and strategic nature of some of the information needed. Nevertheless, this challenge was moderated by reassuring the respondents of confidentiality in handling the research data which was upheld through the use of codes in place of identity of individual respondents. In addition, the researcher experienced difficulties in reviewing empirical literature owing to the fact the area of focus is not adequately researched in developing countries especially in Kenya.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This Chapter reflects on the findings of the research that sought to assess the organizational factors that affect knowledge management practices in selected banks in Kenya. The results are presented based on the objectives and the research questions. These were focused on examining the effect of organizational culture on knowledge management practices in banking sector, determining the effect of organizational structure on knowledge management practices in the banking sector, and studying the effect of Information Technology on knowledge management practices in banking sector of the selected banks in Nairobi, Kenya.

4.2 Response Rate

The research operated with a sample size of 53 where 15 were from the Kenya Commercial Bank, 7 from the Standard Chartered Bank, 15 from Cooperative Bank, 16 from Equity Bank. This was based on the use of stratified sampling that facilitated the division of the population into varying groups. Stratified sampling was also utilized to make inferences about the intended population from the targeted management and employees.

A total of 53 questionnaires were circulated to the population of which 45 were returned fully filled. The response rate for the circulated questionnaires was 85%. This is a very high response rate which is good for research considering that a response of 70 % is considered to be good and adequate for analysis and reporting (Mugenda 2003).

The high response rate obtained was due to the respondent's rich knowledge and understanding of the research problem. Hence they provided an essential insight which was of great significance to the study.

4.3 General Information

This segment outlines data about the respondents from the varying banking institutions utilized for this research. The findings have been presented below.

4.3.1 Gender

The study established the distribution of gender of the respondent. There were 47% female and 53% male respondents that translated gender equality in management positions and other sub-groups assessed in the banking industry.

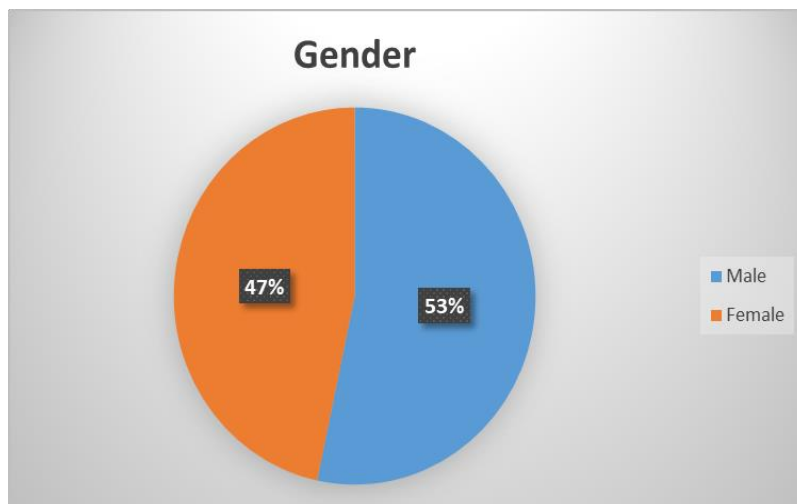


Figure 4.1: Gender Distribution of respondents

Source: Survey Data

4.3.1 Age Bracket

The researcher pursued to discovery the respondent's age brackets. The gathered data shows that a majority of the respondents (47%) were aged between 31 and 40 years. This was followed by 24% of who were aged between 25 and 30 years and 18% aged between 41 and 50 years. The remainder 11% indicated that they below 25 years old. None of the respondents who participated in this research was over 55 years old.

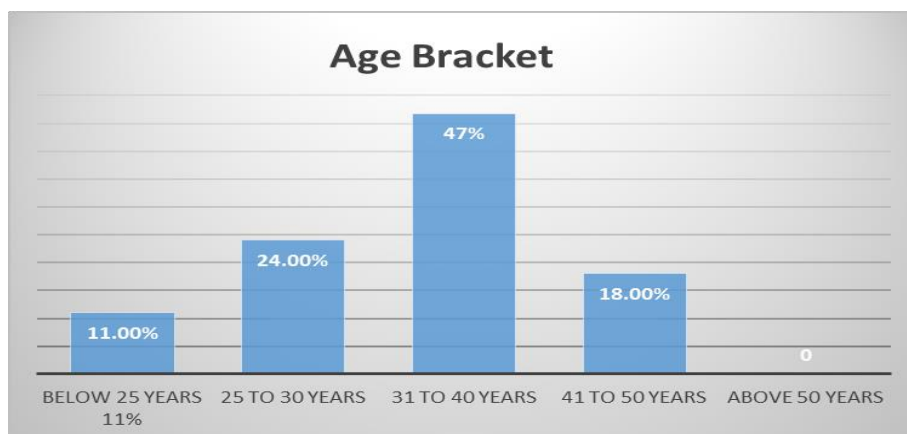


Figure 4.2: Age Bracket of respondents, Survey Data.

4.3.2 Level of Education

In this area of the study, the researcher aimed at having an understanding of the respondent's level of education. Table 4.1 shows that the research findings.

Table 4.1: Respondents' Level of Education

Level of Education	Frequency	Percentage
Certificate	0	0
Diploma	8	18%
Bachelors	22	49%
Masters and above	15	33%
None	0	0
Total	45	100.0

Source: Survey Data, 2019

The findings reflect that 49% of the participants were Bachelor graduates. This was followed by 33% of the respondents who had Masters while the remainder 18% had Diplomas. The collection of education information was considered to be essential in establishing the respondent's ability to respond to the questions. The data showed that the respondents had rich knowledge and understanding of the research problem and could provide an essential insight which was of great significance to the study.

4.4 Knowledge Management Practices

The researcher pursued to discover the aspects of knowledge management practices. Respondents were asked to indicate their ratings on the following notions based a Likert scale Where 5) Strongly Disagree, (4) Disagree, (3) Not Sure, (2) Agree and (1) Strongly Agree. The study findings are as shown in subsequent table.

Table 4.2: Knowledge Management Practices

Knowledge Management Practices	Mean	Std. Deviation
Knowledge creation	4.5171	.9098
Knowledge Acquisition	4.5024	.9166
Knowledge Organizing	4.1463	.9099
Knowledge Sharing	4.3621	.9921
Knowledge utilization and Implementation	4.4935	.9731
Average Mean	4.4042	0.9403

Source: Survey Data, 2019

The participants strongly agreed that knowledge creation, acquisition, organizing, sharing, and utilization and implementation are crucial knowledge management practices. This is clear through the respective means of 4.5171, 4.5024, 4.1463, 4.3621, and 4.4935 respectively. This implies that the factors have a crucial influence on knowledge management.

4.5 Organizational Culture and Knowledge Management

Respondents were asked to indicate on the following notions regarding organization culture influence on knowledge management practices. Responses were based on the five Likert scale.

Table 4.3: Effects of Organizational Culture on Knowledge Management

Effects of Organizational Culture on Knowledge Management	Mean	Std. Deviation
Open communication	3.9286	.8084
Team collaboration	4.3143	.9947
Trust	3.7860	.9941
Experimentation	4.574	.9832
Autonomy	4.2861	.9347
The overall environment of my department improves my job performance	3.5143	.8164
Average Mean	4.8806	1.1063

Source: Survey Data, 2019

The participants strongly agreed that team collaboration, experimentation, and autonomy affect knowledge management with means of 4.3143, 4.2860, and 4.5740 respectively. The study also revealed through the participant's agreement that open communication affects knowledge management (mean= 3.9286), trust (mean=3.7860), and that their overall setting in the departments enhances job performance (mean=3.5143).

4.6 Organizational Structure

Respondents were asked to rate how the following statements on organization structure influence knowledge management practices. Responses were based on five point Likert scale based questions. Findings are presented in the figure below.

Table 4.4: Effects of Organizational Structure on Knowledge Management

Effects of Organizational Structure on Knowledge Management	Mean	Std. Deviation
Distribution of tasks	4.4285	.9420
Order, control and authority	4.4768	.9428
Free flow of relevant information	4.2304	.9171
There is a reflection on information and data, to allow reframing at the strategic level.	4.1839	.8961
Top management support in the implementation of strategies	3.8221	.8572
Average Mean	4.2283	0.9110

Source: Survey Data, 2019

The participants strongly agreed that the distribution of tasks affects knowledge management (mean=4.4285), they also strongly agreed that order, control and authority affect knowledge management (mean=4.4768), free flow of relevant data strongly affects knowledge management (mean=4.2304), the participants also strongly agreed that there is a reflection of data to facilitate reframing at a strategic level (mean=4.1839). The respondents further agreed that top management supports the implementation of strategies (mean=3.8221). The data implies that the internal structure and relationships prevailing in the organization have a significant effect on knowledge management.

4.7 Organizational Technology

Respondents were asked to rate how the following statements on Information Technology influence knowledge management practices. Responses were based on the five Likert scale.

Table 4.5: Effects of Information Technology on Knowledge Management

Effects of Information Technology on Knowledge Management	Mean	Std. Deviation
Computer Systems such as laptops	4.4768	.9420
Programs such as Windows 10	4.1691	.9883
Security such as Antivirus, Malware	3.9358	.8428
Usability such as guaranteed	3.8421	.8752
Average Mean	4.1059	0.9120

Source: Survey Data, 2019

The participants strongly agreed that computer systems and programs affect knowledge management as shown through the means 4.4768 and 4.1691 respectively. The participants further agreed that security and usability affect knowledge management through means 3.9358 and 3.8421 respectively. This implies that effective IT infrastructure is crucial in facilitating knowledge management.

4.8 Discussion of the Findings

This study aimed to identify the impact of organizational factors on knowledge management in selected banks in Kenya. The findings show that knowledge management is an outcome of organizational culture, structure, and information technology because knowledge is created, made sense of, and utilized in accordance

with a set of cultural values and norms, embedded in structural relationships, and reflected in strategic priorities.

The data gathered shows that the effective and efficient application and deployment of information and knowledge systems in the areas of operations, management, accounting and marketing are crucial factors. Additionally, it is clear that the selected banks in the country employ knowledge management infrastructure as strategies to enhance their organizational performance.

The data analyzed implies that the organizational factors that influence knowledge management in the selected Kenyan banks are quite similar. This can translate to similar values, beliefs, norms, meanings and procedures shared by the banks and experiences of the members. In this case, organizational culture factors such as team collaboration, experimentation, and autonomy significantly influence knowledge management. Knowledge management is also affected by aspects of open communication and trust. The similarities in the banks assessed are clear through the respondents agree that the overall environment of my department improves my job performance.

The data gathered also shows that degree to which different functions are distinguished with respect to goals, task orientation, and degree of autonomy are crucial in influencing knowledge management. Additionally, the degree to which the activities of separate players in the organization can be coordinated through formal coordination mechanisms also affects knowledge management. It is also clear that the extent to which an organization uses rules and procedures to prescribe behavior

affects knowledge management. The data on the influence of Information Technology on KM implies that effective IT infrastructure is crucial in facilitating KM.

4.8.1 Correlation Analysis

Correlation analysis was done to establish the factors that affect KM practices in selected banks in Kenya.

able 4.6: Correlation Analysis

		Knowledge Management practices			
		Management practices	Organizational culture	Organizational structure	Information Technology
Knowledge Management practices	Pearson Correlation	1	.003	.013	.008
	N	45	45	45	45
Organizational culture	Pearson Correlation	.91	1	.001	.010
	N	45	45	45	45
Organizational structure	Pearson Correlation	.83	.016	1	.065
	N	45	45	45	45
Information Technology	Pearson Correlation	.81	.09	.008	1
	N	45	45	45	45

Source: Survey Data, 2019

Results presented by the correlation matrix indicate that there is significant correlation between the dependent and all the independent variables. A very strong positive

relationship was established between organization culture and Knowledge management ($r=0.91$). A strong positive relationship was also established between the organizational structure and knowledge management ($r =0.83$). Additionally, it is clear that there is strong positive relationship between information technology and knowledge management ($r =0.81$).

4.8.2 Multiple Regression Analysis

A multivariate regression model was applied to determine the relative significance of each of the independent variables with respect to the determinants of knowledge management with the selected banks. As the name implies, multivariate regression is a technique that estimates a single regression model with more than one outcome variable as the ones in this research.

The regression model was as follows:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

Where; y = Knowledge management practices,

x_1 = Organizational Culture

x_2 = Organizational Structures

x_3 = Information Technology

β_0 = Constant

β_1 = Regression parameter for organizational Culture

β_2 = Regression parameter for organizational Structures

β_3 = Regression parameter for technology

ε = Error term

Table 4.7: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.916 ^a	.839	.799	1.211

Source: Survey Data, 2019

The results in **Table 4.8** indicate that organizational culture, organizational structure, and information technology had a joint significant effect on knowledge management in the selected banks as shown by r value of 0.916. The R squared of 0.839 shows that the independent variables accounted for 83.9% of the variance on knowledge management.

Table 4.8: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	85.655	5	17.131	93.445	.000 ^b
	Residual	18.666	102	.183		
	Total	104.321	107			

Source: Survey Data, 2019

The significance value is 0.000, which is less than 0.05. Thus the multivariate regression model is statistically significant in predicting how organizational culture, organizational structure and information Technology affects knowledge management practices in selected Kenyan banks. The F critical at 5% level of significance was 2.305. Since F calculated is greater than F critical, that is (93.445 > 2.305), shows that the overall model was significant.

Table 4.9: Co-Efficient Determination

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.080	.189		.423	.672
Organizational culture	.298	.063	.293	4.767	.032
Organizational structure	.144	.071	.041	.622	.029
Information technology	.140	.062	.131	2.261	.025

Source: Survey Data, 2019

The established multiple linear regression equation becomes:

$$y = 0.08 + 0.298 x_1 + 0.144 x_2 + 0.140 x_3$$

Where

Constant=0.080,

According to the regression equation established, taking all variables into account (Organizational culture, Organizational structure and Information Technology) constant, Knowledge management practices will increase by 0.08. Moreover, a unit increase in organizational culture holding all other variables constant, Knowledge management will increase by 0.298. Further, if organizational culture, Information Technology and other variables remain constant while there is a unit change in organizational structure, knowledge management practices will increase by 0.144. For a unit change in Information Technology, holding organizational culture, organizational structure and all other variables constant, knowledge management practices will increase by 0.140.

Table 4.10 : Hypothesis Interpretation

Hypotheses	T-test Results	Accept/Reject
i) Organization culture has no statistical significance on knowledge management practices in selected Kenyan banks.	4.767, sig .032	Reject
ii) Organization structure has no statistical significance on knowledge management practices in selected Kenyan banks.	.622, sig .029	Reject
iii) Information Technology has no statistical significance on knowledge management practices in selected Kenyan banks.	2.261, sig .025	Reject

4.9 Ho: Organization culture has no statistical significance on knowledge management practices in selected Kenyan banks.

The analysis of organizational culture was done through descriptive and regression analysis. The regression analysis showed that organizational culture had a positive and significant effect on knowledge management in selected Kenyan banks. The findings were supported by these statistics which gave, $\beta = .298$, $t = 4.767$, and $p < .032$

4.9.1 Ho: Organization structure has no statistical significance on knowledge management practices in selected Kenyan banks.

The analysis of organizational structure was done through descriptive and regression analysis. The regression analysis showed that organizational structure had a positive and significant effect on knowledge management practices in selected Kenyan banks.

The findings were supported by these statistics which gave, $\beta = .144$, $t = .622$, and $p < .029$

4.9.2 Ho: Information Technology has no statistical significance on knowledge management practices in selected Kenyan banks.

The analysis of Information Technology was done through descriptive and regression analysis. The regression analysis showed that Information Technology had a positive and significant effect on knowledge management practices in selected Kenyan banks.

The findings were supported by these statistics which gave, $\beta = .140$, $t = 2.261$, and $p < .025$

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The researcher believed that this study would provide a refined view of how knowledge management practices are affected by organizational factors in selected banks in Kenya. The study was guided by three objectives that sought to examine the effect of organizational culture on knowledge management practices in selected banks in Kenya; determining the effect of organizational structure on knowledge management practices in banking sector, and studying the effect of Information Technology on knowledge management practices in banking sector of the selected banks in Nairobi City County, Kenya. This sections will present the summary of the outcomes, conclusions and recommendations on how the organizational factors are used to improve the competencies and organizational performance of the banking institutions.

5.2 Summary of Findings

The data collected on knowledge practices implies that the factors have a crucial influence on knowledge management. These factors are directly linked to the organizational structure. Claver-Cortes *et al* (2007) who states that a flexible organizational structure has an important role in the successful knowledge management implementation. This literature concurs with the correlation analysis results ($r= 0.91$), which showed a strong positive relationship between organization culture and knowledge management. The study further suggests that flexible

organizational structures assist to achieve decentralization of decision-making process by facilitating the communication process at all organization levels.

The research findings also showed that organizational culture affects individuals' response to different situations and their interpretation of the organization surrounding environment. For example, the result outcome showed that participants strongly agreed that, team collaboration, experimentation and autonomy affect knowledge management with means of 4.3143, 4.2860, and 4.5740 respectively. The findings correspond with the literature by Mavondo and Farell (2004) that established that organizational culture shapes and controls the behaviors in the organization. Organizational culture shaped by the means of organization members, organization moral standards, by the employment rights given to employees, and by the type of structure used by the organization to run the organization. Like organization structure, organizational culture shapes and controls the behaviors in the organization.

The data implies that the internal structure and relationships prevailing in the organization have a significant effect on knowledge management. Effective knowledge management ensures that every employee has access to appropriate and the highest quality of information available at the time when a decision needs to be made.

The research findings also established that effective IT infrastructure is crucial in facilitating knowledge management. This is depicted in the literature by Mosoti and Masheka (2010) that established that organizations in the developed and the developing world are opting for a change in management and are looking for ways to

improve their ability to create new ideas and to develop the best environment for creation of ideas. The literature concurs with the multiple linear regression model output, which showed a linear relationship between Knowledge management practices and Information Technology. A unit increase in Information Technology led to an increase of 0.140 in Knowledge management practices.

5.3 Conclusion

This study presents empirical evidence on the relationship of KM practices and organizational factors that affect the practices and could better understand the practices of knowledge management in organizations, and ways to apply it, the skills acquired or existing in the employees working in the banking sector.

Managing knowledge is as important to banking institutions as it is for any other kind of organization. This plays an integral part of the overall corporate strategy which aims to grow, extract and exploit the company's knowledge to increase shareholder value. Additionally, this enabled the banking institutions to improve the knowledge necessary to carry out specific business processes and thereby improving efficiency.

Effective knowledge management ensures that every employee has access to appropriate and the highest quality of information available at the time when a decision needs to be made. More specifically it was found that knowledge management practices are directly related to various intermediate measures of strategic organizational performance. For example in a study done by Khuram, (2016), in a study aimed on establishing the relationship between knowledge strategy and KM implementation on the organizational creativity and performance in the listed

firms in India. The study revealed KM strategy influences the KM capabilities that lead to the organization creativity and organizational performance. Another study done by Ahmed, Fiaz, and Shoiab (2015) which empirically focused on the influence of knowledge management practices on organizational performance. The study target population was the banking sector in Pakistan. The study established that through knowledge management practices the organization is able to provide quality services to its clients utilize its resources efficiently, gain more profit hence improve its overall performance. The data analyzed implies that the organizational factors that influence knowledge management in the selected Kenyan banks are quite similar. This can translate to similar values, beliefs, norms, meanings and procedures shared by the banks and experiences of the members.

Organizational culture is a very important factor in effective knowledge management. The research established that one of the most influential factors in knowledge sharing is the existing of an organizational culture that supports effective sharing of knowledge. Organizational Culture acts as a barrier to knowledge – sharing and need to change to become more supportive of it.

IT is capable of influencing knowledge management. As a result, banking intuitions incorporate information technology to facilitate knowledge management. This is in line with the literature by Malhotra (2005) that indicates that management and coordination of diverse technology architectures, data architectures and system architectures pose obvious knowledge management challenges.

5.4 Recommendations

5.4.1 Implications to theory

This study was anchored on-the Knowledge Management theory, the theory of Organizational Epistemology, Knowledge Spiral theory and Resource Based View of the Firm theory. With the extensive literature done on Knowledge management, a significant relationship was obtained in how the theories stated are linked to the study. The variable of interest under study (KM practices) was described in depth using the theories. Hence this study can be used as an application of the four theories under consideration.

The research established that one of the most influential factors in knowledge sharing is the existing of an organizational culture that supports effective sharing of knowledge. Therefore, it is also recommended that banking institutions should employ organizational cultures that enhance autonomy, trust and values which have a strong impact on the communication. In turn, this is bound to enhance the sharing of knowledge and the innovativeness of an organization. Effective organization culture provides support and incentives as well as encourages knowledge related activities by creating suitable environments for knowledge accessibility.

5.4.2 Implications to policy

The realization that knowledge is critical is challenging organizations to re-look at their internal dynamic capabilities as a strategic resource for competitiveness. The findings of this study will enable policy makers within the banking sector to recognize knowledge management and its crucial role in enhancing performance and hence inspire them to make a deliberate and systematic approach to accelerate the review

and redesign of their policies to align to knowledge management practices in order to reap full utilization of the organization's knowledge base.

Despite the growth index in the banking sector as stated in Kenya, subjective evidence suggests that in Kenya, the whole idea of Knowledge Management has not been fully appreciated and aligned to the banking industry; hence banks are faced with a huge challenge of leveraging accumulated knowledge as a mechanism to gain competitive advantage. The study provides useful information to commercial banks that will enable them design policies and develop strategies aligned to the business on how to utilize knowledge management interventions to enhance their performance (Yusuf & Wanjau, 2014). Organizations implementing knowledge management practices benefit in various ways, which based on the four Balanced Scorecard Perspectives (Kaplan & Norton, 1996).

There is a significant need for banking institutions to include knowledge management practices as part of their corporate strategy. This is crucial based on its ability to enhance the performance and also the productivity of the organization, which could lead to a competitive advantage. This is recommended for banks since they operate in settings that rely on quick and adaptive responses as a competitive advantage need a flat organizational structure and short lines of communication among and between employees and management thus allowing employees to make important decisions at all levels.

5.4.3 Implications to Research

There has been extensive literature on Knowledge Management examining various variables, however limited research exists on organizational factors that are affecting knowledge management practices within the banking sector in Kenya.

The findings of this study are useful to other researchers in the field of research as it adds to the body of existing literature in the area of knowledge management practices and organizational performance.

5.5 Suggestions for Future Research

This study represents research carried out with the aim of assessing the organizational factors that affect knowledge management practices in selected banks in Kenya. There is a significant need for more comparative studies to be done with other countries and give the correlation and the differences in the organizational factors that influence knowledge management. Future studies can be conducted in-depth to establish additional organizational factors or the same factors to achieve possible generalization of the results and to ascertain the influence of the factors on knowledge management.

REFERENCES

- Abdi, K., Mardani, A., Senin, A. A., Tupenaite, L., Naimaviciene, J., Kanapeckiene, L., & Kutut, V. (2018). The effect of knowledge management, organizational culture and organizational learning on innovation in automotive industry. *Journal of business economics and management*, 19(1), 1-19.
- Akgün, A. E., Keskin, H., Ayar, H., & Okunakol, Z. (2017). Knowledge sharing barriers in software development teams: a multiple case study in Turkey. *Kybernetes*.
- Alavi, M., Kayworth, T., & Leidner, D. (2006). Organizational and sub-unit values in the process of knowledge management (Working Paper). Baylor University, Waco, TX.
- Arditi, D., Nayak, S., & Damci, A. (2017). Effect of organizational culture on delay in
- Ariani, R., & Rahmawati, N. S. (2020). Knowledge Conversion: An Evaluation of BPPT KM Application Utilization as A Knowledge Management System. *Khizanah al-Hikmah: Jurnal Ilmu Perpustakaan, Informasi, dan Kearsipan*, 8(2), 227-241.
- Audretsch, D. B., Belitski, M., Caiazza, R., & Lehmann, E. E. (2020). Knowledge management and entrepreneurship. *International Entrepreneurship and Management Journal*, 16(2), 373-385.
- Barão, A., de Vasconcelos, J. B., Rocha, Á., & Pereira, R. (2017). A knowledge management approach to capture organizational learning networks. *International Journal of Information Management*, 37(6), 735-740.
- Benjamin, R., Duster, T., Eglash, R., Gaskins, N., Hatch, A. R., Miller, A., ... & Van Oort, M. (2019). *Captivating Technology*. J. Brown, "Black Utopias.

- Biletska, I. (2021). Substantiation of Elements and Structure of Organizational and Economic Mechanism of Internet Marketing For Developing Tourism Enterprises on Innovative Principles. *Індустрія туризму і гостинності в Центральній та Східній Європі*, (1), 18-25.
- Cai, W., McKenna, B., Wassler, P., & Williams, N. (2021). Rethinking knowledge creation in information technology and tourism. *Journal of Travel Research*, 60(6), 1377-1384.
- Ceptureanu, E. G., Ceptureanu, S. I., Popescu, D. I., & Vlad, L. B. (2017)
- Chatterjee, A., Pereira, A., & Sarkar, B. (2018). Learning transfer system inventory (LTSI) and knowledge creation in organizations. *The Learning Organization*. construction. *International journal of project management*, 35(2), 136-147..
- Cui, Y., Zhang, Y., Guo, J., Hu, H., & Meng, H. (2019). Top management team knowledge heterogeneity, ownership structure and financial performance: Evidence from Chinese IT listed companies. *Technological Forecasting and Social Change*, 140, 14-21.
- Darban, M., & Polites, G. L. (2020). Why is it hard to fight herding? The roles of user and technology attributes. *ACM SIGMIS Database: the DATABASE for Advances in Information Systems*, 51(4), 93-122.
- Davenport, T. H. & Dörflinger, S. C. (2001), The Rise of Knowledge towards Attention Management. *Journal of Knowledge Management*, Vol 5, Issue 3, pp. 212-221.
- Deephouse, D. L., Bundy, J., Tost, L. P., & Suchman, M. C. (2017). Organizational legitimacy: Six key questions. *The SAGE handbook of organizational institutionalism*, 4(2), 27-54.

- Dias, L. S., & Ierapetritou, M. G. (2017). From process control to supply chain management: An overview of integrated decision making strategies. *Computers & Chemical Engineering*, *106*, 826-835.
- Evans C. (2012). *Managing for Knowledge. HR's Strategic Role*. Oxford, UK: Butterworth-Heinemann Publishers.
- Ferreira, J., Mueller, J., & Papa, A. (2018). Strategic knowledge management: theory, practice and future challenges. *Journal of Knowledge Management*
- Franco, L., Justo, A., Cotelo, C., Arias, I., Garrido, L., Lloret, L., & Rodríguez-Aubó, N. (2019). Multi-actor engagement: an open innovation process of knowledge exchange and co-creation. In *ICERI2019 Proceedings* (pp. 3808-3813).
- IATED
- Friesen, N. (2017). The History of Education as the History of Writing: A Look from the Past to the Future. In *Schools in Transition* (pp. 273-287). Brill Sense.
- Giampaoli, D., Ciambotti, M., & Bontis, N. (2017). Knowledge management, problem solving and performance in top Italian firms. *Journal of Knowledge Management*.
- Gibson, C. B. (2005). *Virtuality and Collaboration in Teams. The Organizational Behavior Reader*. 8th ed. Upper Saddle River, NJ: Prentice-Hall.
- Gibson, J. L., Ivancevich, J. M., Donnelly Jr., J. H. & Konopaske, R. (2003). *Organizations: Behavior, Structure, Processes*. (11thed.). Houston, TX: McGraw Hill Irwin.
- Goh, S.C. (2003), Improving organizational learning capability: lessons from two case studies. *The Learning Organization*, Vol. 10 No. 4, pp. 216-217

- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, Vol 18, Issue 1, pp. 185-214.
- Gupta, A. K., & Govindarajan, V. (2000). Knowledge management's social dimension: Lessons from Nucor Steel. *Sloan Management Review*, Vol 42, Issue 1, pp.71-81.
- Gupta, G., Tan, K. T. L., Ee, Y. S., & Phang, C. S. C. (2018). Resource-based view of information systems: Sustainable and transient competitive advantage perspectives. *Australasian Journal of Information Systems*, 22.
- Henkel, M., Koutsopoulos, G., Bider, I., & Perjons, E. (2019, September). Using Enterprise Models for Change Analysis in Inter-organizational Business Processes. In *International Conference on Business Process Management* (pp. 315-318).
- Hrebiniak, L. G. (2006). Obstacles to Effective Strategy Implementation. *Organizational Dynamics*, Vol 35, pp.12-31.
- Ibrahim, A. (2018). Monitoring some quality attributes of different wheat varieties by infrared technology. *Agricultural Engineering International: CIGR Journal*, 20(1), 201-210.
- Ito, K., Leung, A. K. Y., & Huang, T. (2020). Why do cosmopolitan individuals tend to be more pro-environmentally committed? The mediating pathways via knowledge acquisition and emotional affinity toward nature. *Journal of Environmental Psychology*, 68, 101395.
- Janz, B. D., & Prasamphanich, P. (2003). Understanding the Antecedents of Effective Knowledge Management. *The importance of a Knowledge-centered Culture. Decision Sciences*, Vol 34, No 2, pp. 351-384.

- Jarvenpaa, S. L., & Staples, S. D (2000). The use of collaborative electronic media for information sharing: an exploratory study of determinants, *Journal of Strategic Information Systems*, Issue 9, pp. 129-154.
- Jarvenpaa, S. L., & Staples, S. D. (2001). Exploring Perceptions of Organizational Ownership of Information and Expertise. *Journal of Management Information Systems*, Vol 18, Issue 1, pp. 151-183.
- Kim, S. (2018). Public service motivation, organizational social capital, and knowledge sharing in the Korean public sector. *Public Performance & Management Review*, 41(1), 130-151.
- Kinyua, G.M., Muathe, S.M.A., & Kilika, J.M. (2015). Effect of knowledge conversion and knowledge application on performance of commercial banks in Kenya. *International Journal of Education and Research*, 3(10), 431-445.
- Laurell, A. C., & Arellano, O. L. (2020). Market commodities and poor relief: The World Bank proposal for health. In *The Political Economy of Social Inequalities* (pp. 191-208). Routledge.
- Lee, C. and Yang, J. (2000). Knowledge Value Chain. *The Journal of Management Development*, Vol. 19 No. 9, pp. 783-94.
- Lee, H., & Choi, B. (2003). Knowledge management enablers, Processes, and Organizational Performance: An integrative view and empirical examination. *Journal of Management Information System*, Vol 20, Issue 1, pp. 179-228
- Lee, S. M. and Hong, S. (2002). An Enterprise-Wide Knowledge Management System Infrastructure. *Industrial Management & Data Systems*, Vol. 102 No. 1, pp. 17-25
- Lesser, E.L. & Storck, J. (2001), Communities of Practice and Organizational Performance, *IBM Systems Journal*, Vol. 40 No. 4, pp. 831-41

- Li, M., Li-Ying, J., Wang, Y., & Chen, X. (2021). From Potential to Real Threat? The Impacts of Technology Attributes on Licensing Competition—Evidence from China during 2002–2013. *Information, 12*(7), 260.
- López-Rodríguez, C. E., Cristancho-Triana, G. J., & Amaya-Téllez, J. L. (2020). Perception and desired brand personality in organizations that internationalize services: The case of the Colombian business environment. *European Research Studies, 23*(3), 581-597
- Lubis, F. R., & Hanum, F. (2020, December). Organizational culture. In *2nd Yogyakarta international conference on educational management/administration and pedagogy (YICEMAP 2019)*. Atlantis Press (pp. 88-91)
- Mach, K. J., Lemos, M. C., Meadow, A. M., Wyborn, C., Klenk, N., Arnott, J. C., ... & Wong-Parodi, G. (2020). Actionable knowledge and the art of engagement. *Current Opinion in Environmental Sustainability, 42*, 30-37
- Mafongoya, P. L., & Ajayi, O. C. (2017). Indigenous knowledge and climate change: Overview and basic propositions. *Indigenous knowledge systems and climate change management in Africa, 17*, 17-28.
- Malhotra Y. (2005). Integrating Knowledge Management Technologies in Organizational Business Processes: Getting Real Time Enterprises to Deliver Real Business Performance. *Journal of Knowledge Management*. Vol 9 No 1, pp 7-28.
- Malhotra, Y. (2000b). Knowledge Assets in the Global Economy: Assessment of National Intellectual Capital. *Journal of Global Information Management*, Vol 8, Issue 3, pp. 5-15.

- Mathew, A. O., & Rodrigues, L. L. (2019). Critical success factors of knowledge management: a review. *World Review of Entrepreneurship, Management and Sustainable Development*, 15(4), 409-427.
- McShane, S. L. and Von Glinow M. A. (2005) *Organizational Behavior*. 3rd Ed. Boston, MA: McGraw-Hill/Irwin.
- Mosoti, Z. & Masheka, B. (2010). Knowledge Management: The Case for Kenya. The Journal of Language, Technology & Entrepreneurship in Africa, Vol. 2. No.1. 2010, ISSN 1998-1279.
- Nahm, A. Y., Vonderembse, M. A. & Koufteros, X. A. (2004). The Impact of Organizational Culture on Time-Based Manufacturing and Performance. *Decision Sciences*, Vol. 35 No. 4, pp. 579-607.
- Oliva, F. L., & Kotabe, M. (2019). Barriers, practices, methods and knowledge management tools in startups. *Journal of knowledge management*.
- Olive, D. J. (2017). Multiple linear regression. In *Linear regression* (pp. 17-83). Springer, Cham.
one, 15(9), e0233207.
- Ongore, V. O. & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-252
- optimization. *Journal of Global Optimization*, 77(3), 543-574.
- Ouriques, R. A. B., Wnuk, K., Gorschek, T., & Svensson, R. B. (2019). Knowledge management strategies and processes in agile software development: a systematic literature review. *International journal of software engineering and knowledge engineering*, 29(03), 345-380.

- Owino, E. O., Cheruiyot, C. K., & Jagongo, A. (2012). Institutionalization of knowledge management in manufacturing enterprises in Kenya: A case of selected enterprises. *International Journal of Business and Social Science*, 3(10).
- Panayotova, T. P. (2017). Possibilities for implementation of the real-time enterprise concept in production. In *World scientific expanse* (pp. 288-295).
- Pardos, Z. A., & Nam, A. J. H. (2020). A university map of course knowledge. *PLoS*
- Park, Y. W., & Klabjan, D. (2020). Subset selection for multiple linear regression via
- Peng, Z., Li, Z., Zhang, J., Li, Y., Qi, G. J., & Tang, J. (2019). Few-shot image recognition with knowledge transfer. In *Proceedings of the IEEE/CVF International Conference on Computer Vision* (pp. 441-449).
- Penrose, E. (1980). *The Theory of the Growth of the firm, 2nd Ed.* Oxford: Basil Blackwell Publisher.
- Penrose, E., T. (1959). *The Theory of the Growth of the Firm.* New York: John Willey and Sons.
- Pereira, V., & Bamel, U. (2021). Extending the resource and knowledge based view: A critical analysis into its theoretical evolution and future research directions. *Journal of Business Research*, 132, 557-570.
- Pesic, M., A. (2007). *Six sigma philosophy and resource-based theory of competitiveness: an Integrative approach.* Retrieved March 4, 2012, from facta.junis.ni.ac.rs: <http://facta.junis.ni.ac.rs/eao/eao200702/eao200702-12-pdf/HTM>
- Peteraf, M. (1993). The cornerstones of competitive advantage. A resource-based view. *Strategic Management Journal*, 13, 363-380.

- Petrick, J., Scherer, R., Brodzinski, J., Quinn, J., & Ainina, M. (1999). Global leadership skills and reputational capital: Intangible resources for sustainable competitive advantage. *Academy of Management Executive*, 13 (1), 58-69.
- Polanyi, M. (1966). *The tacit dimension*. London: Routledge.
- Powell, W., W., Koput, K., W., & Smith, D., L. (1996). Inter-organizational collaboration and the locus of innovation: networks of learning in biotechnology. *Administrative Science Quarterly*, 41, 116-145.
- Prahalad, C., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 79-91.
- Qazi, S., Miralam, M. S., & Bhalla, P. (2017). Organizational culture and job satisfaction: A study of organized retail sector. *Journal of Business and Retail Management Research*, 12(1).
- Raddon, A. (2010). Early stage research training: Epistemology & ontology in social science Research. *Generic Skills Training for Research Students*.
- Rahman, M. H., Moonesar, I. A., Hossain, M. M., & Islam, M. Z. (2018). Influence of organizational culture on knowledge transfer: Evidence from the Government of Dubai. *Journal of Public Affairs*, 18(1), e1696.
- Rasula, J., Vuksic, V. B., & Stemberger, M.I. (2012). The impact of knowledge management on organizational performance. *Economic and business review*, 14(2), 147-168
- Raudeliūnienė, J., Davidavičienė, V., & Jakubavičius, A. (2018). Knowledge management process model. *Entrepreneurship and Sustainability Issues*, 5(3), 542-554.
- Robbin, S. P. (2004). *Organizational behaviour*. 11th ed. Upper Saddle River, NJ: Prentice-Hall.

- Rusakova, O., Kovba, D., Gribovod, E., & Popova, N. (2018, November). Cultural diplomacy as the intellectual capital of soft power exercised by the Shanghai cooperation organization member states. In *Proceedings of the 15th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning ICICKM* (pp. 277-284).
- Sallis, E. & Jones, G. (2002). *Knowledge Management in Education: Enhancing Learning and Education*, London, UK: Kogan Page.
- Sanchez, P. (2004). Defining corporate culture. *Communication World*, Vol 21, No 6, pp. 18-21.
- Sanford, S., Schwartz, B., & Khan, Y. (2020). The role of tacit knowledge in communication and decision-making during emerging public health incidents. *International Journal of Disaster Risk Reduction*, 50, 101681.
- Saunders, C., Lewis, P. & Thornhill, A. (2009). *Research Methods for Business Students* (5th ed.). Englewood Cliff, NJ: Prentice-Hall.
- Schein, E. (2010). *Organizational Culture and Leadership*. In *Classics of Organization Theory*. Fort Worth, TX: Harcourt College Publishers.
- Schwartz, S. P., Adair, K. C., Bae, J., Rehder, K. J., Shanafelt, T. D., Profit, J., & Sexton, J. B. (2019). Work-life balance behaviours cluster in work settings and relate to burnout and safety culture: a cross-sectional survey analysis. *BMJ Quality & Safety*, 28(2), 142-150.
- Sensuse, D. I., Qodarsih, N., Lusa, J. S., & Prima, P. (2018, October). Critical Success Factors of Knowledge Management: A Systematic Literature Review. In *2018 International Conference on Information Technology Systems and Innovation (ICITSI)* (pp. 26-31). IEEE.

- Shih-Yi, C., & Ching-Han, T. (2012). Dynamic capability, knowledge, learning, and firm performance. *Journal of Organizational Change Management*, 25(3), 434-444.
- Shujahat, M., Hussain, S., Javed, S., Malik, M. I., Thurasamy, R., & Ali, J. (2017). Strategic management model with lens of knowledge management and competitive intelligence: A review approach. *VINE Journal of Information and Knowledge Management Systems*.
- Springer, Cham., Rosa, C. B., Rediske, G., Rigo, P. D., M Wendt, J. F., Michels, L., & M Siluk, J. C. (2018). Development of a computational tool for measuring organizational competitiveness in the photovoltaic power plants. *Energies*, 11(4), 867.
- Spuzic, S. (2020). Some aspects of knowledge. *Carpe Diem*.
- Storey, J., Barnett, E. (2000) Knowledge Management Initiatives: Learning from Failure, *Journal of Knowledge Management*, Vol 4, No. 2, pp 145-156.
- Syed-Ikhsan, S. & Rowland, F. (2004). Knowledge management in a public organization: a study on the relationship between organizational elements and the performance of knowledge transfer. *Journal of Knowledge Management*, Vol 8 No 2, pp. 95-111.
- Symeonidou, N., & Nicolaou, N. (2018). Resource orchestration in start-ups: Synchronizing human capital investment, leveraging strategy, and founder start-up experience. *Strategic Entrepreneurship Journal*, 12(2), 194-218.
- Velasquez, R. M. A., & Lara, J. V. M. (2017, August). Implementation of knowledge management in energy companies. In *2017 IEEE XXIV International Conference on Electronics, Electrical Engineering and Computing (INTERCON)* (pp. 1-4). IEEE.

- Vesga Rodríguez, J. J., Rubiano, M. G., Forero Aponte, C., Aguilar Bustamante, M. C., Jaramillo, J. Á., Quiroz González, E., ... & Gómez Vélez, M. A. (2020). Aspects of organizational culture and its relation to the organizational change disposition. *Suma Psicológica*, 27(1), 52-61.
- Waights Hickman, N. (2020). (Implicit) Knowledge, reasons, and semantic understanding. *Mind & Language*.
- Wanjiku, G. C. (2013). *Knowledge management practices of selected non-profit organization in health sector in Nairobi County*. (Unpublished MBA project). University of Nairobi, Nairobi, Kenya.
- Zhang, Y., Jiang, M., & Zhao, Q. (2021). Explicit Knowledge Incorporation for Visual Reasoning. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (pp. 1356-1365).

APPENDICES**APPENDIX I: QUESTIONNAIRE FOR EMPLOYEES****SECTION A: DEMOGRAPHIC INFORMATION**

1. Please state your gender

a. Male ()

b. Female ()

2. Please state your age

a. Below 25 years ()

b. 25 to 30 years ()

c. 31 to 40 years ()

d. 41 to 50 years ()

e. Above 50 years ()

3. Highest Level of Education

a. Secondary ()

b. College ()

c. Graduate ()

d. University ()

4. How many years have you worked for the organization?

a. 0 – 2 years ()

b. 2-5 years ()

c. 5-10 years ()

d. 10-20 years ()

e. More than 20 years ()

SECTION B: KNOWLEDGE MANAGEMENT PRACTICES

5. On a scale of five, (5) Strongly Disagree, (4) Disagree, (3) Not Sure, (2) Agree and (1) Strongly Agree, what is the extent of the KM practices within the commercial banks in Kenya? rate the following aspects of knowledge management practices in the table below by ticking

Knowledge Management practices in selected banks in Kenya	1	2	3	4	5
Knowledge creation					
Knowledge Acquisition					
Knowledge Organizing					
Knowledge Sharing					
Knowledge utilization and Implementation					

SECTION C: ORGANIZATIONAL CULTURE AND KNOWLEDGE MANAGEMENT

6. On a scale of five, (5) Strongly Disagree, (4) Disagree, (3) Not Sure, (2) Agree and (1) Strongly Agree, please rate how the following statements on organization culture influence knowledge management practices

Effects of knowledge management on organizational culture	1	2	3	4	5
Open communication					
Team collaboration					
Trust					
Experimentation					
Autonomy					
The overall environment of my department improves my job performance					

SECTION D: ORGANIZATIONAL STRUCTURE

7. On a scale of five, (5) Strongly Disagree, (4) Disagree, (3) Not Sure, (2) Agree and

(1) Strongly Agree, please rate how the following statements on organization structure influence knowledge management practice

Effects of Knowledge Management Organizational Structure	1	2	3	4	5
Distribution of tasks					
Order, control and authority					
Free flow of relevant information					
There is a reflection on information and data, to allow reframing at the strategic level.					
Top management support in the implementation of strategies					

SECTION E: ORGANIZATIONAL TECHNOLOGY

8. On a scale of five, (5) Strongly Disagree, (4) Disagree, (3) Not Sure, (2) Agree and

(1) Strongly Agree, please rate how the following statements on information technology influence knowledge management practices


Effects of Knowledge Management on Information Technology	1	2	3	4	5
Computer Systems e.g. laptops					
Programs e.g. Windows 10					
Security e.g. Antivirus, Malware					
Usability e.g. guaranteed					


APPENDIX II : Map of Nairobi, Kenya

APPENDIX III: LICENSED COMMERCIAL BANKS

- 1.ABC Bank (Kenya)
- 2.Bank of Africa
- 3.Bank of Baroda
- 4.Bank of India
- 5.Barclays Bank of Kenya
- 6.Chase Bank Kenya (In Receivership)
- 7.Citibank
- 8.Consolidated Bank of Kenya
- 9.Cooperative Bank of Kenya
- 10.Credit Bank
- 11.Development Bank of Kenya
- 12.Diamond Trust Bank
- 13.Dubai Islamic Bank
- 14.Ecobank Kenya
- 15.Equity Bank
- 16.Family Bank
- 17.First Community Bank
- 18.Guaranty Trust Bank Kenya
- 19.Guardian Bank
- 20.Gulf African Bank
- 21.Habib Bank AG Zurich
- 22.Housing Finance Company of Kenya
- 23.I&M Bank
- 24.Imperial Bank Kenya (In receivership)
- 25.Jamii Bora Bank
- 26.Kenya Commercial Bank
- 27.Mayfair Bank
- 28.Middle East Bank Kenya
- 29.National Bank of Kenya
- 30.NCBA Bank Kenya Plc.
- 31.Oriental Commercial Bank
- 32.Paramount Universal Bank
- 33.Prime Bank (Kenya)
- 34.SBM Bank Kenya Limited
- 35.Sidian Bank
- 36.Spire Bank
- 37.Stanbic Bank Kenya
- 38.Standard Chartered Kenya
- 39.Transnational Bank
- 40.United Bank for Africa
- 41.Victoria Commercial Bank


APPENDIX IV: NACOSTI PERMIT Ref# 111223


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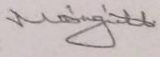
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