EFFECT OF KNOWLEDGE MANAGEMENT ON SERVICE DELIVERY OF FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

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DECLARATION

I declare that this research proposal is my original work and has not been presented for a degree in any other university.

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DEDICATION

This work is dedicated to my family with special mention of my wife, Susan; and my children; Adonijah, Pendo and Amanda who have been a source of motivation throughout this journey. Their moral and social support to press on with my studies has been overwhelming.

ABSTRACT

Knowledge management is increasingly gaining traction in most organizations around the world that need to gain and maintain their competitive edge at the marketplace. Intellectual capital theory asserts that constant exchange and diffusion of knowledge within an organization and preserving the knowledge creates competitive advantage. Knowledge-based theory similarly emphasises that knowledge is an intellectual capital that distinguishes one firm from another, creating a sustainable competitive advantage when properly managed. Despite the increased interest in the field of KM globally, majority of studies concentrate on product-based companies, with minimal studies focusing on the service industry. This informed the objective of this study to determine the effect of knowledge management on service delivery of firms listed at NSE, Kenya. Descriptive survey research design was adopted to investigate the effect of KM on service delivery, and the primary data collected from 30 service industry firms listed at NSE through the help of structured questionnaire. Descriptive statistics through the help of SPSS was employed to undertake the analysis. The regression summary found a strong positive relationship between knowledge management and service delivery of firms listed at NSE. The results of correlation analysis also found that service delivery had cumulative positive correlation with knowledge management practices. Based on the finding, the study strongly recommends that all companies listed at NSE to adopt knowledge management practices in their respective firms in order to enhance their service delivery.

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LIST OF ABREVIATIONS

IPO:	Initial public offer
KA:	Knowledge acquisition
KC:	Knowledge creation
KM:	Knowledge Management
KR:	Knowledge Retention
KS:	Knowledge sharing
KU:	Knowledge utilization
NGO:	Non-governmental institution
NSE:	Nairobi Securities Exchange
SERVQUAL:	Service Quality
SD:	Standard Deviation
SME:	Small and Medium Enterprises

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Knowledge is an intellectual asset that when efficiently utilized by an organization may enhance the capability of the firm to compete in the business setting, which is increasingly becoming competitive day by day (Alavi & Leidner, 2001; Carneiro, 2000 & Pusaksrikit 2006). Organizations that offer both tangible and non-tangible products can gain and maintain competitive edge through proper knowledge management (KM), to bring about superior capabilities and synergy, more poised judgments with minimized errors, better quality products and services at reduced cost, more creativity and innovation, broader knowledge sharing and collaboration, and enhanced expertise as well as deeper understanding of concepts and processes (Pusaksrikit, 2006). Drucker (1995) and Laudon and Laudon (2012) asserts that KM is the most dominant economic resource and possibly the sole basis of competitive edge in organizations.

Organizations can improve service delivery through creation of fresh knowledge and concepts, ensuring knowledge accessibility, optimum utilization of the present knowledge, and sharing and communicating new knowledge across the work groups (Carneiro, 2000; Lin & Lee, 2005; Plessis, 2007; Huang & Li, 2009). The capacity of the company to gather and incorporate knowledge into all organizational processes and members will determine how effective knowledge management is at enhancing service delivery (Grant, 1996). However, the firm must leverage their knowledge internally and externally, through collection and storage of specialized facts, and evenly distribution of the knowledge to all

relevant users within the firm in order to create and sustain a competitive advantage (Grant, 1996; Davenport & Prusak, 1998).

This study on knowledge management was guided by the Theory of Intellectual Capital by Louise Harris (2000), Knowledge-based Theory by Leonard-Barton (1992), and the 1959 Resource-Based Theory proposed by Penrose, but later advanced by Wernerfelt in 1984. Louise Harris (2000) in his theory asserts that constant exchange and diffusion of companies' competencies, firms technical knowhow, brands, patents and trademarks, and company's intellectual capital guarantee competitive lead and are fundamental to the success of businesses. The knowledge-based theory, similar to the intellectual capital theory emphasizes that knowledge is a resource difficult to imitate, thus distinguishes firms giving them competitive edge over other firms. Contrastingly, the resource- based theory emphasizes on the exploitation of a company's assets with a view to achieve sustainable competitive edge over rival organizations within the sector (Wernerfelt, 1984). The three theories emphasize on intellectual capital, competencies and knowledge as a resource, that when properly diffused, utilized and managed in a firm produces competitive advantage and high performance. The theories are thus very applicable in this study.

Well-functioning security exchange markets enable economic growth and development of a country by facilitating the mobilization of financial resources and risk sharing, thereby linking those in need of capital with those who have financial resources to invest (Unctad.Org, 2017). The focus on firms listed at NSE is informed by the position that such firms operate within highly regulated, secure, transparent and equitable environment that promote good corporate governance to protect amongst other things shareholders' investments. The transparency aspect for good corporate governance informs the ease of

access to information on knowledge management practices by the companies. Equally, the listed firms have verifiable financial soundness as determined by Capital Markets Authority to ensure safety of trading in the stock market and are valued higher than non-listed firms, hence attract both local and international investors. The listed firms thus provide stocks to sell or buy, in which the disinvestment and reinvestment exchange process leads to capital formation and economic growth and development.

1.1.1 Knowledge Management

Knowledge management concerns efficient handling of information, intellectual property and resources within an institution. It involves conscious defining, acquisition, structuring, sharing, application, and retaining the knowledge, and retaining the knowledgeable and skilled workers within the organization with an objective to ensure teams and individuals within the organization have the essential know-how to undertake their tasks and to improve their performance (Hall, 2006; Tippins & Sohi, 2003 & Podgorski, 2010). In a competitive environment, knowledge management is practiced to ensure sustainable competitive edge and to guarantee lasting benefits in companies (Darroch & McNaughton, 2002; Alavi & Leidner, 2001).

Hislop (2013) defines knowledge management as an effective way to boost the founding and distributing of knowledge within the organization. Gloet and Terziovski, (2004) on the other hand defines knowledge management as a management function that permits concept distribution to ensure stress-free admittance to knowledge and expertise as well as experience. Beijerse (1999) on the other hand avers that KM concerns the use of strategy-driven motivation to achieve company goals and to share company knowledge with

workers in order to develop their ability to interpret data. Mosoti and Masheka (2010) consider KM as the practice to plan, organize, motivate and control processes, systems and people within a company, with the view to improve and effectively employ its knowledge-related assets such as operation manuals, patents, and knowledge stored in electronic repositories and databases. This study adopts the definitions by Mosoti and Masheka (2010) as well as the definition by Parlby and Taylor (2000), which states that KM is a business process involving founding new knowledge and facilitating rapid diffusion of the knowledge for use within the organization.

1.1.2 Service Delivery

Service delivery refers to offering quality non-tangible products to individuals or enterprises in an effective, cost efficient, predictable, reliable and customer-friendly manner (Samihah & Abdulwaheed, 2012). Effective service delivery involves providing services which are accessible, competitive, comprehensive and offered as integrated package in a timely manner for the benefit and satisfaction of the end users and (Harvey, 2015). According to Blackmore, et al (2015), effective service delivery depend on who finances the service, who delivers the services, and how the services are delivered, either through ICT or face-to-face interactions with agents. The question of by who and how service is delivered has largely to do with the knowledge, technical knowhow, expertise, and experience of the customer service executives.

Company employees that directly or indirectly deliver services to end users need to be knowledgeable and experienced in order to offer high quality, reliable, comprehensive, timely and satisfying experiences (Westcott, 2019). To ensure consistency in service

delivery, organizations need to develop a service delivery framework that outlines the principles, policies, standards, limitations to be considered and clear service deliverables when designing and delivering service products. Such framework involves defining, designing, creating, and implementing a process of delivering a service and managing company knowledge across all groups and departments of the organization from planning to financing, production and service delivery (Blokdyk, 2018).

1.1.3 Firms Listed in Nairobi Securities Exchange

East Africa's top stock exchange, the Nairobi Securities Exchange (NSE), was established in 1954 and based in Nairobi Kenya. When the Stock Exchange was first established, stockbrokers formed it on their own volition, but has since grown into a securities exchange that offers world class trading opportunities for both local and foreign investors (Nse.co.ke, 2021). Regulated by the Capital Markets Authority of Kenya, the NSE is the only stock exchange in the region which upon a successful IPO to raise Ksh 627 million, demutualized in 2014 to become listed on the main board of its own exchange.

Currently, 62 firms are trading at the NSE (Nse.co.ke, 2021). The firms are categorised into 13 main sectors of the economy namely; Energy and Petroleum, Investment Services, Automobiles and Accessories, Agricultural, Commercial Services, Insurance, Investment Trust, Construction and Allied, Telecommunication and Technology, investment, Manufacturing and Allied, Exchange Traded Fund, Banking and Real Estate. For the benefit of this study companies in the service industry categories including Banking, Energy and Petroleum, Exchange Traded Fund, Investment Services, Telecommunication and Technology, Insurance and Commercial and Services were targeted.

1.2 Research Problem

Intellectual Capital Theory asserts that constant exchange and diffusion of knowledge within an organization and preserving the organizational knowledge creates competitive advantage. Knowledge-based Theory similarly emphasises that knowledge is an intellectual capital that distinguishes one firm from another, is difficult to imitate, thus creating a sustainable competitive advantage when properly managed. Davenport and Prusak (1998) equally agrees with the Intellectual Capital and Knowledge-based theories when they state that a firm must be able to assemble, store, and disseminate expert knowledge strictly within the organization in order to create and maintain competitive edge. Further, Pusaksrikit, (2006) and Kor and Maden (2013) assert that KM is very significant for all types of businesses because it leads firms into innovation of new product lines, helps companies to improve their services, increases quality of products, reduces costs, and that knowledgeable workforce respond promptly and accurately to the needs of the clients. Byukusenge and Munene, (2017) also noted that knowledge management enhances performance, while Mohajan (2017) postulates that KM leads to higher efficiency by minimizing duplication of work, enriches new staffs, improves decision making and results into better performance.

Majority of firms listed at NSE practice some form of KM, particularly the acquisition and distribution of knowledge. However, application and retaining the knowledge and experienced employees within the organization is still facing a challenge. Firms in the banking, insurance and telecommunication sector run leadership and training centers where capacity building and sharing of internal knowledge and skills is done. Despite the efforts to practice KM in firms listed at NSE, the weak link remains enhanced application of

trademarks and patents policies that limit imitation of products and services, in order to sustain their competitive advantage.

Empirical evidences indicate that knowledge management (KM) is very important to all kinds of businesses. Wangui, (2018) in a study domiciled in Kenya focused on the KM and performance of companies on the NSE, and discovered that there is statistically noteworthy direct link between KM and institutional performance. The study also found that a combination of KM, organization learning, and organization characteristics had a significantly more influence on firm's overall output compared to individual effect of KM and organizational performance. Ogao (2019) In a different study, the impact of KM techniques on service delivery of Kenya Forestry Research Institutes in Kenya, discovered that knowledge management practices provided the intellectual capital that enhanced service delivery.

Ashaba (2015) examined knowledge management and service provision in NGOs in Uganda on an equal footing, particularly focusing on ChildFund Uganda. Byukusenge and Munene (2017) in a study domiciled in Rwanda also focused on KM and institutional delivery, with innovation considered the intervening variable. The study showed that innovation entirely displaces the relationship between knowledge management and SMEs' commercial performance. This finding is in agreement with the findings by Pusaksrikit, (2006) inn Sweden. Mohajan (2017) did a study on the roles of KM for the growth of firms in Bangladesh equally found that KM leads to higher efficiency by minimizing duplication of work, enriches new staffs, improves decision making and results into better performance. The theories as well as the empirical evidences thus agree that knowledge

management impacts the competitiveness and performance of firms, both for the tangible and non-tangible products.

Despite the increased interest in the field of KM globally, majority of studies concentrate on product-based companies, with minimal studies focusing on the service industry which continue to record tremendous growth. Consequently, it is essential to comprehend the state and how KM impacts service sector delivery. In addition, there is no study locally known to the researcher that has concentrated on the influence of KM on service delivery, particularly focusing on firms listed at NSE. This informs the need to respond to the research question, what is the consequence of knowledge management on service delivery of organizations listed at NSE?

1.3 Research Objective

This study's goal is to ascertain how knowledge management affects the provision of services by companies with Kenyan NSE listings.

1.4 Value of the Study

Several internal and external factors have an impact on the service delivery and competitiveness of businesses. In this study, understanding the association between KM and quality service delivery will add knowledge to the theory of management and to confirm of refute the assertion of intellectual capital theory, service quality theory and knowledge-based theory.

The findings will also benefit strategic managers and employees of both listed and non-listed firms to decide whether to or not to adopt and practice knowledge management in

their companies. The superior sustainable performance of firms in the service sector is dependent on customer satisfaction (Villanueva & Du, 2002). As a result, the current and potential investors will also benefit from the finding of this study, particularly to help them identify the stocks that will guarantee sustainable performance and return, when making investment decisions.

Finally, the findings will inform the need to enhance intellectual property rights and policies in organizations. Through this study, firms will see the need to protect intellectual capital, make their technical knowhow, and brands difficult to imitate through enhanced trademarks and patents policies, in order to sustain their competitive advantage

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Chapter two reviews the previous studies that relate to the topic of study. The chapter begins by reviewing relevant theories of knowledge management upon which the study is founded. The chapter will also discuss connection between KM and service delivery and finally undertake empirical review of similar previous studies on the association between KM and Service Delivery. The previous studies will include both local and international research papers.

2.2 Theoretical Review

The intellectual capital theory, the firm's resource-based theory, and the knowledge-based theory are the three theories of knowledge management that will be covered in this section.

2.2.1 The Theory of Intellectual Capital

Theory of intellectual capital was first authored by Taylor (1911) when he emphasized about knowledge, skills and experience of workers in his book "The Principles of Scientific Management". The concept was then developed in later works by Chamberlin (1933) and Robinson (1933), who emphasized the importance of firm knowledge, technological know-how, brands, patents, and trademarks to the success of any corporation.

The contemporary theory of intellectual capital is authored by Edvinsson and Malone (1997) and defines intellectual capital as having control of the knowledge, company gained

experience, process technology of the firm, and having the experience in offering customer experience that provide a competitive edge in the marketplace.

Knowledge accessibility is the basis for establishing a competitive edge (Stewart, 1997). This means that in the modern settings, intangible assets like knowledge, customer relationships, applied experience, trademarks, patents, organizational technology, and professional skills are vital for institutional operations, based on their ability to considerably grow asset value, market value of the firm and competitiveness (Kolakovic, 2003). This theory is therefore very appropriate to this study, since it postulates the relationship between knowledge management activities such as managing firm capabilities, knowledge, technical knowhow, trademarks and patents and competitive lead at the marketplace. The findings of this study will either confirm or refute the assertion of the theory, that service delivery if influenced by knowledge management.

2.2.2 Service Quality Theory

SERVQUAL theory was first advanced by Parasuraman, Zeithaml & Berry (1985) with ten characteristics of service quality, but later reviewed in 1988 to five characteristics namely; intangibility, responsiveness, reliability, assurance and empathy. The theory posits that a virtuous service quality is one which satisfies or surpasses the user's expectation, and that service quality is the inconsistency existing between the user's anticipations of service to be rendered and the users' perceptions on the service received. Meeting the customer's expectation could mean the quality of the process, performance, and the final output of the service based on the industry (Johns, 1999).

According to Ghylin et al., (2008) defining service quality makes organizations to become conscious of the concept and deliver services with higher quality levels that enhance customer satisfaction. Further, understanding service quality necessitates the acknowledgement of the features of a service, which include; heterogeneity, intangibility and inseparability (Ladhari, 2008). The quality of service delivered enhances the company's ability to attract and retain customers, and it is considered a significant tool for organizations that intend to differentiate themselves from their competitors. This theory will add value to this study that focuses on service delivery as a dependent variable, with a view to understand whether knowledge management will impact the responsive and reliability dimensions of service irrespective of place and the service delivery in general.

2.2.3 The Knowledge-based Theory

The knowledge-based theory advanced by Leonard-Barton (1992), similar to the intellectual capital theory puts emphases on knowledge as an asset of the firm which is hard to copy and counterfeit, thus distinguishes firms, hence preserving its competitive edge. The proponents of the theory identify four dimensions that define company knowledge namely; workers' knowledge and skills; the technical systems developed by the firm; the management systems and firm culture (Leonard-Barton, 1992, Liebeskind 1996, Spender, 1996 and Grant, 1996). Grant (1996) goes on to state that knowledge is the primary source of value and the essential input of production. Spender (1996) on the other hand states that in a highly competitive and ever changing environment, successful companies are those which constantly produce original knowledge, share it within the

Knowledge management with a view to protect expropriation of firm knowledge but securing possession rights of valuable information as put forward by the knowledge based theory, potentially allow a firm to be unique and distinguish its services, making it more competitive. When a company's principal knowledge is its most important strategic asset, it must continually develop new, crucial knowledge (Viedma Marti, 2007). This theory gives a firm foundation to this study that looks a knowledge management and service delivery. The four dimensions of this theory speaks to knowledge creation and control, technical systems and skills of the employees and management systems that ensure protection of firm knowledge and delivery of unique knowledge based and competitive services.

2.3 Components of Knowledge Management

To ensure efficient defining, acquisition, structuring, sharing, application, and retaining the knowledge within an organization, four knowledge management components which include people, process, content and strategy must be at play.

The people component is the foremost significant component of KM that forms the original basis for growing a prosperous organization. Employees are the critical holders of knowledge and are in charge of defining, structuring and boosting, sharing, applying and retaining knowledge within an organization to bring about competitive advantage (Ganesh, Mohapatra, Nagarajan & Springer (2014). Further, knowledge requires thinking, planning, and execution, which cannot be achieved without the involvement of peoples. To increase people’s efforts to grow organizational knowledge, employees need to be motivated and be encouraged to inculcate friendly relations between them, hence building a courteous and

professional environment that breeds innovation in and knowledge development in the company.

Process component concerns the processes through which organization knowledge flows and is distributed from the source to the user for the benefit of the institution. A standard knowledge flow process involves seven step cycles where people component creates, organize, store, and distribute knowledge. According to Hubert and Trees (2018), the cycle comprise; creating new knowledge daily across all areas of the business; identifying and separating the critical knowledge that brings potential benefit and advantage to operations; collecting the knowledge to allow sharing with others within the organization; review of formulated knowledge to appraise its accuracy, relevancy, and applicability; sharing knowledge through official documentation of new concepts, through collaborative activities or through informal posts; access knowledge whenever required within the organization; and finally use of knowledge to resolve challenges faced faster and to make more responsive decisions.

Content also referred to as IT Infrastructure, relate to documented facts and data that people convert into knowledge and apply on a daily basis. Content can be reusable stored I form of templates, videos, or project documentation. IT infrastructures enable people to create this knowledge, store, access and reuse it at will. In addition, technology connects people within the organization together irrespective of place and time, thus facilitate application and management of the knowledge to create competitive advantage (Hubert & Trees, 2018). Organizations that are advanced in KM use content management to enable cooperation, discover new concepts, and supply content to all workers within the organization their prime moments and in its simplest form.

Efficient execution of knowledge management requires a clear, documented, and relevant organization strategy. The strategy ties the people, process and content components together by identifying the value proposition of the created knowledge, outlining the persons and roles, tools, and approaches to be employed, availing the budget and clearly identifies the expected output of knowledge management. Understanding the components of KM makes the researcher appreciate the attributes of the knowledge management variable of the study, in order to acknowledge efficient application by the listed firms under focus in this study.

2.4 Measures of Service Delivery

SERVQUAL model is commonly employed to evaluate the subjective components of service quality. The SERVQUAL model defines service quality as the discrepancy between customers' expectations of the service to be provided and their views of the service they actually received (Parasuraman, Zeithaml & Berry, 1988). As a result, it is now a service delivery attitude metric that assesses consumers' attitudes and perceptions of service quality by locating the discrepancy between services provided and services expected. In this measure of service delivery, the attitude and perception of customers is collected in a survey, by asking clients to rate the delivered service compared to their expectations, with a view to establish whether the service exceeded consumer’s expectation or otherwise (Johns, 1999).

The SERVQUAL model's five dimensions were used to gauge service quality. As the dimensions of service quality, they are intangibility, dependability, responsiveness, empathy and assurance. (Parasuraman, Zeithaml & Berry, 1988). Intangibility; measures

the convenience of the physical appearance of the facility environment where there is no physical product offered; The ability to serve consumers and be prompt with service is a measure of responsiveness; reliability points to the ability to execute the service in a consistent, dependably and accurately without variance irrespective of place and time; assurance dimension concerns the knowledge, courtesy and the capacity to stir trust and assurance on the customers; and finally empathy dimension concerns how caring the company is to the customers, and the ability to provide individual attention to the diversified needs of its customers (Parasuraman, Zeithaml & Berry, 1988).

2.5 Knowledge Management and Service Delivery

A number of local and international studies have been undertaken in the past, to comprehend the possible link between KM practices and service delivery. Different studies with different scopes showing different results are under consideration in this section.

The first study being discussed is one by Chebet and Njuguna (2020), whose goal was to determine how knowledge management techniques at Oxfam International in Kenya affected service delivery. The author identified knowledge generation, knowledge application knowledge sharing, and knowledge storage as the study variables. The study concluded that KM techniques had a significant impact on service delivery at Oxfam International in Kenya, targeting a population of 65 officials from the organization's global headquarters and using descriptive statistics to analyse the data. The analysis revealed that Oxfam adopted knowledge distribution by sharing lessons and exchange of experience, embraced knowledge application through knowledge conversion, training, use and integration of modern IT, and adopted knowledge storage through documentation, record

keeping, and classifying information. Despite the encouraging results, the study's scope was too narrow and Oxfarm does not operate in the traditional service sector to provide a conclusive answer. The researcher intends to cure is deficit by expanding the scope to several publicly listed companies at the security exchange.

In a case study model that highlights the impact of KM practices on the service delivery of research institutes in Kenya, Ogao (2019) uses the Kenya Forestry Research Institute as an example. Using descriptive survey and stratified sampling method collect data from 169 respondents, and descriptive statistics to analyse, the study discovered that KM practices such as information gathering, creation, acquisition, storage, analysis and use provided the intellectual capital that enhanced service delivery. In addition, the study noted that IT systems within the organization enabled sharing of information, proper planning, and efficient coordination thus resulting into increased service delivery. The author established that skills development, KM process and Information technology all impact service delivery and performance in KEFRI. This study intends to confirm if similar findings will be arrived at with the focus of all service industry firms listed at NSE.

Okemwa and Smith (2018) examined in-depth how knowledge management might support performance effectiveness, service delivery, and good governance in Kenyan government agencies. The investigation also uncovered obstacles to the adoption of KM. Literature survey methodology was adopted to collect data about KM in the civil service, in addition to data integrated from the results derived from a PhD research project undertaken by Okemwa (2006). The study found that bureaucracy and lack of incentives in the civil service are the main factors that impede generation, and distribution of information, hence restraining effective adoption of KM practices. This is particularly so because civil

servants imagine that by hoarding information they retain their worth and attractiveness to keep their jobs. Additionally, it was discovered that KM may enhance civil service service delivery. Despite these findings, the reliability of the data collected through literature survey was not given and could not be established. The researcher thus repeats this study but with a focus on firms listed at NSE, but with a clear test of level of significance of the data.

Another study conducted in Rwanda by Byukusenge and Munene (2017) examined the mediating role of innovation in the relationship between knowledge management and the success of SMEs there. To collect information from a sample of 250 SMEs, the authors used a cross-sectional survey methodology. For the mediation analysis, they used the bootstrap approach. The investigation showed that innovation fully interferes with the relationship between knowledge management and the success of SMEs. According to this finding innovation is just a conduit that catalysed KM to enhance business performance. However, this study does not separate innovation from knowledge management which by its very definition involves creation/innovation of new knowledge (Parlby & Taylor, 2000), but in concurrence with Kuhn and Marisck (2010) who considered innovation to concern the transmutation of a concept into a finished product or service that meets the desires and anticipations of customer. An additional investigation found that KM fosters innovation through increasing staff capacity, sharing experiences, and employee exposure, which boosts SMEs' performance levels.

In a different study, Mohajan (2017) examined the contributions that KM made to the development of institutions in Bangladesh and came to the conclusion that, in addition to labour, land, and capital, knowledge is the most important component in production. The

researcher noted that it is most imperative to manage and share knowledge for the sustainable development of an organization. Mahajan concluded that with the successful adoption of KM, companies can advance their efficacy and can gain competitive edge. This outcome is similar to the findings by Wiig (1999), and Podgórski (2010) which held that the purpose KM is to enhance innovativeness, competitiveness and business performance. The finding is a further confirmation of the study by Mohajan (2016) which averred that knowledge management instigates higher efficiency by minimizing duplication of work, instead guaranteeing superior performance, improve the competencies of workers and facilitating quality decisions within the organization.

Ashaba (2015) equally delved in the similar study on the linkage between KM and Service Delivery in NGOs, particularly on ChildFund international in Uganda. The study isolated knowledge generation, knowledge distribution, and knowledge exploitation as the attributes of the KM variable, while accessibility, cost effectiveness, timeliness, and usefulness of the services as the attributes of the Service Delivery variable of the study. 101 respondents were used in the study's collection of quantitative and qualitative data, which was then analysed using descriptive statistics and SPSS correlation. The research found a strong positive association between knowledge management and service delivery. The findings are similar to Chebet and Njuguna (2020), which was also identically a case study scoped in Kenya. The study concluded that any firm completely practice Knowledge Management will absolutely miss challenges related to service delivery. The current study in a similar fashion seeks to determine whether similar results will be realised in Kenya, but now with the expanded scope of publicly listed companies at NSE.

Kor and Maden (2013) in a study based in Turkey researched on three concepts of Knowledge management, innovativeness and innovation. The attention was on examining the connection between effective KM practices and forms of innovation in firms and to clarify on the mediating consequence of innovation on KM process and innovation types in Turkish Service and High-Tech Firms. The researcher analysed survey data from 103 participants and found that KM processes positively influences innovativeness, which subsequently stimulates innovations in organizations. The findings are consistent with the finding by Byukusenge and Munene (2017) which stated that innovation fully mediate the relationship between KM and business performance. Similar to the findings by Mohajan (2017), Wiig (1999), and Podgórski (2010) the study equally found that Knowledge management, innovativeness and novelty of new products and services create competitive edge among the Turkish Service and High-Tech Firms. Organizations are therefore expected to create, transform, and manage their internal knowledge in order to keep their capacity for innovation.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The methods and design framework used for the study are described in this chapter. The research design, study population, sampling method, sample size, data collection process, and data analysis procedure are all described in detail in this chapter.

3.2 Research Design

In order to explore the effect of KM on service delivery as determined by customer satisfaction, accessibility of services and service efficiency, the researcher will employ a descriptive survey study approach. Survey research is a kind of research used to get first-hand information from a predetermined sample of respondents in order to learn more and obtain insights into a variety of study topics (Check & Schutt, 2012). Descriptive survey design if therefore a scientific method which involves observing, collecting primary data, analysing, and describing the behaviour of a subject (Christensen, Johnson & Turner, 2011). The study was used by Naik, Gantasala and Gantasala (2010) when looking at the impact of service quality on client satisfaction in Jordan.

3.3 Population

The population for this study comprised the 31 companies listed at NSE, which are categorized under service industry as at March 31, 2021. The researcher undertook a census study to include all the 31 firms in the study. They include companies in the banking sector, telecommunication and technology, commercial and services, energy and petroleum and insurance sectors (Appendix I). The choice of the 31 companies is because they are service

oriented firms that offer non-tangible products, thus may significantly benefits from the findings of this study, particularly when considering whether or not to practice knowledge management as a way of enhancing service delivery.

3.4 Data Collection

The study used primary data collected from all the 31 firms listed at NSE, which are categorized under service industry. The collection of primary data was done through structured questionnaire from either the KM managers or the operation managers who are in charge of service delivery from each of the targeted firms. This makes a total of 31 respondents. The questionnaire was categorized into three sections. Section A gave the organizational characteristics; and section B that covers questions on knowledge management and section C covering questions on service delivery, all organized in the format of a Likert scale. To ensure confidentiality, the researcher hand delivered the questionnaires and collect the filled questionnaires from the respondents, hence eliminating any chances of exposing the information to wrong hands.

3.5 Data Analysis

The quantitative data from the Likert scale was entered directly into the SPSS in themes of knowledge management and the measures of service delivery. Descriptive statistics was thereafter employed to run the analysis through the help of SPSS. The researcher closely observes mean deviation, the standard deviation of the data, and percentage scores. The influence of KM practices on service delivery on firms listed at NSE was established through regression model. This was done by analysing the parameter estimates as generated by the log-odds in SPSS and tested at 95% significance level.

To ascertain whether there is a substantial association between the dependent and independent variables, the researcher also performed a correlation study. The association between the study's variables was determined using the regression model shown below.

$$Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \beta 4\ X4 + \varepsilon$$

Where:

Y = Service delivery;

X1 = Knowledge creation;

X2= Knowledge acquisition;

X3= Knowledge sharing;

X4= Knowledge utilization;

X5 = Knowledge hoarding and retention

$\beta 0$ = Intercept; $\beta 1$ = Beta coefficient; ε = error term.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

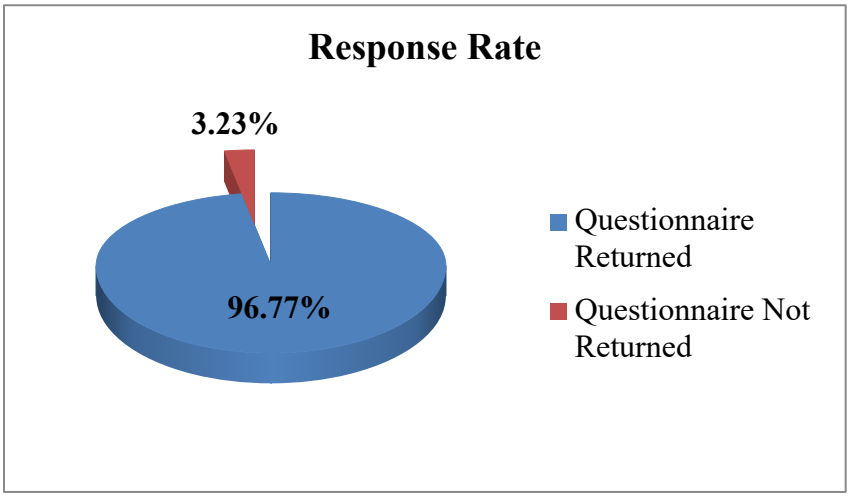
4.1 Introduction

The research on the impact of knowledge management on the service delivery of companies listed on the Nairobi Securities Exchange is presented in this chapter. This chapter has provided a summary of the demographic information and response rate. Descriptive statistics, such as mean, variance, standard deviation, range, and skewness, were used to analyse the data. Tables and graphs were used to present the findings. In order to ascertain the link between the study's variables, regression analysis and correlation analysis were also conducted.

4.2. Response Rate

The study planned to collect data from 31 companies listed at NSE, which are categorized under service industry as at March 31, 2021. Out of the targeted 31 firms, the researcher collected data from 30 firms making 96.77% response rate. According to Mugenda and Mugenda (2003), a response rate of 50 percent is a satisfactory for analysis and drawing conclusions. Weisberg, Krosnick and Bowen (1996) on the other hand recommend a response rate of 70%. From this study, the response rate of 96.77% was adequate to draw conclusions for the study. This is represented in figure 4.1.

Figure 4.1: Response Rate



Source: Research Findings

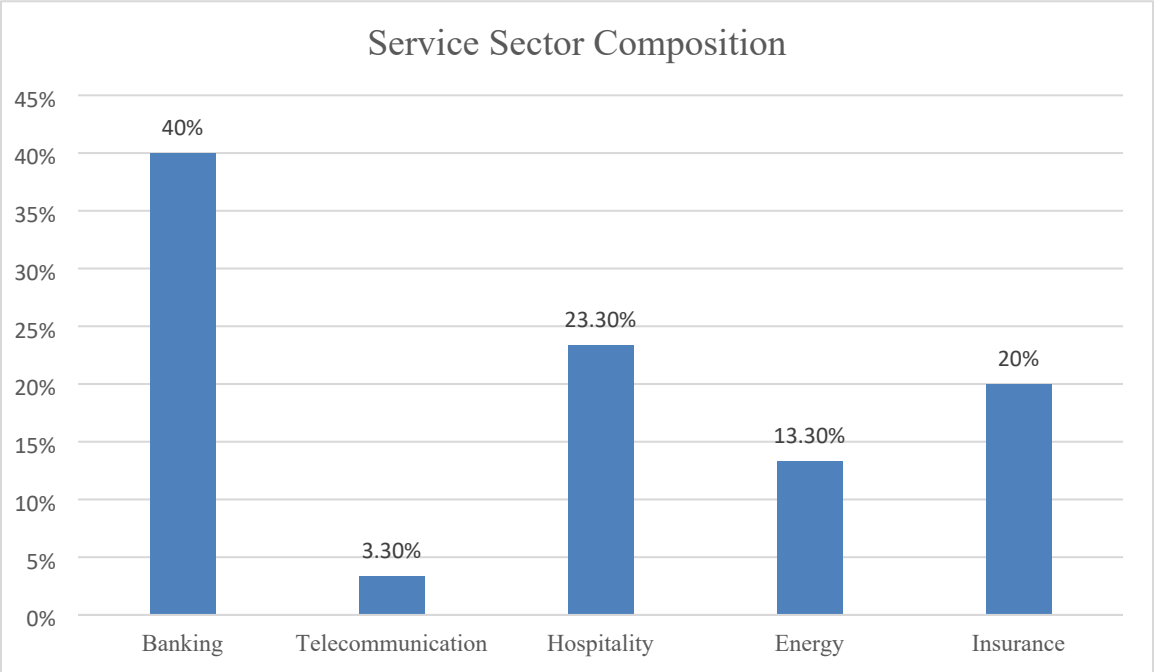
4.3 Demographic Information

The researcher sought to understand the organizational characteristics and sought to know the service sectors the sampled firms operated, the number of years the company had been in business, the number of employees in the company, and whether or not the company had a functional knowledge management department.

4.3.1 Service Sector Composition

This information is to point out the service sectors that are listed at NSE. It is assumed that NSE attracts established firms from different sectors of the economy, hence reliability of the finding to be application across different sectors. This is outlined in figure 4.1.

Figure 4.2: Service Sector Composition



Source: Research Findings

The analysis indicates that banking industry contribute the majority of the service firms listed at NSE at 40%, followed by hospitality industry at 23.3%, insurance industry at 20%, energy 13.3% and telecommunication industry at 3.3%. The presence of five sectors indicate the stability of service sector in the economy.

4.3.2 Number of Years in Business

This outlines the number of years the listed companies in the service industry have been in operation. It is assumed that for a firm to qualify to be listed at the NSE, the company must have been more established to have knowledge management department and must have been in business for a long time. This is outlined in table 4.1.

Table 4.1: Number of years in Business

Years of Operation	Frequency	Percentage
0-15	2	6.67%
16-30	4	13.33%
31-45	4	13.33%
Over 45	20	66.67%
Total	**30**	**100.00%**

Source: Research Findings

The analysis noted that 20 firms, making 66.67% of the sampled firms had been in operation for over 45 years, 4 firms making 13.33% of the sampled firms had been in operation for between 16-30 years and 31-45 respectively, and only 2 firms making 6.67% had been in operation for less than 15 years. This indicate that stability of firms to be qualified to be listed at NSE potentially depend on experience and number of years the company has been in business.

4.3.3 Number of Employees

The number of employees in the firm is an indicator to the size of the company, which points to the need of knowledge management in the firm in order to ensure that the organization's knowledge is properly defined, acquired, structured, shared, applied, and retained within the organization. This is outlined in table 4.2.

Table 4.2: Number of Employees

No. of Employees	Frequency	Percentage
0-1000	6	20%
1001-2000	9	30%
2001-3000	4	13.30%
3001-4000	0	0
Over 4000	11	36.70%
Total	**30**	**100%**

Source: Research Findings

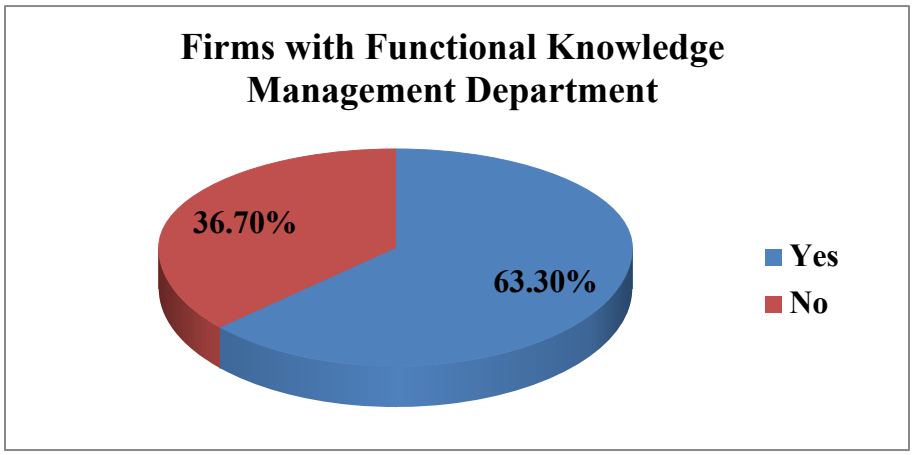
The analysis indicates that majority of the firms at 80% are well established companies with over 1000 employees. Only 6 firms making 20% of the sampled firms had less than 1000 employees. This is indicative that company information, knowledge and intellectual property need to be properly managed to ensure efficiency of all employees, and particularly the newly employed staff.

4.3.4 Functional Knowledge Management Department

The existence of a functional knowledge management department in the sampled firms may have a direct implication on the findings of this study. Considering that KM is the

independent variable of the study, the researcher sought to know whether sampled listed firms have KM departments as outlined in figure 4.3.

Figure 4.3 Functional Knowledge Management Department



Source: Research Findings

The analysis shows that 11 firms making 36.7% of firms listed at NSE had no functional knowledge management departments, while 19 making 63.3% of the firms had a functional knowledge management department. This reflects that majority of firms consider KM as an important management segment that adds value the operation of the firms.

4.4 Descriptive Statistics

The purpose of descriptive statistics was to determine the knowledge management practices. This was achieved by enquiring from the respondents the degree to which they agreed with several statements concerning knowledge creation, acquisition, sharing, utilization, hoarding and retention, service delivery. The researcher closely observed the mean and the standard deviation of the data.

4.4.1 Knowledge Creation

The respondents indicated the extent to which they agreed with various statements concerning knowledge creation. A Likert scale with key scores of 1 for 'Strongly Disagree', 2 for 'Disagree', 3 for 'Undecided', 4 for 'Agree', and 5 for 'Strongly Agree' was used. This was also used for the rest of the rest of the items below. The results are indicated in table 4.3 below.

Table 4.3: Knowledge Creation

Knowledge Creation	N	Mean	Std. Deviation
The company creates its district knowledge to enhance unique service	30	4.37	.490
The company finances innovation and incubation of new knowledge	30	4.30	.535

Source: Research Findings

The analysis on knowledge creation responses in table 4.3 found a mean score range of 4.3 to 4.37, which all fall in the category of 'Agree' in the Likert scale. From the finding, the respondents agree that the companies create their own distinct knowledge to enhance their service delivery with a mean score of 4.37and standard deviation of 0.490. Similarly, the respondents agreed that the companies finance innovation and incubation of new knowledge with a mean score of 4.30 and standard deviation of 0.535.

4.4.2 Knowledge Acquisition

The respondents indicated the extent to which they agreed with the statements about knowledge acquisition. The responses were structured through a Likert scale, and the results are presented in table 4.4 below.

Table 4.4: Knowledge Acquisition

Knowledge Acquisition	N	Mean	Std. Deviation
The firm has elaborate knowledge acquisition and capacity building policies within the organization	30	4.03	.490
Employees within the organization have the essential know-how to undertake their tasks and to improve their performance	30	4.23	.504

Source: Research Findings

The results on knowledge acquisition responses outlined in table 4.4 found a mean score range of 4.03 to 4.23, which all equally fall in the category of 'Agree' in the Likert scale. From the findings, the respondents agreed that the companies had an elaborate knowledge acquisition and capacity building policies within the organization with a mean score of 4.03 and standard deviation of 0.490. Similarly, the respondents agreed that employees within the organization have the essential know-how to undertake their tasks and to improve their performance, with a mean score of 4.230 and standard deviation of 0.504.

4.4.3 Knowledge Sharing

The respondents indicated the extent to which they agreed with the statements about knowledge sharing. The responses were structured through a Likert scale and the results are presented in table 4.5 below.

Table 4.5: Knowledge Sharing

Knowledge Sharing	N	Mean	Std. Deviation
The Company knowledge and information is shared freely to all employees to enhance reliability and consistency of shared information	30	3.70	.651
The Company has elaborate process to share new company knowledge on its employees	30	4.00	.525

Source: Research Findings

The analysis results outlined in table 4.5 found a mean score range of 3.70 to 4.00, which fall in the category of 'Undecided' and 'Agree' respectively in the Likert scale. From the findings, the respondents were not sure whether the companies' knowledge and information were shared freely to all employees to enhance reliability and consistency, with a mean score of 3.70 and standard deviation of 0.651. Nevertheless, the respondents agreed that the Companies had elaborate process to share new company knowledge to its employees, with a mean score of 4.00 and standard deviation of 0.525.

4.4.4 Knowledge Utilization

The respondents indicated the extent to which they agreed with the statements about knowledge utilization within the companies. The responses were equally structured through a Likert scale and the results are presented in table 4.6 below.

Table 4.6: Knowledge Unitization

Knowledge Utilization	N	Mean	Std. Deviation
The Company knowledge is procedurally utilized within the organization to enhance service delivery	30	4.00	.643

Knowledge is used to design new services to clients	30	4.07	.521

Source: Research Findings

The analysis results outlined in table 4.6 found a mean score of 4.00 and 4.07, which fall in the category of 'Agree' in the Likert scale. From the findings, the respondents agreed that Company knowledge is procedurally utilized within the organization, with a mean score of 4.00 and a moderate variability of 0.643 standard deviation. Further, the respondents agreed that Company knowledge is used to design new services to clients, with a mean score of 4.07 and moderate variability of 0.521 standard deviation.

4.4.5 Knowledge Hoarding and Retention

The respondents indicated the extent to which they agreed with the statements about knowledge hoarding and retention within the companies. The responses were structured through a Likert scale and the results are presented in table 4.7 below.

Table 4.7: Knowledge Hoarding and Retention

Knowledge Hoarding and Retention	N	Mean	Std. Deviation
The firm keeps copyrights, patents and manual of their knowledge in electronic repositories and databases.	30	4.27	.583
The company hoards its knowledge and retains knowledge to sustain competitive advantage	30	4.07	.785

Source: Research Findings

The results outlined in table 4.7 found a mean score of 4.27 and 4.07, which fall in the category of 'Agree' in the Likert scale. From the findings, the respondents agreed firms

keeps copyrights, patents and manual of their knowledge in electronic repositories and databases, with a mean score of 4.27 and a moderate variability of 0.583. Further, the respondents agreed that the companies hoard their knowledge and retains knowledge to sustain competitive advantage, with mean score of 4.07 and high variability of 0.521 standard deviation.

4.5 Service Delivery

The respondents indicated the extent to which they agreed with the statements about whether knowledge management affect service delivery. The results found a cumulative mean score for all the service delivery measures to be 4.161, which is the category of 'Agree' in the Likert scale. The findings of the individual statements for each of the measures are presented in 4.8 to 4.11.

Table 4.8: Intangibility Measure

Intangibility Measure	N	Mean	Std. Deviation
Knowledge management facilitates physical appearance of facility, making service environment very convenient	30	3.90	.662
Knowledge management ensures proper order and guidance to service delivery	30	4.10	.481
Knowledge management enhances safety of the customers during service delivery	30	4.23	.568
Knowledge management ensures that services are satisfactorily packaged	30	4.50	.572

Source: Research Findings

The findings in table 4.8 show that respondents agreed; that KM facilitates physical appearance of facility, making service environment very convenient with a mean score of 3.90 and SD of 0.662; KM ensures proper order and guidance to service delivery with a

mean score of 4.10 and moderate variability of 0.48; KM enhances safety of the customers during service delivery with a mean score of 4.23 and moderate variability of 0.568; KM ensures that services are satisfactorily packaged with a high mean score of 4.50 and SD of 0.572.

Table 4. 9: Responsive Measure

Responsive Measure	N	Mean	Std. Deviation
Knowledge management practices make service provider employees very responsive and readily willing to assist customers	30	4.27	.450
Knowledge management ensures Services are provided promptly	30	4.27	.521
Knowledge management practices makes service providers are very approachable and friendly to customers	30	4.23	.504
Knowledge management practices empowers service providers pick calls promptly and addresses customer queries	30	3.90	.803

Source: Research Findings

Analysing the responsive measure of service delivery in table 4.9 indicate that; KM practices make service provider employees very responsive and readily willing to assist customers with a mean score of 4.27 and moderate SD of 0.450; KM ensures that services are provided promptly with a mean score of 4.27 and moderate variability of 0.521; knowledge management practices makes service providers very approachable and friendly to customers with a mean score of 4.23 and SD of 0.504; and that knowledge management practices empowers service providers pick calls promptly and addresses customer queries with a mean score of 3.90 and a high variability of 0.803.

Table 4. 10: Reliability Measure

Reliability Measure	N	Mean	Std. Deviation
Knowledge management ensures that services offered are very reliable and consistent irrespective of place and time	30	3.73	.691
Through Knowledge management, services rendered to be very accurate to address the specific needs without guess work	30	4.00	.525
Through KM the quality of service is standardized and assured in all branches	30	3.90	.712
Through KM, Customers are assured of excellent service whenever needed	30	4.13	.681

Source: Research Findings

Results of analysis on reliability measure of service delivery as presented in table 4.10 found that; KM makes services offered to be very reliable and consistent irrespective of place and time with a mean score of 3.73 and a moderate variability of 0.691; KM makes the services rendered to accurately address the specific customer needs without guess work with a mean score of 4.00 and moderate variability of 0.525; KM standardizes the quality of service is in all branches with a mean score of 3.90 and a high variability of 0.712; and that KM makes customers assured of excellent service whenever needed with a mean score of 4.13 and moderate SD of 0.681.

Table 4. 11: Assurance Measure

Assurance Measure	N	Mean	Std. Deviation
Knowledge management makes all service providers very knowledgeable of their products	30	4.07	.254
Knowledge management inspires trust and confidence on the customers	30	4.10	.305
Due to KM practices, customers are handled with courtesy and dignity	30	4.53	.507

By KM, customers are assured of service that meets expectation	30	4.53	.571

Source: Research Findings

Table 4.11 outlines the results of effect of knowledge management on assurance service delivery measure. The respondents agreed that; KM makes all service providers very knowledgeable of their products with mean score of 4.07 and a low variability of 0.254; KM inspires trust and confidence on the customers with mean of 4.10 and low variability of 0.305; KM practices make customers be handled with courtesy and dignity with a mean of 4.53 and moderate SD of 0.507, and agreed that KM practices makes customers be assured of services that meets expectation with mean of 4.53 and moderate variability of 0.571.

Table 4. 12: Assurance Measure

Empathy Measure	N	Mean	Std. Deviation
Knowledge management makes the company and its employees caring and compassionate to the customers	30	4.33	.479
Knowledge management makes employees to provide individualized attention to the diversified needs of its customers	30	3.90	.803
Knowledge management makes the company determined to change the plight of customers	30	4.20	.484
KM practices makes us satisfied with the service rendered to clients	30	4.40	.621

Source: Research Findings

From the results on empathy service delivery measure outlined in table 4.11, the respondents agreed that; knowledge management makes the company and its employees caring and compassionate to the customers with a mean of 4.33 and SD of 0.479; KM practices prepare employees to provide individualized attention to the diversified needs of

its customers with a mean score of 3.90 and high variability of 0.803; KM makes the company determined to change the plight of customers with a mean of 4.20 and SD of 0.484, and greed that KM practices makes employees satisfied with the service rendered to clients with a mean score of 4.40 and moderate variability of 0.621.

With the cumulative average score of 4.161, which falls in the category of '4' for 'Agree' in the Likert scale, the analysis find that the respondents from the listed firms agreed that implementation of knowledge management practices affect service delivery among the listed firms.

4.6 Regression Analysis

The study adopted linear regression model to determine how the independent variables influence the dependent variables. The result is presented in table 4.9.

Table 4.13: Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.686[a]	.471	.361	.26389	2.339

a. Predictors: (Constant), KR, KU, KA, KS, KC
b. Dependent Variable: SERVDEL

The regression summary in table 4.9 show R value of 0.686 which point to a strong positive relationship between knowledge management and service delivery of firms listed at Nairobi securities exchange. The R-Squared value of 0.471 means that 47.1% change in service delivery among firms listed at NSE is as a result of knowledge management practices of knowledge creation, knowledge acquisition, knowledge sharing, knowledge

utilization and knowledge hoarding and retention. From the finding, it is inferred that 52.9% of the change in service delivery is contributed by other variables not included in this study. The Adjusted R-Squared value of 0.361, means that 36.1% of change in service delivery among firms listed at NSE is as a result of knowledge management practices, while 63.9% contributed by other variables not part of the study. The Durbin Watson Statistic 2.339 indicates a positive autocorrelation between the variables of study.

4.6.1 ANOVA Analysis

Table 4.14: ANOVA Analysis

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.487	5	.297	4.271	.006[b]
	Residual	1.671	24	.070		
	Total	3.158	29			

a. Dependent Variable: SERVDEL

b. Predictors: (Constant), KR, KU, KA, KS, KC

The ANOVA analysis presented in table 4.10 tests the findings at 95% confidence level. The analysis recorded a p value of 0.006, being < 0.05, hence pointing that the model was statistically significant and can be adopted to predict effect of KM on service delivery. The F critical value score of 1.487, being < 4.271 reading of the calculated F also indicate that the model was statistically significant.

4.6.2 Coefficient of Determination

Table 4.11 shows the coefficient of determination, assessed at a 95% confidence level, that illustrates the relationship between knowledge management and service delivery.

Table 4.15: Coefficients of Determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.841	.771		2.388	.025	.250	3.433
	KC	.358	.118	.521	3.027	.006	.114	.603
	KA	-.063	.124	-.079	-.507	.617	-.319	.193
	KS	-.016	.112	-.024	-.146	.885	-.248	.215
	KU	.146	.095	.231	1.527	.140	-.051	.342
	KR	.121	.104	.216	1.156	.259	-.095	.336

a. Dependent Variable: SERVDEL

Source: Research Findings

The results show that when the independent variables (knowledge management practices) are held constant, service delivery will grow at rate of 1.841. The independent variables, particularly knowledge creation recorded a positive correlation of 0.358, knowledge acquisition recorded a negative correlation of -0.063, knowledge sharing negative correlation of -0.016, knowledge utilization positive correlation of 0.146, and knowledge retention with positive correlation of 0.121. From the results, outcome the relationship between knowledge management practice and service delivery tested at 95% confidence level is be represented by the regression model below:

$$Y = 1.841 + 0.358\ X1 - 0.063\ X2 - 0.016\ X3 + 0.146\ X4 + 0.121X4 + \varepsilon.$$

4.7 Discussion of Findings

The purpose of this study was to ascertain how knowledge management affected the provision of services by enterprises listed on Kenya's NSE. According to the descriptive

data, knowledge management activities, such as knowledge generation, knowledge acquisition, information sharing, knowledge usage, and knowledge retention, have an impact on service delivery, with a cumulative mean score of 4.161. The findings by Chebet and Njuguna (2020), who similarly identified knowledge generation, knowledge application, knowledge sharing, and knowledge storage as the KM practices that had a substantial impact on service delivery at Oxfam International in Kenya, are consistent with this outcome. Further, the findings of this research agree with the findings of Ogao (2019) that discovered that KM practices such as information gathering, creation, acquisition, storage, analysis and use provided the intellectual capital that enhanced service delivery at Kenya Forestry Research Institute.

The descriptive statistics findings were also affirmed by the regression analysis, which similar to the findings by Ashaba (2015) and Chebet & Njuguna (2020), found a strong positive correlation between knowledge management and service delivery, to the extent that 47.1% change in service delivery among firms listed at NSE is as a result of knowledge management practices. Findings by other scholars such as Byukusenge & Munene (2017), (Parlby & Taylor, 2000 and Kor & Maden (2013), also emphasize knowledge management practices but with more focus on innovation and creation as a catalysed of KM to enhance business performance. The results of this study that found strong correlation between KM and service delivery is also in line with the findings of Mohajan (2017) that postulated that KM leads to higher efficiency by minimizing duplication of work, enriches new staffs, improves decision making and results into better performance.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The summary of the results and the conclusion of the impact of knowledge management on service delivery for enterprises listed on the Nairobi Securities Exchange are presented in this chapter. The chapter provides policy recommendations based on the findings, identifies the study's shortcomings, and makes suggestions for future research.

5.2 Summary of Findings

The quantitative data from the Likert scale was loaded into SPSS for descriptive statistics analysis. A regression model was then evaluated at the 95% significance level to determine the association between knowledge management and service delivery on enterprises listed at the NSE.

Analysis of the demographic data found a response rate of 96.77% response rate, which is above the rate of 50% recommended by Mugenda and Mugenda (2003) and 70% response rate recommended by Weisberg, Krosnick and Bowen (1996). The analysis also found that banking industry contributed the majority of the service firms listed at NSE at 40%, followed by hospitality (23.3%), insurance (20%), energy (13.3%) and telecommunication industry (3.3%). Further, majority of the sampled firms at 66.67% had been in operation for over 45 years, while only 13.33% of the sampled firms had been in operation for between 16-30 years and another 13.33% in operation between 31-45. This pointed to the fact that listed firms are well established with over 1000 employees that require knowledge management for efficiency. However, the demographic data revealed that only 63.3% of the sampled firms had a functional knowledge management department.

Descriptive statistics analysis found mean score of '4' in the Likert scale to confirm knowledge creation, acquisition, sharing, utilization, hoarding and retention as the knowledge management practices that affect service delivery. Further, the study found a cumulative mean score of 4.161, which is the category of 'Agree' in the Likert scale to all the questions about knowledge management and service delivery. This means that knowledge management affect service delivery measures with a score of '4' in the Likert Scale.

With a R value of 0.686, the regression summary discovered a significant positive link between knowledge management and service delivery for companies listed on the Nairobi Stock Exchange. The study also discovered that R-Squared value was 0.471, indicating that knowledge management practices of knowledge creation, knowledge acquisition, knowledge sharing, knowledge utilization, and knowledge hoarding and retention are responsible for a 47.1% change in service delivery among firms listed at NSE. The coefficients of determination demonstrated the link between the variables. The regression model, Y = 1.841 + 0.358 X1 - 0.063 X2 - 0.016 X3+ 0.146 X4+0.121X4 +, represents the link between knowledge management technique and service delivery tested at 95% confidence level.

5.3 Conclusion

The study's goal was to ascertain how knowledge management affected the way services were provided by companies with NSE listings. The average score of 4.00 indicates that KM practices have an impact on service delivery. The KM practices that need to be followed by the companies listed on the NSE include in particular knowledge production,

knowledge acquisition, information sharing, knowledge utilization, and knowledge hoarding and retention.

From the findings of regression analysis, it is concluded that there is a strong positive relationship between knowledge management and service delivery of firms listed at Nairobi securities exchange. The study found that for every one-unit increase of knowledge creation, there is a positive change in service delivery, and that for every one-unit increase in knowledge acquisition, there is a negative change in service delivery. This mean that knowledge acquisition and service delivery are inversely related. Similar inverse correlation was found to exist between knowledge sharing and service delivery where one-unit increase in knowledge creation results into a negative change in service delivery. On the contrary, one unit change in knowledge utilization causes a positive change in service delivery and one unit change in knowledge hoarding and retention causes a positive change in service delivery responsibly. In conclusion, whether negative of positive relationship, a unit change in all the KM practices under study affects service delivery.

5.4 Recommendations

Service delivery is central to the operations of service-oriented firms at NSE. Any effort including adoption of KM practices to improve service delivery, particularly to ensure quality, effectiveness, cost efficiency, predictability, reliability and customer-friendliness needs to be adopted by the firms listed at NSE. From the demographic information analysis, the study found that only two thirds of the sampled firms had functional knowledge management departments. As a result, it is advised that all service industry businesses establish knowledge management departments to develop, distribute, utilize,

and maintain their expertise. The study strongly advises that all companies listed at NSE adopt knowledge management practices, particularly knowledge creation, knowledge acquisition, knowledge sharing, knowledge utilization, and knowledge hoarding and retention in their respective firms in order to improve their service delivery. This recommendation stems from the study's findings on the impact of knowledge management on service delivery.

In order to build resilience among the firms listed at NSE, to generate unique knowledge and to continuously build expertise within the firms, the top leadership of capital market authority, NSE and all relevant regulatory bodies regulating service industry need to develop knowledge management policies that will ensure all firms listed at NSE have functional knowledge management department. The policy need to be a guide to all firms that need to be listed at NSE in order to Guarantee the performance of the firms.

5.5 Limitations of the study

The study may be limited as a result of potential biasness and subjectivity of the respondents who are workers of the respective companies.

Further, the number of respondents were limited in this study, and only focused on the top level management who are KM managers or the operation managers who are in charge of service delivery from each of the targeted firms. This means that the opinion of other employees not at the strategic level of may have been valid, but was not considered in this study.

5.6 Areas of Further Research

For further study, it is recommended that larger sample size to be considered in future studies. This will allow more stakeholders not in the strategic level of management to provide responses for analysis. Further, it is recommended that similar study be done to also focus on non-service delivery firms in the manufacturing sector whose tangible products equally render services to the end consumers.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

The research questionnaire is structured to collect information on effect of knowledge management on service delivery on firms listed at NSE. You are requested to provide responses to the statements contained therein. The information you provide will be treated with highest privacy.

PART A: ORGANIZATION CHARACTERISTICS

Instructions: (tick where appropriate)

1 Name of Business/Company.....

2. Which service sector does the firm belong?

Banking ☐

Telecommunication ☐

Hospitality ☐

Energy ☐

Insurance ☐

3. What is the ownership structure of the firm?

Publicly Owned ☐

Private Locally Owned ☐

Foreign Owned ☐

4. The number of years the business/company has been in business

a) 0-15 years ☐ b) 16-30 years ☐

c) 31-45years ☐ d) Over 45 years ☐

5. Approximate number of employees in the firm

a) 0-1000 ☐

b) 1001-2000 ☐

c) 2001- 3000 ☐

d) 3001-4000 ☐

e) over 4000 ☐

6 Does the company have functional knowledge management department?

Yes ☐ No ☐

SECTION B: KNOWLEDGE MANAGEMENT

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5= Strongly Agree

The statements presented below relate to the effect of Knowledge management on service delivery among firms listed at NSE in Kenya.

Kindly mark by ticking (√), the response appropriate to you for each statement.

Knowledge Creation	**1**	**2**	**3**	**4**	**5**
The company creates its district knowledge to enhance unique service					
Company finances innovation and incubation of new knowledge					

Knowledge Acquisition					
The firm has elaborate knowledge acquisition and capacity building policies within the organization					
Employees within the organization have the essential know-how to undertake their tasks and to improve their performance					
Knowledge Sharing					
Company knowledge and information is shared freely to all employees to enhance reliability and consistency of shared information					
Company has elaborate process to share new company knowledge on its employees					
Knowledge utilization					
Company knowledge is procedurally utilized within the organization					
Knowledge is used to design new services to clients					
Knowledge Hoarding and Retention					
Firm keeps copyrights, patents and manual of their knowledge in electronic repositories and databases.					
The company hoards its knowledge and retains knowledge to sustain competitive advantage					
The company retains the knowledgeable and experienced employees within the organization					

SECTION C: SERVICE DELIVERY

The statements presented below relate to the effect of KM on service delivery among firms listed at NSE in Kenya. The questions are based on the five measures of service delivery. Kindly mark by ticking (√) the response appropriate for each statement.

Intangibility Measure	**1**	**2**	**3**	**4**	**5**
Knowledge management facilitates physical appearance of facility making service environment is very convenient					
Knowledge management ensures proper order and guidance to service delivery					
Knowledge management enhances safety of the customers during service delivery					
Knowledge management ensures that services are satisfactorily packaged					
Responsiveness Measure					
Knowledge management practices make service provider employees very responsive and readily willing to assist customers					
Knowledge management ensures Services are provided promptly					
Knowledge management practices makes service providers are very approachable and friendly to customers					
Knowledge management practices empowers service providers pick calls promptly and addresses customer queries					
Reliability Measure					

Knowledge management ensures that services offered are very reliable and consistent irrespective of place and time					
Through Knowledge management, services rendered to be very accurate to address the specific needs without guess work					
Through KM the quality of service is standardized and assured in all branches					
Through KM, Customers are assured of excellent service whenever needed					
Assurance Measure					
Knowledge management makes all service providers are very knowledgeable of their products					
Knowledge management inspires trust and confidence on the customers					
Due to KM practices, customers are handled with courtesy and dignity					
By KM, customers are assured of service that meets expectation					
Empathy Measure					
Knowledge management makes the company and its employees are caring and compassionate to the customers					
Knowledge management makes employees to provide individualized attention to the diversified needs of its customers					
Knowledge management makes the company determined to change the plight of customers					
KM practices makes us satisfied with the service rendered to clients					

THANK YOU

APPENDIX II: FIRMS LISTED AT NSE

BANKING SECTOR

1. Absa Bank Kenya PLC
2. Stanbic Holdings Plc.
3. I&M Holdings Ltd
4. Diamond Trust Bank Kenya Ltd
5. HF Group Ltd
6. KCB Group Ltd
7. National Bank of Kenya Ltd
8. NCBA Group PLC
9. Standard Chartered Bank Ltd
10. Equity Group Holdings
11. The Co-operative Bank of Kenya Ltd
12. BK Group PLC

TELECOMMUNICATION AND TECHNOLOGY SECTOR

13. Safaricom PLC

COMMERCIAL AND SERVICES SECTOR

14. Express Ltd
15. Kenya Airways Ltd
16. Nation Media Group
17. Standard Group Ltd
18. TPS Eastern Africa (Serena) Ltd
19. Scangroup Ltd
20. Uchumi Supermarket Ltd

ENERGY AND PETROLEUM SECTOR

21. Total Kenya Ltd
22. KenGen Ltd
23. Kenya Power & Lighting Co Ltd
24. Umeme Ltd

INVESTMENT SERVICES

25. Nairobi security exchange Ltd

INSURANCE SECTOR

26. Jubilee Holdings Ltd
27. Sanlam Kenya PLC
28. Kenya Re-Insurance Corporation Ltd
29. Liberty Kenya Holdings Ltd
30. Britam Holdings Ltd
31. CIC Insurance Group Ltd