

**KNOWLEDGE MANAGEMENT STRATEGY AND
ORGANIZATIONAL CHANGE IN COMMERCIAL BANKS IN
KENYA**

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DECLARATION

Declaration by Student

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

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Approval by Supervisor

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

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DEDICATION

I dedicate this work to two wonderful mums one could wish to have; Sophie Kifundo and Petty Nakhumicha.

ABSTRACT

This study is about knowledge management strategy and organizational change in commercial banks in Kenya. The main objective of the study was to determine the relationship between knowledge management strategy and organizational change in commercial banks in Kenya. Knowledge management strategy can assist a firm to; induce individuals to proffer their knowledge voluntarily for a firm's use, achieve distinctive advantage through full exploitation of a firm's knowledge base, build institutional memory and protect it from prying competitors. It can influence amongst others a successful organizational change. The study employed a descriptive cross sectional survey. A total of 39 commercial banks in operation (i.e not under statutory management) were surveyed. Primary data was collected from the respondents using a 7 scale Likert type questionnaire. The quantitative data collected was then analysed utilising both Excel spreadsheet and Statistical Package for Social Sciences (SPSS). Median and mode were computed for central tendency while the inter quartile range was used as a measure of dispersion. Percentages and frequencies were also utilised to present part of the findings. Pseudo R square statistics were used as a measure of association between knowledge management strategy (independent variable) and organizational change (dependent variable). The study found that commercial banks in Kenya primarily employ proactive and moderate knowledge management strategies. Both strategies had a strong association with the organizational changes that the commercial banks have undergone. The most popular form of organizational change was found to be a mix of both revolutionary and evolutionary change. The findings of this study are consistent with theory in that knowledge management strategy was found to have given banks dynamic capabilities in pursuit of a firm's goals such as organizational change. The study recommends that banks revitalise the foundations of their knowledge management strategies to extract more value from them. Transfer and application of knowledge and cultural principles and leadership essential for effecting a knowledge management system thus strategy are the most crucial aspects that need to be strengthened.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
DEDICATION.....	iv
ABSTRACT.....	v
LIST OF TABLES	ix
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Knowledge Management Strategy.....	2
1.1.2 Organizational Change.....	2
1.1.3 Commercial Banking Industry	3
1.2 Research Problem.....	4
1.3 Research Objectives	5
1.4 Value of the Study.....	6
CHAPTER TWO: LITERATURE REVIEW.....	7
2.1 Introduction	7
2.2 Theoretical Foundation of the Study.....	7
2.2.1 Knowledge Based Theory.....	7
2.2.2 Resource Based Theory	8
2.2.3 Competence Based Theory	9
2.3 Knowledge Management Strategies.....	10
2.3.1 Knowledge Management Strategy and Organization Change	12
2.4 Empirical Studies	13

2.5	Summary of Literature Review	15
CHAPTER THREE: RESEARCH METHODOLOGY		17
3.1	Introduction	17
3.2	Research Design.....	17
3.3	Population of the Study	17
3.4	Data Collection.....	18
3.5	Data Analysis	19
CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION.....		21
4.1	Introduction	21
4.2	Knowledge Management Strategy	21
4.2.1	Knowledge Strategy.....	21
4.2.2	Knowledge Management Tools	25
4.2.3	Implementation Support Systems	32
4.2.4	Knowledge Management Strategies Practised by Commercial Banks	36
4.3	Organizational Change among Commercial Banks in Kenya.....	39
4.3.1	Radical Change Practises among Commercial Banks in Kenya.....	39
4.3.2	Organizational Changes among Commercial Banks in Kenya.....	46
4.3.3	Radical Changes among Commercial Banks in Kenya	47
4.4	Knowledge Management Strategy and Organizational Change	48
4.5	Discussion of Findings	50
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS ..		53
5.1	Introduction	53
5.2	Summary of the Findings	53

5.3	Conclusion.....	54
5.4	Implications on Theory, Policy and Practice	55
5.5	Limitations of the Study.....	56
5.6	Suggestion for Further Research.....	57
5.7	Recommendations	57
	REFERENCES.....	59
	APPENDICES	64
	Appendix 1: Questionnaire.....	64
	Appendix 2: List of Commercial Banks as at 8 th April, 2016.....	70

LIST OF TABLES

Table 4. 1: Knowledge Management Conception.....	22
Table 4. 2: Range of Responses for Selected Knowledge Management Conception Items	23
Table 4. 3: Knowledge Strategy Objectives	24
Table 4. 4: Range of Responses for Selected Knowledge Strategy Objectives.....	24
Table 4. 5: Knowledge Storage Tools.....	26
Table 4. 6: Range of Responses for Selected Knowledge Storage Tools.....	27
Table 4. 7: Knowledge Transfer and Application Tools.....	28
Table 4. 8: Range of Responses for Selected Knowledge Transfer and Application Tools	29
Table 4. 9: Knowledge Protection Methods	31
Table 4. 10: Range of Responses for use of Complementary Assets as a Knowledge Protection Method.....	31
Table 4. 11: Support Based on Cultural Principles and Leadership	33
Table 4. 12: Support Based on Human Resources Practices	34
Table 4. 13: Range of Responses for Selected Human Resources Practices Support Based Implementation Systems.....	35
Table 4. 14: Model Knowledge Management Strategies.....	37
Table 4. 15: Knowledge Management Strategies	38
Table 4. 16: Reengineering Practises among Commercial Banks	40
Table 4. 17: Range of Responses for Selected Reengineering Practises among Commercial Banks.....	41

Table 4. 18: Innovation Practises among Commercial Banks	42
Table 4. 19: Range of Responses for Innovation Practises among Commercial Banks ...	43
Table 4. 20: Restructuring Practises among Commercial Banks.....	44
Table 4. 21: Range of Responses on Restructuring Practises.....	44
Table 4. 22: Organizational Changes among Commercial Banks in Kenya.....	46
Table 4. 23: Radical Changes among Commercial Banks in Kenya	47
Table 4. 24: Knowledge Management Strategy and Organizational Change.....	48

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In the contemporary society, the ability to generate and exploit knowledge is of critical importance for the competitiveness of any organization (Drucker, 1993). A knowledge management strategy is thus important in providing a codified means of effecting organizational change congruent with its mission (Beckett, Wainwright & Banes, 2000). A knowledge management strategy generates a repository upon which organizations can extract value from processes scheduled across times hence build its capacity for change (du Plessis, 2007).

The concept studied is based on the; resource based theory, competence based theory and the knowledge based theory. The resource based theory acknowledges that a firm's resource can enable it develop strategic competencies (Sanchez and Heene, 2005). Indeed the determination of what constitutes resources in an organization depends on knowledge (Foss et al., 2007). Therefore an organization can be explained as a set of interrelated elements based on knowledge (Tsoukas, 1996). Competence based theory sees the dynamism of an organization as based on the tacit knowledge and skills that its personnel possess and the way it's coordinated (Hodgson, 1998). Knowledge as being one of the competencies of the organization can be used for adaptation through responding to the environment it operates hence allow it deliver on its potential (March, 1991).

The commercial bank sector has been marked with high levels of innovations and competition as a result of globalization. The implication of this means that commercial banks have had to change in order to remain competitive in a rapidly changing environment. Indeed part of the imposed change on some of the traditional banks has seen them have an increased uptake of technology to challenge the online banking trend (Joseph et al., 2003). Mechanisms for developing and managing knowledge bases are therefore critical in the sector to ensure continued innovation and competitiveness (Corno et al., 1999).

1.1.1 Knowledge Management Strategy

Swann et al (1999) define knowledge management as consisting of all activities in an organization that involve creation to eventual utilization of knowledge with a purpose of increasing its repertoire and in enhancing organization performance. A knowledge management strategy is a means through which an organization can derive value from its knowledge bases (Bierly and Chakrabarti, 1996; Zack, 1999). It provides the bridge that links the present and future knowledge desired in the pursuit of competitive advantage through directed leveraging (Zack, 1999). A knowledge strategy ensures that in extracting value from an organization's intellectual capital, the process is congruent with the overall mission and strategy it pursues. A well thought out, consistent and integrated knowledge management strategy is vital for the effectiveness and efficiency of any organization (Maier and Remus, 2002).

Donate and Canales (2012) aver that any organization that discovers new knowledge and utilize it to its advantage then it must have a knowledge management strategy. They identified four types of knowledge management strategies viz; moderate, inconsistent, passive and proactive. These typologies are differentiated based on the extent of the understanding of the concept of knowledge management considered alongside the alignment of knowledge management tools and support mechanisms.

Both inconsistent and passive strategies have a narrow breadth of the concept of knowledge management. However, while the passive strategy has high consistency between knowledge management tools and support mechanisms, the inconsistent strategy can be said to be inconsistent. The moderate strategy takes a middle position for the two dimensions. The proactive strategy has a wide breadth of the concept of knowledge management and is highly consistent in its knowledge management tools and support mechanisms.

1.1.2 Organizational Change

Gibson, Ivancevich and Donnelly (1988) define organizational change as a deliberate effort by a firm's management to improve its total performance through organisational redesign, altering its culture and processes. Organizations aim to be better by trying to move to improved states through change (Ragsdell, 2000).

According to Yang, Zhuo and Yu (2009), organization change targets in most cases the following aspects; how the organization perceives to be its aspiration, how it competes, the values and norms of the organization, organization design, its systems, how the firm produces its products and the style of leadership it adopts.

Sveiby (2001 b) argues that a firm that is well endowed with knowledge is capable of outperforming its adversaries. This is because such a firm is able to extract value from what it holds to attain abilities it did not have before. It can thus be argued that knowledge is a key driver of change and thus its coherent application through a knowledge management strategy is key in seeing out a successful organizational change.

Organization change can be in a variety ways. It can be in form of small changes that add to a big change or in transformational in nature (Pettigrew et al., 1992). The small scale changes that Pettigrew et al (1992) called operational changes are alluded to as evolutionary change by George and Jones (2007) and Miller (1980/1982). They involve the organizations effort to improve their systems and generally pursue small sustainable improvements through Kaizen. The transformational change can also be viewed as revolutionary. George and Jones (2002) sees revolutionary change as affecting three domains; redesign of how the organization carries out its business processes, innovation and the reorganization of a business.

1.1.3 Commercial Banking Industry

Commercial Banks are controlled by the Central Bank of Kenya under the Banking Act Cap 488. They include the Cooperative Bank of Kenya but exclude the Central Bank. There are 42 commercial banks currently operating in Kenya (Central Bank of Kenya [CBK], 2015). These banks consist of; 3 local public commercial banks, 25 local private commercial banks and 14 foreign commercial banks. Local public banks refer to those banks that 50% of their shareholding is owned by the Government of Kenya. Local private owned banks refer to those banks whose controlling interest lies with the general Kenyan public. Foreign owned banks refer to those banks whose major shareholding rests with foreigners.

According to the Central Bank of Kenya (2015), the total net asset base of the Commercial Banking Industry owned by local private and public banks stood at Kenya shillings 3.65 trillion. The report further illustrates a lucrative industry marked with high profits. The pre-tax profit of the quarter ending September, 2015 stood at Kenya shillings 114.22 billion for a nine months period. The sector is not without challenges though. It is marked with continuous review of its regulations, economy down turn and increased expectations by its customers.

The Central Bank of Kenya (2015) reported increased use of technology resulting to convergence of mobile telephony platforms and banking plus more internet banking. There was a trend towards agency banking a departure from traditional banking. The increased uptake of technology and innovation clearly indicate a sector where knowledge management strategy and organizational changes are imperative for competitiveness.

1.2 Research Problem

The concept of knowledge management strategy and organizational change has not received much attention. Knowledge management strategy is itself a contemporary issue that is yet to be studied exhaustively. The world today is marked with rapid changes that require a fluid knowledge management strategy to minimize negative impact on firms and ensure achievement of organizational goals. It is therefore important to understand the influence of knowledge management strategy on various actions taken by organizations such as change.

Commercial banks in Kenya have over time changed in response to rapidly changing; technologies, customer preferences and forms of competitors. The study of the relationship between knowledge management strategy and organizational changes is thus important to commercial banks. This is especially so because appropriate application of knowledge management strategy may enhance the competitiveness of a bank. More so, organizational change occur at a cost.

Greiner, Bohmann and Krcmar (2007) carried out a study on the linkage of knowledge management strategies to business strategies. The key finding was that alignment of knowledge management strategy and business strategy is important for organizations to perform. Olouikpe (2012) studied the importance of linking knowledge management strategy to business strategy and thus performance. He concluded that proper alignment results to both efficiencies and effectiveness. Maseki (2012) studied the linkage of the banks' performance with their knowledge management practices. The researcher found that knowledge management was related to bank's performance. Muthee (2014) sought to find out how Safaricom employed knowledge management as a strategic tool in its pursuit for competitive advantage. He found that knowledge management can minimize uncertainties associated with a volatile environment and that it could enhance competitiveness. A review of previous studies done indicate that most concentrated on; knowledge management and business process reengineering, knowledge management and innovation, implementation of knowledge management and the influence of knowledge management on performance. Consequently, Massingham (2014) suggested that studies need to be carried out to examine amongst others the linkage of knowledge management strategy and organizational change and performance. This study aimed to address this knowledge gap by answering the following research question; to what extent is the relationship between knowledge management strategy and organizational changes among Commercial Banks in Kenya?

1.3 Research Objectives

The objectives of the study are;

- i. Identify the knowledge management strategy used by Commercial Banks in Kenya.
- ii. Establish the types of organizational change that have taken place in Commercial Banks in Kenya.
- iii. Determine the relationship between knowledge management strategy and organizational changes among Commercial Banks in Kenya.

1.4 Value of the Study

This study aimed to validate the importance of knowledge management strategy in achieving desired organizational change. The study contributes to theory by providing a different context and aspects under which the knowledge management strategies are tested. Further, it brings out the typologies of knowledge management strategy in the Kenyan context.

This study is invaluable especially to the policy makers in the public sector. The commercial banking industry has three public banks that are owned by the Government of Kenya. It is hoped that it shall guide future policies as opposed to political expediency.

This study is also of importance to the commercial banks. Knowledge management strategy is a systematic tool whose application may yield desired organizational change and thus competence. The insight gained in bringing out the knowledge management strategy at play will help decision making of the commercial banks in so far as shaping strategy is concerned.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter outlines the theoretical framework anchoring knowledge management strategy. It attempts to find a fit between the concept being studied and the related theories. It examines the typologies of knowledge management strategies and their theoretical connection with organization change.

2.2 Theoretical Foundation of the Study

Knowledge management strategy is anchored on theories based on resources. Knowledge is an intangible asset. This study will base the concept on three theories viz; knowledge based theory, resource based theory and competence based theory.

2.2.1 Knowledge Based Theory

This theory places premium on the abilities of knowledge to help organizations to change in tandem with the changes in its environment by altering its competencies (Bareto, 2010). Knowledge is the most important asset that if well harnessed can enable an organization achieve its long term objectives and goals plus confer it with a competitive advantage (Zack, 1996). It follows therefore that knowledge should form the fulcrum upon which the activities of an organization revolve around.

The actions and inactions that organizations undertake are based on the knowledge in its possession. Knowledge helps an organization makes sense of the uncertainties of the environment. It does this by providing an interpretation of such uncertainty to a given a reality that motivates its actions and change abilities (Sveiby, 1994). Thus it can be argued that knowledge informs organizational change be it evolutionary or revolutionary. Knowledge however on its own without some sort of coherent application may not provide the value it possesses. A mechanism should be devised that can enable the knowledge in an organization be shared through a network (Seufert et al., 1999).

It follows therefore that the theory advocates for a system to be in place that is integrative and consistent to allow for the maximum derivation of value from knowledge in its possession.

Such a mechanism is important in strengthening the firm's capability to exploit the knowledge in its possession plus it can confer it with abilities to create new knowledge thus assisting in meeting the organization goals (Bierly and Daly, 2002; Earl, 2001; March, 1991; Zack, 1999). It follows therefore the formulation of a knowledge management strategy is crucial for a firm to achieve its goals in a coherent manner through exploitation of its knowledge (Maier and Remus, 2002). The theory stipulates that an enduring competitive advantage can be obtained through optimum leveraging of knowledge based assets. This is consistent with what a knowledge management strategy ought to achieve which includes a successful organizational change.

2.2.2 Resource Based Theory

The resource based theory holds the view that a firm's collection of assets (both intangible and tangible) can be a source of competitive advantage. This premise can only hold if such resources are rare, valuable, inimitable and non-substitutable. Knowledge plays a critical role in determining what resources of an organization makes up its portfolio of strategic assets and thus influences their appropriate deployment to extract value (Makadok and Berney, 2001).

Barney (1991) argues that a firm's resources can only confer it with an edge over its competitors if it provides sustained incremental value over time in its competitiveness relative to its competitors. A knowledge management strategy provides this competitive edge through leveraging the knowledge assets. A knowledge management strategy is able to mediate the disequilibrium between supply and demand conditions that may turn a valuable resource into a liability (Knott, 2009) through providing a consistent and coherent way of navigating through such disequilibrium.

The application of this theory clearly help to isolate assets that can confer a firm with competitive advantage. Knowledge as an asset may not help as much without a knowledge management strategy. Knowledge management strategy as a special asset can enable a firm obtain dynamic capabilities. The dynamic capabilities thus gained once leveraged on may help shift a firm's competencies to move in tandem with the dynamism of the environment (Teece et al., 1997).

2.2.3 Competence Based Theory

This theory is credited to the early works of scholars such as Prahalad and Hamel (1994), Sanchez et al (1996) and Teece et al (1997). It explains differences among firms as based on the effectiveness of the use of available resources through employment of proficiencies gained over time that cannot be copied by others and do not have alternatives such that it provides a distinction amongst firms (Teece et al., 1997). Competence according to this theory is deeply embedded in organizational learning. This affords it proper organization of its factors of production in a way that guarantees effectiveness and shapes the way it competes (Sanchez et al., 1996; Schneider, 1997; Freilings, 2001).

The competence based theory like the resource based view alludes to the ability of the firm to influence the environment in which it operates by adopting a proactive stance (Etzioni, 1968; Astley and Van de Ven, 1983; Ringstetter, 1988). The competence theory asserts that it's the managers' decision making that matters. It holds that managers' rationality in decision making is relative contingent upon the respective organization's wealth of knowledge and its subsequent exploitation (Freilings, 2004). This means that managers facing similar environment will make different decisions as to the deployment of their assets as informed by the knowledge they have.

Accordingly, it is not resources that provide the competitive edge but the proficiencies shaped by organizational knowledge that is asymmetrical that does (Freilings, 2004). This theory provides a clear basis for the application of a knowledge management strategy that can help shape organization change and its performance. Knowledge shapes competencies while knowledge management strategy provides a systematic, coherent and integrative application approach.

2.3 Knowledge Management Strategies

Scholars have not been unanimous on the typologies of knowledge management strategies. Various strategies have been suggested. Leidner et al (2006), Schulz and Jobe (2001), Alavi et al (2005), Sveiby (2001), Un and Cuervo – Cazurra (2004) and Von Krogh et al (2001), categorize knowledge management strategies based on how the organization places emphasis on knowledge storage, protection, exploitation and identification. Schulz and Jobe (2001) classify knowledge management strategies into four; codification, tacitness, focused and unfocussed. Codification strategy translates personal knowledge to one that can be shared organization wide so that it can be exploited. Tacitness strategy aims at trying to protect the knowledge an organization has by making it as personal as possible. Focused strategy meanwhile regulates how knowledge is institutionalized through providing a means of balancing the intensity of knowledge flow versus its inexactness. The unfocussed strategy does not distinguish between value adding knowledge to a firm's capabilities nor the way it is systematized.

Other scholars identify and categorize knowledge management strategies based on the whether the organization places emphasis on knowledge creation or use or both. Bierly and Chakrabarti (1996), Bierly and Daly (2007) and He and Wong (2004) belong to this category. Bierly and Chakrabarti (1996) suggest four strategies viz; loner, exploiter, explorers and innovators. Loners are highly ineffective. They invest heavily in research and development yet their turnover of technologies is low. Loners tend to have low knowledge sharing practices. Exploiters are highly efficient in making use of the little knowledge in their possession. This assists them to enhance their competitive positions despite low investments in research and development. Explorers meanwhile are extremely good in generating new knowledge that can transform a firm's strategy. Innovators combine the best qualities of explorers and exploiters. They generate transformational knowledge at a high rate and place emphasis in learning from within and outside the organization.

Choi and Lee (2003), Clarke and Turner (2004) and Hansen et al (1999) identify their typologies depending on where the knowledge was sourced for the organization. Clarke and Turner (2004) identify two strategies; external acquisition and internal development. The external acquisition strategy refers to undertakings to source knowledge outside the organization. Internal development refers to efforts by the organization to create its own knowledge.

The afore discussed knowledge management strategy typologies focus on; where the organization gets its knowledge from, how the knowledge in the organization is shared through converting tacit knowledge into explicit knowledge, the focus of knowledge activities, the speed and the breadth of learning. They concentrate more on particular dimensions without due regard to challenges that may inhibit their eventual realization. To address the shortcomings, Donate and Canales (2012) knowledge strategy typologies (inconsistent, passive, moderate and proactive) are based on wider dimensions. The dimensions consist of the breadth of the concept of knowledge management and consistency between knowledge management tools and support mechanisms.

Donate and Canales (2012) states that knowledge management concept measures the significance attached to knowledge management in contributing to organizational goals. Knowledge management involves; exploration, retention, exploitation, sharing and safeguarding of knowledge in pursuit of organizational objectives. Knowledge strategy objectives measures the importance attached to knowledge management strategy in addressing organization's performance gaps. The gaps include those of; quality, costs, customer satisfaction, efficiency amongst others. The knowledge management concept and knowledge strategy objectives inform the breadth of the concept of knowledge management.

Donate and Canales (2012) further explain that the knowledge management tools dimension include; storage, distribution and protection. Databases, handbooks and data warehousing are some of the mediums that can be used for knowledge storage. Knowledge distribution application involves; the setting up of accessible data bases, the holding of meetings and seminars to share knowledge, the development of learning modules to facilitate the dispersion of new knowledge amongst others.

Knowledge protection refers to deliberate efforts by an organization to protect its knowledge from external and internal parties. The use of; patents, exclusive distribution channels, secrecy, complex innovations, superior brands amongst others are meant to ensure competitors do not make any head way.

Donate and Canales (2012) aver that the implementation support mechanisms include; leadership, culture and human resources practices. Leadership through communication of a clear vision shapes the language of an organization and collective efforts towards that vision. Leadership that allows for errors to be made encourages experimentation of new ideas which breeds new knowledge. Culture shapes the beliefs and values that an organization holds. A culture that is supportive can assist in making an effective knowledge management strategy. Human resources practices such as; incentives, promotion of team work, job rotation, training and empowerment can be used in knowledge management. Proactive strategy attaches high importance to implementation support mechanisms.

2.3.1 Knowledge Management Strategy and Organization Change

The knowledge management strategy an organization adopts depends on the sensitivities of the environment (Greiner, Bohmann, and Krcmar, 2007). Organizations will adopt knowledge management strategies that reflect; competition intensity, product lifecycles, rate of changes in production processes amongst others (Picot, 1998). The exploration, storage, sharing and exploitation of knowledge in an organization is a delicate affair that is fraught with risks and therefore may be an expensive affair if not well managed (Soliman and Spooner, 2000). This means therefore that the process of knowledge management must be guided by a strategy to mitigate against such risks. This is of more importance given the turbulent environment we are in.

Malhotra (2000) emphasizes this fact when he observed that the contemporary environment has placed enormous demands on business organizations operating within it. This has forced them to pursue revolutionary changes which require a rethinking on how knowledge management is practiced.

A failure to rethink how the organization can keep up with the rapid changes in today's environment might turn past core competencies into sources of inflexibility in the present. A knowledge management strategy provides a systematic and deliberate application of knowledge in possession of an organization which allows it to create order out of disorder that all sorts of organization change may bring.

Through creation of new knowledge an organization shapes its future and through knowledge sharing the organization solidifies its present by incorporating experiences into its corporate memory. The shape the organization takes in terms of its design and the way it operates must reflect the organization's knowledge (Malhotra, 2000). This means that knowledge management strategies adopted can reflect the sort of changes an organization adopts. A considered argument can thus be advanced that passive knowledge management strategy can only be associated at most with evolutionary changes. The proactive strategy on the extreme can be associated with revolutionary changes.

2.4 Empirical Studies

A review of previous studies done shows that the relationship of knowledge management strategy to just a single aspect of organizational change like innovation have been documented. Studies done locally have mainly confined themselves to other issues affecting businesses and not knowledge management strategy and organizational change. Greiner, Bohmann and Krcmar (2007) sought to establish the importance of linking knowledge management strategies to business strategies. They did this by carrying out a study on eleven Germany speaking companies situated in Germany and Switzerland in 1999. In the eleven companies making up the case study research design, one to two people were interviewed and data collected subjected to qualitative data analysis. The findings were; companies pursuing process efficiency as a business strategy registered much success with codification knowledge management strategy. Those that pursued innovation, personalization strategy registered most success. All in all, the finding was that there was need for alignment of knowledge management strategy and business strategy for organizations to perform.

Olouikpe (2012) sought to establish the importance of linking knowledge management strategy to business strategy and thus performance using a case study of the Central Bank of Nigeria. The Central Bank of Nigeria is a public sector organization which provides a unique context. In his study findings, it came out clearly that knowledge management strategies if properly aligned to business strategy can enable the creation and sharing of knowledge that can assist in shaping the competencies and capabilities of an organization. In the study of this linkage in 2010 and 2011, the Central bank of Nigeria experienced both efficiencies and effectiveness as a result of alignment of knowledge management strategy and business strategy which ultimately reflected in its performance.

Donate and Canales (2012) in their study sought to develop novel knowledge management strategy typologies that are more holistic and broad than previously identified. They sought to link these novel typologies to innovation patterns of Spanish firms. This study was done in 2004 but covered a period of between 1994 to 2004. In their findings, they suggested four knowledge strategies that include; proactive, moderate, passive and inconsistent. They saw a linkage of the proactive and moderate strategies to significant better business performance than passive strategy. The proactive strategy provided consistent significant results in performance and in innovation for both processes and products. Relative to the other strategies, the passive strategy performed dismally in product innovation while the moderate strategy could not outperform the other strategies in process innovation. This study finding was as a result of analysis using Statistical Package for Social Sciences (SPSS). 111 respondents returned the questionnaires administered giving a successful response rate of 13.84%

Maseki (2012) while studying Commercial Banks in Kenya sought to examine the linkage of the banks' performance with their knowledge management practices. With a population of 43 commercial banks, a descriptive cross sectional survey was done with samples picked from a stratified random sampling. Data was then gathered from the banks through their human resource departments which were believed to be the custodians of knowledge management. A quantitative data analysis using the Statistical Package for Social Sciences (SPSS) was then employed to come up with descriptive statistics of the findings.

A strong linkage was found between knowledge management and the performance of commercial banks. Knowledge management practices were attributed to innovations of products and process improvements in the banks and ultimately to performance.

Githua (2013) sought to find the extent to which non-profit organizations had entrenched knowledge management practices in their firms. Set in the context of the health sector in Nairobi County, the researcher employed a cross sectional research design with his respondents made up of managerial cadre of the target population of 15 organizations. A factor analysis model was used to analyse the data collected. The findings were that these organizations had favourable climate for knowledge management but lacked focused leadership to fully exploit knowledge management.

Muthee (2014) carried out a study at Safaricom Limited Kenya seeking to find out how the organization employed knowledge management as a strategic tool in its pursuit for competitive advantage. This case study was done in the context of the telecommunication industry. It sought to identify the challenges encountered by Safaricom in the use of knowledge management as a positioning tool in the competitive environment. Qualitative data analysis was employed to draw findings that established a link between knowledge management and competitive advantage enjoyed by Safaricom. The study found that knowledge management can be used to reduce the uncertainties of the environment. Despite this finding, the employment of knowledge management practices faced the challenges of inadequate supportive policies and appropriate framework for its execution.

2.5 Summary of Literature Review

The influence knowledge management strategy on one or two aspects of an organization have been widely documented. The results have been consistent across countries. Knowledge management strategy studies however, have mostly been done abroad.

Greiner, Bohman and Krcmar (2007) found a linkage of the knowledge management strategy practised with innovation and process efficiency. Olouikpe (2012) found that efficiency and effectiveness of an organization and thus performance can be improved by aligning knowledge management strategy and business strategy. Donate and Canales (2012) saw a linkage between the form of knowledge management strategy and innovation. Maseki (2012) found that knowledge management practises contribute towards performance through innovation and process improvements. Muthee (2014) established that knowledge management can be used to obtain competitive advantage. Githua (2013) found that knowledge management benefits had not been fully utilised due to poor leadership.

The studies on knowledge management strategy previously done confined themselves to case studies and in some cases just a sample of the population. This study aimed to extend the findings further by examining the impact of knowledge management strategy on the entire industry. While locally studies have been done on knowledge management, knowledge management strategy studies have mostly been done outside the country. This provides an opportunity to develop theory by examining the impact of a country context. A country context provides a platform for cultural differences that have a huge influence on organizations. Culture is a determinant of knowledge management practices success (Ardichvili et al., 2006, Ford and Chan, 2003; Michailova and Husted, 2003). A positive and supportive culture will yield success for knowledge management practices.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology used in the study. It explains the research design used and its justification. It further highlights on the target population which consist of commercial banks in Kenya. It elaborates on data collection tool used and analysis methods chosen. It further gives a rationalization for the selected data analysis instruments.

3.2 Research Design

This study adopted a descriptive survey research design. The design adopted was also cross sectional in nature. A descriptive research design is one in which the researcher cannot influence the results of the study through the varying of the independent variable in the present as its influence occurred in the past and results have already manifested (Mugenda and Mugenda, 2003). A survey involves collecting opinions and beliefs from respondents in a structured manner of how things are to facilitate comparison across the chosen sample and project the results thereof to the population (Cooper and Schindler, 2014). The research design is also cross sectional as it involves capturing data at a given point in time.

Therefore, the descriptive cross sectional survey research design involved collecting information at a given point in time from the study group in its natural setting without some form of manipulation. The design was selected as it is apt in answering the 'what is' question the researcher sought to determine (Bickman and Rog, 1998). Since an organization may chose an evolutionary change at certain point in time but resort to a revolutionary change at yet another point, questions seeking to obtain historical data were also used.

3.3 Population of the Study

The population of interest consisted of all commercial banks in Kenya. According to the Central Bank of Kenya (2015) there were 42 licensed commercial banks operating in Kenya. However, three commercial banks were under statutory management at the time of conducting the study.

The three banks under statutory management were excluded from the study as they were engaged in turnaround strategies and liquidation procedures making them inappropriate respondents. Therefore a census of only 39 banks that were operational was carried out. The census was done due to the small size of the population and the researcher's aim to increase reliability of findings in a sector where industry practises among the banks maybe different (Cooper and Schindler, 2014).

The census covered; 3 local public owned banks, 22 local private owned banks and 14 foreign owned banks. The Central Bank of Kenya (2015) further classified these banks into three tiers according to a weighted composite index that was pegged on the; net assets of the bank, capital and reserves, customer deposits, number of loans and deposit accounts. The three tiers are; large banks, medium sized banks and small banks. Using this classification; there were 6 large banks, 13 medium sized banks and 20 small banks. When the two modes of classifying the banks were collapsed into one, the following emerged; Out of the 3 local public owned banks, 2 were small banks while 1 was a medium sized bank. Of the 17 local private banks, 8 were classified as small banks, 5 as medium sized banks and 4 as large banks. Of the 10 foreign owned banks, 3 were small banks, 5 medium sized banks and 2 were large banks.

3.4 Data Collection

The study used primary data collected from the heads of strategy and new business of the respondents' commercial banks. Primary data was used since the data the study sought was not documented nor available in the public domain. A modified 7 scale Likert type questionnaire adapted from Donate and Canales (2012) was used for data collection. The 7 scale Likert was used as it reduces partiality of responses from respondents and also offers highest reliability and variance (Stennet, 2002).

The questionnaire sought responses ranging from very low to very high and from totally disagree to totally agree on a scale of one to seven to the questions posed. To identify the type of knowledge management strategies employed by commercial banks in Kenya, the questionnaire was split into three major sections viz; knowledge strategy, knowledge management tools and implementation support systems.

These three sections were further split into seven subsections namely; knowledge management conception, knowledge strategy objectives, storage tools, transfer and application tools, protection methods, implementation support system based on cultural principles and leadership and implementation support systems based on human resources practises. To establish the types of organizational changes that commercial banks have undergone, the questionnaire was designed to elicit responses in the three forms of organizational change viz; radical change, incremental change and a mix of incremental and radical change. Further, the section covering radical change was subdivided into three subsections namely; reengineering, innovation and restructuring.

The heads in the department of strategy and new business were chosen as respondents. These respondents are in the top level of management. Easterby-Smith (1997) alludes to the eagerness of top management to take credit for an organization success hence their choice. A drop and pick later method of administering the questionnaires was adopted.

3.5 Data Analysis

Likert type data is ordinal in nature (Jamieson, 2004). The mean and standard deviation are thus unusable in ordinal data (Sullivan and Artino Jr, 2013). The study hence used the median and mode as measures of central tendency as recommended by Boone Jr and Boone (2012). The study also adopted frequencies and percentages to report on findings on the ordinal data as recommended by Sullivan and Artino Jr (2013). To measure dispersion, the inter quartile range (IQR) was used as the range is affected by extreme values. For measures of association, the study used an ordinal regression model which yields the; Cox and Snell, Nagelkerke and McFadden coefficients.

To identify the type of knowledge management strategies employed by commercial banks in Kenya, the mode score for each of the seven subsections making up knowledge management strategy was computed and overall mode score for each respondent commercial bank in the seven subsections determined.

This overall mode score was then compared to Donate and Canales (2012) suggested model overall mode scores for the different knowledge management strategies viz; moderate strategy 5.00, inconsistent strategy 4.00, passive strategy 1.00 and proactive strategy 6.00. This comparison allowed for the identification of knowledge management strategies as employed by commercial banks. The median for each of the three sections (knowledge strategy, knowledge management tools and implementation support systems) was then used to establish the surveyed banks; scope of knowledge management concept and its alignment to knowledge management tools used and the implementation support systems utilised. The interquartile range was used to measure variation in the respondents' banks' opinion. Where there was divergence of views (inter quartile range that is equal to or greater than 2.00), percentages of how the responses were spread was presented.

To establish the types of organizational changes that commercial banks have undergone, percentages were computed to identify the most prevalent organizational change. The median score for reengineering, innovation and restructuring was then used to infer what on average the respondents practised. The inter quartile range was used to measure variance in opinion as regards common radical change practises. Where a large inter quartile range was recorded (range equal to or greater than 2.00), percentages of how the responses were spread for the affected practise were presented.

To determine the relationship between knowledge management strategy and organizational changes, ordinal regression was done. Knowledge management strategy was the designated independent variable while the forms of organizational change was the dependent variable. Cox and Snell, Nagelkerke and McFadden coefficients were then used to measure the association of the following variables; knowledge management strategy and reengineering, knowledge management strategy and innovation and knowledge management strategy and restructuring. To interpret the coefficients, the study used the guide as suggested by Kraska – Miller (2008). A score of 0.2 was considered as a weak relationship, 0.6 moderate association and 0.8 strong association.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter will outline the findings obtained from the analysis of data collected during the descriptive cross sectional survey of the Commercial Banks. The study targeted 39 operational Commercial Banks out of which 30 of them responded to the researcher's questionnaire. This corresponds to a response rate of 76.92%. This is in tune with an excellent response rate as averred by Mugenda and Mugenda (2003) who holds that 50% response rate meets the adequate threshold for analysis and reporting with 60% adjudged as good while a response rate equal to or above 70% is excellent.

4.2 Knowledge Management Strategy

The way an organization perceives knowledge management has a wide implication on its importance as far as its role in pursuing the firm's objectives is concerned. This study sought to identify the knowledge management strategy used by commercial banks in Kenya. To actualise the objective, questions seeking to bring out the type of knowledge management strategy in practise were split into three sections. The three segments make up the elements of a knowledge management strategy. These are; knowledge strategy, knowledge management tools and implementation support systems. The responses to the questions posed in the three sections were all considered in inferring the type of knowledge management strategy employed by commercial banks.

4.2.1 Knowledge Strategy

The study sought to estimate the scope of the concept of knowledge management. This is alluded to as the breadth of the concept of knowledge management by Donate and Canales (2012). This section was subdivided into two subsections; knowledge management conception and knowledge strategy objectives. The subsection on knowledge management conception aimed to bring out how the commercial banks perceive knowledge management to be.

While the subsection on knowledge strategy objectives sought to rate the importance of knowledge strategy objectives in achieving the commercial banks' goals such as cost reduction.

On knowledge management conception, four statements were put forth to the respondents to rate on a scale of 1 to 7 whether they totally disagree (scale 1) or strongly agree (scale 7). The findings on knowledge management conception were as tabulated in Table 4.1 below.

Table 4. 1: Knowledge Management Conception

		Concept integrated within the company's culture	Concept related to IT use	Methods and tools for creation, transfer and application of knowledge	Tool for evaluating and quantifying intellectual capital
N	Valid	30	30	30	30
	Missing	0	0	0	0
Median		6.00	6.00	6.00	5.00
Mode		6	5	6	5
Range		3	3	4	6
Percentiles	25	5.00	5.00	5.00	5.00
	50	6.00	6.00	6.00	5.00
	75	6.25	7.00	7.00	6.00

Source: Research Data, 2016

On average the respondents agreed at a median of 6.00 and interquartile range of 1.25 that knowledge management as a concept was embedded within the banks' culture. This assisted in the sharing of experiences and knowledge within the workforce. The small interquartile range signify strong concurrence of this opinion. However, when asked whether knowledge management as a concept was related to the use of information technologies and that it consisted of a multiple of methods and applications intended for the coming up, sharing and utilization of knowledge to achieve an organization goals and objectives; on average the respondents agreed at a median of 6.00. However opinion was divided amongst the respondents for the two items at interquartile range of 2.00. The range of responses for selected knowledge management conception items were as tabulated in Table 4.2.

Table 4. 2: Range of Responses for Selected Knowledge Management Conception Items

	Totally disagree = 1	Disagree = 2	Disagree somewhat = 3	Undecided = 4	Agree somewhat = 5	Agree = 6	Totally agree = 7
Concept related to the information technologies use	0%	0%	0%	3.3%	40%	30%	26.7%
Methods and tools used for the creation, transfer and application of knowledge.	0%	0%	3.3%	0%	26.7%	40%	30%

Source: Research Data, 2016

On knowledge management as a concept related to the application of information technology, the responses were varied as follows; 40% of the respondents agreed somewhat, 30% agreed and 26.7% totally agreed. On whether knowledge management as concept meant the utilisation of a variety of instruments and mechanisms for knowledge creation, distribution and use in pursuit of a firm’s goals; 40% of the respondents agreed, 30% totally agreed and 26.7% agreed somewhat. Respondents concurred on whether the banks perceive knowledge management as an instrument of assessing and measuring the firm’s intellectual capital at an inter quartile range of 1.00 and a median of 6.00 (rating = agree).

On knowledge strategy objectives, respondents were asked to rate the importance of the following objectives to the bank and the instrumental role knowledge strategy plays in their achievement. The objectives were; product/ service improvement, cost reduction (efficiency), innovation capacity improvement and customer service improvement. The findings were as tabulated in Table 4.3.

Table 4. 3: Knowledge Strategy Objectives

		Product/ service quality improvement	Cost reduction (efficiency)	Innovation capacity improvement	Customer service improvement
N	Valid	30	30	30	30
	Missing	0	0	0	0
Median		6.00	6.00	6.00	7.00
Mode		6	7	6	7
Range		2	5	4	3
Percentiles	25	5.75	5.00	5.00	5.00
	50	6.00	6.00	6.00	7.00
	75	7.00	7.00	7.00	7.00

Source: Research Data, 2016

On average respondents rated the importance of knowledge strategy objectives in achieving product/service quality enhancement, cost cutting and innovation capacity improvement objectives at high (median = 6.00). Opinion was less polarised for the objective on product/service quality upgrading at an interquartile range of 1.25. The other two objectives had a slight differing opinion at interquartile range of 2.00 for each of them. This shows a lack of consensus. The range of responses for selected knowledge strategy objectives were as tabulated in Table 4.4 below

Table 4. 4: Range of Responses for Selected Knowledge Strategy Objectives

	Very low = 1	Low = 2	Moderately low = 3	Undecided = 4	Moderately high = 5	High = 6	Very high = 7
Cost reduction (efficiency).	0%	3.3%	3.3%	10%	23.3%	26.7%	33.3%
Innovation capacity improvement.	0%	0%	6.7%	6.7%	20%	40%	26.7%
Customer service improvement.	0%	0%	0%	3.3%	23.3%	16.7%	56.7%

Source: Research Data, 2016

For the objective of cost reduction, the divergence of opinion manifested in the following form; 33.3% of the respondents rated it at very high, 26.7% at high while 23.3% rated it at moderately high. On innovation capacity improvement, the respondents gave the following different ratings; 26.7% very high, 40% high and 20% moderately high. The importance of knowledge strategy objective in achieving customer service improvement was rated on average at very high (median of 7.00). The opinion though differed amongst the respondents at an interquartile range of 2.00. While 56.7% respondents rated it at very high, 23.3% of the respondents rated it at moderately high.

The overall findings for the knowledge strategy section show that commercial banks have a wide understanding of the concept of knowledge management. This broad understanding is reflected in the importance attached to knowledge strategy objectives in accomplishing organization goals such as increasing efficiency. The short coming to this wide breadth of understanding given to the concept of knowledge management is on its use as a tool for assessing and measuring the firm's intellectual capital which was rated at moderately high. The inter quartile range of 2.00 recorded in some items in the section point to the different practices of knowledge strategy that banks employ to achieve their goals.

4.2.2 Knowledge Management Tools

Knowledge management tools are critical for any organization for it to store, distribute, utilise and protect its knowledge. Creation of repositories without efforts to utilise such knowledge bases or grow it through knowledge creation is a fruitless venture. The failure to protect one's repositories serves to erode any competitive advantage gained from one's knowledge bases. The study thus sought to establish the range of; tools that the commercial banks employ to store knowledge, knowledge sharing and utilisation mechanisms and protection methods. Accordingly, this section was split into three subsections. These subsections are; storage, transfer and application and protection methods.

On knowledge storage, seven storage tools were proffered to the respondents to rate on a scale of 1 to 7. The lowest rating was whether they totally disagree (scale 1) while the highest rating was totally agree (scale 7). The findings on utilisation of knowledge storage tools were as tabulated in Table 4.5.

Table 4. 5: Knowledge Storage Tools

	Median	Mode	Range	Percentile		
				25	50	75
Organizational procedures are documented.	7	7	2	6	7	7
Databases allow knowledge transfer in future.	6	7	6	5	6	7
There are phone or e-mail directories (referring to departments) to find an expert in specific area.	7	7	5	5.75	7	7
Accessibility of knowledge repositories through use of information technology	6	6 ^a	4	5	6	7
Existence of up to date customer databases.	6	7	2	6	6	7
Database are frequently updated.	6	7	5	5	6	7
Existence of procedural handbooks about problems and solutions.	6	7	6	5	6	7

a. Multiple modes exist. The smallest value is shown

Source: Research Data, 2016

On average, respondents strongly agreed (median = 7.00) that their procedures are documented and can be found in handbooks amongst other forms of documentation. The level of concurrence was high at an inter quartile range of 1.00. Same strong agreement at a median of 7.00 was given to the question of whether the banks had phone or email directories that can be used to source for experts in particular specialities. There was a very slight differing opinion though as the interquartile range stood at 1.25. Generally, however, there was concurrence on the issue. On average the respondents agreed at a median of 6.00 that; there existed databases that allowed for future use of collected knowledge and experience, databases are often updated and that there existed procedural handbooks. However, the three storage tools had an inter quartile range of 2.00. This divergence in opinion was as reflected in Table 4.6.

Table 4. 6: Range of Responses for Selected Knowledge Storage Tools

	Total disagree = 1	Disagree = 2	Disagree somewhat = 3	Undecided = 4	Agree somewhat = 5	Agree = 6	Totally agree = 7
Data bases allow knowledge transfer in future.	3.3%	0%	3.3%	3.3%	20%	30%	40%
Data bases are frequently updated.	0%	3.3%	0%	0%	23.3%	26.7%	46.7%
Existence of procedural handbooks about problems and solutions.	3.3%	0%	6.7%	10%	23.3%	16.7%	40%

Source: Research Data, 2016

On whether there were existing databases that allow for future utilisation of its repositories; 40% of the respondents totally agreed, 30% agreed while 20% agreed somewhat. On whether the databases were frequently updated; 46.7% of the respondents totally agreed, 26.7% agreed while 23.3% agreed somewhat. On whether there were procedural handbooks with problems and solutions; 40% of the respondents totally agreed, 16.7% agreed while 23.3% agreed somewhat. There was consensus and agreement (median = 6.00 inter quartile range = 1.00) that the banks maintained customer databases that had up to date information about them.

On knowledge transfer and application, 9 statements alluding to different modes of knowledge transfer and application were presented to the respondents to rate on a scale of 1 to 7 (from totally disagree = 1 to totally agree = 7). The findings on knowledge transfer and application were as tabulated in Table 4.7.

Table 4. 7: Knowledge Transfer and Application Tools

	Median	Mode	Range	Percentile		
				25	50	75
Periodical reports on organizational achievements are made and distributed to all.	6	6	5	5	6	7
Periodical meetings are held on firm's advances.	6	6 ^a	5	5	6	7
There are formal mechanisms to allow knowledge sharing.	6	6 ^a	6	5	6	7
Project teams are interdisciplinary.	6	6	4	5	6	6
Employees compile suggestions and distribute structured reports of these within the bank.	5.50	7	6	4	5.5	7
There are groups of learning.	5	5	6	4	5	6
Organizational databases and repositories are accessible.	5	6 ^a	6	4	5	6.25
Customer suggestions are incorporated.	6	5	3	5	6	7
New knowledge is structured in modules.	6	6	5	5	6	6

a. Multiple modes exist. The smallest value is shown

Source: Research Data, 2016

On whether there existed interdisciplinary teams in projects being pursued by the banks so as to allow the sharing of knowledge and whether new knowledge is structured into modules to create new/different applications. On average respondents agreed (median = 6.00). The two issues also attracted a strong concurrence amongst respondents with the inter quartile range standing at 1.00. At a median of 6.00 and inter quartile range of 2.00, on average respondents agreed that; periodical reports on organization's accomplishments are prepared and given to all employees, regular meetings are carried out to inform employees of new occurrences and achievements and that clients' recommendations are often integrated into products and services. The inter quartile range of 2.00 shows divergence of opinion on the three items. Table 4.8 shows the range of responses for selected knowledge transfer and application tools that respondents held divergent views.

Table 4. 8: Range of Responses for Selected Knowledge Transfer and Application Tools

	Totally disagree = 1	Disagree = 2	Disagree somewhat = 3	Undecided = 4	Agree somewhat = 5	Agree = 6	Totally agree = 7
Periodical reports on organizational achievements are made and distributed to all.	0%	6.7%	6.7%	6.7%	20%	33.3%	26.7%
Periodical meetings are held on firm's advances.	0%	6.7%	10%	3.3%	20%	30%	30%
Employees compile suggestions and distribute structured reports of these within the bank.	3.3%	3.3%	10%	13.3%	20%	20%	30%
There are groups of learning.	3.3%	0%	10%	30%	0%	23.3%	13.3%
Organizational databases and repositories are accessible.	3.3%	13.3%	3.3%	13.3%	20%	23.3%	23.3%
Customer suggestions are incorporated.	0%	0%	0%	3.3%	36.7%	30%	30%

Source: Research Data, 2016

The difference in opinion was manifested as follows. On whether periodical reports are made; 26.7% of the respondents totally agreed, 33.3% agreed and 20% agreed somewhat.

On holding periodic meetings to inform employees about the firm's progress; 30% totally agreed, 30% agreed while 20% of the respondents agreed somewhat. On whether the consumers recommendations are incorporated into products and services; 30 % of the respondents totally agreed, 30% agreed while 36.7% agreed somewhat. As to whether the banks had employees that gather suggestions sourced from fellow employees, clientele and suppliers and that the same is shared within the firm in form of structured reports, opinions were divergent with an inter quartile range of 3.00. On average the respondents were split between agree somewhat (median = 5.00) and agree (median = 6.00). The median score for this question stood at 5.50. The diverse range of responses were reflected as follows; 30% of the respondents totally agreed, 20% agreed, 20% agreed somewhat, 13.3% were undecided while 10% disagreed somewhat.

On the assertion that there were groups of learning within the banks to facilitate the sharing of knowledge and experiences, on average respondents agreed somewhat (median = 5.00). Opinion however differed amongst respondents with the interquartile range standing at 2.00. 23.3% of the respondents agreed that there were groups of learning, 30% agreed somewhat while 20% were undecided. On average respondents also agreed somewhat (median = 5.00) to the belief that all employees could access organizational databases and repositories. There were some divergent views however as the interquartile range stood at 2.25. The responses were spread as follows; 23.3% of the respondents totally agreed, 23.3% agreed, 20% agreed somewhat, 13.3% were undecided while 13.3% disagreed.

On knowledge protection methods, 6 tools were suggested to the respondents. The respondents were asked to rate the utilisation of the suggested protection instruments on a scale of 1 to 7 whether their use was very low (rating = 1.00) or very high (rating = 7.00). Table 4.9 summarises the findings on the use of knowledge protection methods by commercial banks.

Table 4. 9: Knowledge Protection Methods

	Median	Mode	Range	Percentile		
				25	50	75
Patents	7	7	5	6	7	7
Secrecy	7	7	5	6	7	7
Knowledge characteristics (innovation complexity)	6	6	3	6	6	7
Complementary assets (marketing skills, financial resources access, distribution channels, etc.).	6	6	3	5	6	7
To be the first into the market (pioneer).	6	6	5	4.75	6	6.25
Brands and/or the bank's reputation.	7	7	3	6	7	7

Source: Research Data, 2016

On average respondents rated very high (median = 7.00) the use of; patents, secrecy and brands as protection methods. There was concurrence as each of the three items attracted an inter quartile range of 1.00. The use of knowledge characteristics (innovation complexity) as a protection method was rated at high (median = 6.00) on average by respondents. There was also concurrence on this method as the interquartile range stood at 1.00. On average respondents rated the first mover advantage as a protection method at a median of 6.00 (rating = high). There was a slight divergent of opinion however as the inter quartile range stood at 1.50. As regards the use of complementary assets, Table 4.10 summarises the range of responses as regards its use as a knowledge protection method.

Table 4. 10: Range of Responses for use of Complementary Assets as a Knowledge Protection Method

	Very low = 1	Low = 2	Moderately low = 3	Undecided = 4	Moderately high = 5	High = 6	Very high = 7
Complementary assets	0%	3.3%	3.3%	10%	23.3%	26.7%	33.3%

Source: Research Data, 2016

On the use of complementary assets such as marketing skills, distribution channels amongst others as a protection method, on average the respondents rated it at high (median = 6.00). Opinions were however divergent as the interquartile range stood at 2.00. Responses were spread as follows; 26.7% rated it at very high, 46.7% at high while 23.3% rated it at moderately high.

From the findings it can be deduced that commercial banks applied fairly robust knowledge management tools. Their use of knowledge protection tools was very good. Knowledge storage tools were also used very well. There were however some weaknesses in some banks as regards to the use of tools used in the transfer and application of knowledge. The use of employees to gather recommendations from various stakeholders the banks dealt with and their subsequent distribution to all within the firm was rated at a median of 5.5 with an inter quartile range 3. This shows that banks were yet to fully appreciate the value of learning from mistakes and/or from learning from others. Stakeholders can be good sources of market intelligence and thus may boost a firm's competitiveness. The use of groups of learning is yet another tool that was rated at a median of 5 with an inter quartile range of 2. This rating show the hiccups the banks were facing in transforming to learning organizations. In line with banks' famed secrecy and confidentiality virtue, access to organizational data bases was rated at a median of 5.00 and an inter quartile range of 2.25. The lack of unfettered access to the organizational data bases robs employees a foundation to use in their quest to create new knowledge that may benefit the banks. Generally, however it can be concluded that the use of knowledge management tools by banks was robust and comprehensive except for the few weaknesses noted.

4.2.3 Implementation Support Systems

This section made the final part of the segments making up knowledge management strategy elements. A comprehensive, consistent and integrative knowledge management strategy must address its key three elements viz; knowledge strategy, knowledge management tools and implementation support systems. The implementation support systems provide an enabling environment that allows for sustained full exploitation of the benefits of knowledge management strategy.

This section on implementation systems was split into two. The subsections were; implementation support systems based on cultural principles and leadership and those based on human resource practises.

On implementation support systems based on cultural principles and leadership, 11 practises were suggested to the respondents to rate on a scale of 1 to 7 whether they totally disagree (scale= 1) to whether they totally agree (scale = 7). The findings on implementation support systems based on cultural principles and leadership are as summarised in Table 4.11 below.

Table 4. 11: Support Based on Cultural Principles and Leadership

	Median	Mode	Range	Percentile		
				25	50	75
There is a common language to support knowledge exchange and sharing.	6	6	3	5	6	6.25
Employees experiment and implement new ideas.	5	5	5	5	5	6
Mistakes are tolerated.	5.50	6	5	5	5.50	6
Bank's culture is based on confidence and openness.	6	7	6	5	6	7
Employees share knowledge at an informal level.	6	6	6	5	6	6
Employees have responsible behaviour and a high learning disposition.	6	7	3	5	6	7
Perception of same purpose and fidelity to it.	6	7	4	5	6	7
Leadership generates qualities towards responsible behaviour.	6	7	5	5	6	7
Directors are knowledge managers and mediators.	6	6	4	6	6	7
Managers act as assessors.	6	6	5	5	6	6
Managers promote the acquisition of external knowledge.	6	6	6	5	6	6.25

Source: Research Data, 2016

At a median of 6.00 (agree) and inter quartile range of 1.25, on average respondents agreed that there existed a common medium to aid the sharing of knowledge across employees and departments and that managers support the acquirement of knowledge from outside their respective banks. The two issues had a concurrence. On whether employees test novel ideas in the course of their work, most respondents agreed somewhat with the assertion (median = 5.00).

This opinion had a wide concurrence as exhibited by the narrow inter quartile range of 1.00. On whether errors are endured within certain bounds as they are a consequence of learning, on average respondents were split between agree somewhat (median = 5.00) and agree (median = 6.00). There was a concurrence of opinion on this issue as the inter quartile range stood at 1.00. Same rating of median 6.00 (agree) was given to the following practises that; their respective organizations encouraged employees to share knowledge at an informal level, Directors played a crucial role as knowledge managers as they facilitated knowledge exchange and acted as moderators in ensuring the achievement of the firm’s goals, managers played the role of assessors with controls being used as an evaluator of objectives, Bank customs, values and norms were based on confidence and frankness, employees had responsible behaviour and that they were highly amiable to learning, leadership of the banks encouraged responsible behaviour among employees and groups and that employees identified same purpose and were compelled through own will to pursue it. There was a consensus in the seven issues as the inter quartile range in each of the items stood at 1.00.

On knowledge management implementation support systems based on human resources practises. Four practises were suggested to the respondents to rate on a scale of 1 to 7 whether they totally disagree (scale = 1.00) to whether they totally agree (scale = 7.00). The findings of knowledge management implementation support system based on human resources practises are summarised in Table 4.12 below.

Table 4. 12: Support Based on Human Resources Practises

	Median	Mode	Range	Percentile		
				25	50	75
Employees are rewarded for sharing and applying knowledge.	5	6	5	4	5	6
There are financial/non-financial incentive systems to reward teams.	5.5	6	5	4	5.50	6
Internal rotation.	6	6	5	4	6	6
Methods to assess and control knowledge management processes.	6	6	5	5	6	6

Source: Research Data, 2016

On average respondents agreed somewhat (median = 5.00) with the assertion that managers rewarded employees who share and apply knowledge. This issue attracted divergent views amongst respondents as the interquartile range was recorded at 2.00. The divergence of opinion in the use of human resource based implementation support system was as tabulated in Table 4.13 below

Table 4. 13: Range of Responses for Selected Human Resources Practices Support Based Implementation Systems

	Totally disagree = 1	Disagree = 2	Disagree somewhat = 3	Undecided = 4	Agree somewhat = 5	Agree = 6	Totally agree = 7
Employees are rewarded for sharing and applying knowledge.	0%	10%	6.7%	13.3%	26.7%	36.7%	6.7%
There are financial/non-financial incentive systems to reward teams.	0%	3.3%	10%	16.7%	20%	30%	20%
Internal rotation.	0%	6.7%	13.3%	10%	6.7%	43.3%	20%

Source: Research Data, 2016

On whether there are incentives for workers who distribute and apply knowledge; 36.7% of the respondents agreed that indeed employees get rewarded, 26.7% agreed somewhat, 13.3% were undecided while 10% disagreed. On whether financial and non-financial enticements were in place to reward teams as opposed to individuals, respondents were split between agree somewhat (median = 5.000) and agree (median = 6.00). Opinions were also divergent on this item as the inter quartile range stood at 2.00. 20% of the respondents totally agreed that financial and non-financial incentives were in place, 30% agreed, 20% agreed somewhat, 16.7% were undecided while 10% disagreed somewhat. On development and use of an internal rotation system to allow employees move across functions and departments, on average respondents agreed (median = 6.00). However, there were divergent views on use of internal rotation amongst banks as the inter quartile range was recorded at 2.00.

20% of the respondents totally agreed that the use of internal rotation was excellent in their respective banks, 43.3% agreed, 10% were undecided while 13.3% disagreed somewhat. On average respondents agreed (median = 6.00) with the view that the banks had a set up means to evaluate and control knowledge management processes. There was concurrence on this issue as the inter quartile range stood at 1.00.

The findings indicate that the respondent banks had good implementation support systems for their knowledge management. On support based on cultural principles and leadership, the findings indicate that mistakes tolerance threshold amongst commercial banks was fairly adequate at a median of 5.5. However, an increase in tolerance might result to more novel ideas as mistakes form the platform of new knowledge. The support based on human resources while good on average amongst banks can be improved. The use of incentives (financial or/and non-financial) to reward individuals and teams for knowledge sharing and application was found to be varied amongst the surveyed banks at an inter quartile range of 2.00. This spread of responses show that some banks were yet to fully embrace the use of rewards to encourage knowledge creation and utilisation. Respondents rated the practise of allowing workers to apply novel ideas at their work places at 5.00. This means that on average respondents agreed somewhat. The lack of a higher average rating point to banks that were still conservative. Conservatism inhibit knowledge creation and maybe a source of inflexibility if not checked.

4.2.4 Knowledge Management Strategies Practised by Commercial Banks

This study aimed at establishing the type of knowledge management strategies employed by commercial banks as suggested by Donate and Canales (2012). These strategies are; moderate strategy, inconsistent strategy, passive strategy and proactive strategy. To discern the knowledge management strategies in practise, mode scores for each individual bank in each of the subsections making up knowledge management strategy was computed and compared against the benchmark provided by Donate and Canales (2012). Table 4.14 below provides the mode scores for each of the subsections making up knowledge management strategy and overall mode score for the strategies as suggested by Donate and Canales (2012).

Table 4. 14: Model Knowledge Management Strategies

	Moderate Strategy	Inconsistent Strategy	Passive Strategy	Proactive Strategy
Knowledge management concept	5	4	2	6
Knowledge strategy objectives	5	4	2	6
Knowledge storage	5	4	4	7
Knowledge transfer and application	5	2	1	6
Knowledge protection methods (external)	4	5	1	6
Knowledge protection methods (internal)	2	4	1	5
Implementation support system based on cultural principles and leadership	5	4	3	7
Implementation support system based on human resources practises.	5	2	1	6
Overall mode	5	4	1	6

Source: Donate and Canales, 2012

After analysing all the questions on knowledge management strategy. An assessment of the types of knowledge management strategies employed was made. This determination was made by picking the modes of the different multiple response sets in the subsections querying on knowledge management strategy for each bank. These modes were then compared to the classification made by Donate and Canales (2012) who assigned the following overall mode scores for each strategy as follows; moderate strategy 5.00, inconsistent strategy 4.00, passive strategy 1.00 and proactive strategy 6.00. Table 4.15 summarizes findings of the forms of knowledge management strategies practised by commercial banks in Kenya.

Table 4. 15: Knowledge Management Strategies

Bank's Classification		Inconsistent Strategy	Passive Strategy	Moderate Strategy	Proactive Strategy	Total
Ownership	Size					
Local Public	Small	0	0	0	2	
	Medium	0	0	1	0	
Sub Total		0	0	1	2	3
Local Private	Small	0	0	2	6	
	Medium	0	0	1	4	
	Large	0	0	1	3	
Sub Total		0	0	4	13	17
Foreign Owned	Small	0	0	2	1	
	Medium	0	0	1	4	
	Large	0	0	0	2	
Sub Total		0	0	3	7	10
Grand Total		0	0	8	22	30

Source: Research Data, 2016

Using the Donate and Canales (2012) mode scores as a benchmark, two knowledge management strategies clearly came out viz; proactive strategy and moderate strategy. Out of the 30 banks that responded to the questionnaires, 22 banks (73.33%) were found to be employing proactive strategy while the remaining 8 banks (26.67%) were found to be employing moderate strategy. No commercial bank was found to have employed inconsistent nor passive strategy at the time of the study.

The study findings clearly indicate that commercial banks in Kenya considered the concept of knowledge management at its broadest sense. This consideration was consistent with the importance the commercial banks gave to knowledge management strategy in achieving firm's goals such as cost reduction amongst others. The findings also indicate that there's consistency between knowledge management concept and knowledge management tools and the implementation support systems as practised by commercial banks in Kenya. This alignment of the three elements making knowledge management strategy resulted to the manifestation of the two strategies found. The moderate and proactive strategies require proper alignment of the three elements that determine knowledge management strategy.

4.3 Organizational Change among Commercial Banks in Kenya

This study sought to establish the types of organizational changes that have occurred amongst commercial banks in Kenya. Organizational change can be in three forms; revolutionary change, evolutionary change and a mix of revolutionary and evolutionary change. Revolutionary change is also referred to as radical change in the study while evolutionary change is referred to as incremental change. Since organizational change takes time to pan out, the questionnaire was designed to solicit historical data from the respondents. The questions on organizational change were split into three major sections. The first section of the questionnaire on organizational change was designed to establish radical change practises amongst the commercial banks. This section was subdivided into three reflecting the elements of radical change viz; reengineering, innovation and restructuring. The second section of the questionnaire on organizational change sought to establish the common form of organizational change. The third and last section of the questionnaire on organizational change sought to establish the frequency of radical changes amongst commercial banks in Kenya.

4.3.1 Radical Change Practises among Commercial Banks in Kenya

Radical change also known as revolutionary change affects the entire organization. Radical change can take three forms; reengineering, innovation and restructuring (George and Jones, 2002). To identify radical change practises, the questionnaire was designed to address practises in each of the three forms (elements) of radical change. Respondents were asked to rate their respective bank's practises in each of the three elements on a scale of 1 to 7 whether the practises were very low (scale = 1) or very high (scale = 7).

Reengineering refers to a reconfiguration of how an enterprise carries out its processes. 8 reengineering practises were suggested to the respondents to rate on a scale of 1 to 7 whether their prevalence in their organizations was very low (scale = 1) or very high (scale = 7). The findings on reengineering practises by commercial banks in Kenya are summarised in Table 4.16.

Table 4. 16: Reengineering Practises among Commercial Banks

	Median	Mode	Range	Percentile		
				25	50	75
Development of new service delivery methods and procedures	6	7	5	5	6	7
Improvements of existing methods and procedures.	6	7	4	5	6	7
Introduction of more new (or improved) methods and procedures.	6	7	6	5	6	7
New formal regulations, policies and procedures.	6	7	6	5	6	7
Development of a new vision	5.50	6	6	4.75	5.50	6
Alteration of strategy	6	6	6	4.75	6	6.25
Development of new organizational culture.	5.50	6	6	4	5.50	6
Adoption of new leadership style	6	6	6	3	6	6

Source: Research Data, 2016

On whether the banks had developed a new vision, on average respondents were split between moderately high (median = 5.00) and high (median = 6.00). There concurrence as the inter quartile range stood at 1.25. On change of strategy through varying long term goals, on average respondents rated it at high (median = 6.00). There was a slight difference in opinion as the inter quartile range stood at 1.50.

The following four items were rated at high (median = 6.00): that the banks had done the following; developed new ways of offering services, improved on the current methods and procedures, presented more novel (or improved) methods and procedures relative to its major rivals and that new formal guidelines and processes such as incentive systems amongst others had been developed. The opinion was however divergent. The inter quartile range of the four items stood at 2.00 showing a difference in opinion amongst the respondents. Table 4.17 gives the range of responses for selected reengineering practises among commercial banks in Kenya.

Table 4. 17: Range of Responses for Selected Reengineering Practises among Commercial Banks

	Very low = 1	Low = 2	Moderately low = 3	Undecided = 4	Moderately high = 5	High = 6	Very high = 7
Development of new service delivery methods and procedures.	0%	3.3%	3.3%	10%	26.7%	20%	36.7%
Improvements of existing methods and procedures.	0%	0%	3.3%	3.3%	30%	30%	33.3%
Introduction of more new (or improved) methods and procedures.	3.3%	0%	10%	6.7%	23.3%	16.7%	40%
New formal regulations, policies and procedures.	3.3%	10%	3.3%	3.3%	23.3%	26.7%	30%
Development of new organizational culture.	3.3%	6.7%	10%	13.3%	16.7%	36.7%	13.3%
Adoption of new leadership style.	10%	6.7%	10%	6.7%	13.3%	33.3%	20%

Source: Research Data, 2016

Regarding the creation of novel ways to proffer services, the rating was spread as follows; 36.7% of the respondents rated it at very high, 20% at high, 26.7% at moderately high while 10% of respondents were undecided. On efforts to upgrade existing methods and procedures, the divergence of opinion was exhibited in the following form; 33.3% of the respondents rated it at very high, 30% at high and 30% rated it at moderately high. Regarding the creation of better methods and procedures relative to rivals the responses were spread thus; 40% of the respondents rated it at very high, 16.7% at high, 23.3% moderately high while 10% of the respondents were undecided.

As for the creation new formalities, policies and procedures; 30% of the respondents rated it at very high, 26.7% at high, 23.3% at moderately high while 10% of the respondents rated it at low. On development of new organizational culture, on average respondents were split between moderately high (median = 5.00) and high (median = 6.00). There were however divergent views as the inter quartile range was recorded at 2.00. The responses to this practise attracted responses across the spectrum of the rating scale. 13.3% of the respondents rated it at very high, 36.7% at high, 16.7% at moderately high, 13.3% were undecided while 10% of the respondents rated it at moderately low. On whether the banks had adopted new leadership style, on average respondents rated it at high (median = 6.00) however the opinion was highly polarised as the inter quartile range stood at 3.00. 20% of the respondents rated it at very high, 33.3% at high, 13.3% at moderately high, 10% at moderately low while 10% were of the opinion that it was very low.

The second element of radical change is innovation. For the purpose of the study innovation was confined to product innovation. Innovation refers to the development of new products/services or the upgrading of existing ones. To gauge the commercial banks' innovation practises, three forms of innovation were availed to the respondents to rate. The rating was on a scale of 1 to 7 from very low (scale = 1) to very high (scale = 7). The findings on innovation are summarised in Table 4.18 below.

Table 4. 18: Innovation Practises among Commercial Banks

		Development of new products	Modification and/ improvement of existing products	Introduction of more new/improved products than major competitors
N	Valid	30	30	30
	Missing	0	0	0
Median		6.00	6.00	6.00
Mode		7	7	6
Range		4	2	4
Percentiles	25	5.00	5.00	5.00
	50	6.00	6.00	6.00
	75	7.00	7.00	7.00

Source: Research Data, 2016

On average the respondents rated all items of innovation at high (median = 6.00). The questions were on whether the banks had; developed novel products, made improvements on current products and whether more novel (or improved) products had been introduced relative to major rivals. The opinion was however divergent. The inter quartile range stood at 2.00. Table 4.19 below summarises the range of responses for innovation practises among commercial banks in Kenya.

Table 4. 19: Range of Responses for Innovation Practises among Commercial Banks

	Very low = 1	Low = 2	Moderately low = 3	Undecided = 4	Moderately high = 5	High = 6	Very high = 7
Development of new products	0%	0%	6.7%	3.3%	26.7%	23.3%	40%
Modification and/or improvement of existing products	0%	0%	0%	0%	33.3%	30%	36.7%
Introduction of more new/improved products than major competitors	0%	0%	3.3%	13.3%	23.3%	33.3%	26.7%

Source: Research Data, 2016

On the creation of new products; 40% of the respondents rated it at very high, 23.3% at high while 26.7% of the respondents were of the belief that it is moderately high. As regards the upgrading of existing products, the variety of responses took the following form; 36.7% rated it at very high, 30% at high while 33.3% rated it at moderately high. About the introduction/upgrading of products that are better relative to major rivals; 26.75% of the respondents rated it at very high, 33.3% at high, 23.3% at moderately high while 13.3% of the respondents were undecided.

The third element of radical change is restructuring. Table 4.20 below summarizes the findings on restructuring practises while Table 4.21 gives the range of responses.

Table 4. 20: Restructuring Practises among Commercial Banks

	Median	Mode	Range	Percentile		
				25	50	75
Downsizing employees	3	1	6	1	3	5
Simplifying organization structure through; elimination of hierarchies, vertical disintegration or horizontal differentiation.	5	3	6	3	5	6
Top management restructuring	4	3	6	3	4	6
Operational restructuring through assets reduction	4	3	6	3	4	5
Widening the breadth of the bank business through penetration of new geographical and/or demographic markets.	5	7	6	3	5	7

Source: Research Data, 2016

Table 4. 21: Range of Responses on Restructuring Practises

	Very low = 1	Low = 2	Moderately low = 3	Undecided = 4	Moderately high = 5	High = 6	Very high = 7
Downsizing employees	33.3%	10%	26.7%	3.3%	10%	6.7%	10%
Simplifying organization structure	6.7%	3.3%	33.3%	3.3%	20%	16.7%	16.7%
Top management restructuring	13.3%	0%	13.3%	16.7%	10%	16.7%	10%
Operational restructuring	16.7%	0%	30%	10%	23.3%	16.7%	3.3%
Widening the breadth of the bank business.	6.7%	3.3%	16.7%	3.3%	23.3%	10%	36.7%

Source: Research Data, 2016

On average respondents rated the question on downsizing employees at moderately low (median = 3.00). The opinion was highly polarised though with the inter quartile range being recorded at 4.00. The responses were spread as follows; 33.3% rated of the respondents rated downsizing at very low, 10% at low, 26.7% at moderately low, 10% at moderately high and 10% of the respondents rated it at very high. On whether the banks had sought to collapse levels of authority in a bid to making the organizational structure much more simpler, on average the respondents rated it at moderately high (median = 5.00). The rating was also highly polarised amongst respondents as the inter quartile range stood at 3.00. The divergence of opinion was manifested thus; 33.3% of the respondents rated it at moderately low, 20% at moderately high, 16.7% at high while 16.7% rated it at very high.

On whether the banks effected changes in top management through restructuring, on average the respondents were undecided (median = 4.00). There was no agreement on the rating amongst the respondents however. The inter quartile range stood at 3.00. This shows a sharp difference in opinion amongst the respondents. The responses were spread as follows; 13.3% of the respondents rated it at very low, 33.3% at moderately low, 16.7% were undecided, 10% rated it at moderately high, 16.7% at high while 10% of the respondents were of the belief that it was very high. On whether the banks had carried out operational restructuring through asset reduction, on average the respondents were also undecided (median = 4.00). While there was no consensus on the issue amongst the respondents, the opinion was relatively less divisive compared to the earlier questions on restructuring. The inter quartile range stood at 2.00. 16.7% of the respondents categorised operational restructuring as very low, 30% as moderately low, 10% were undecided, 23.3% of the respondents rated it at moderately high while 16.7% of other respondents believed it was high. On whether the banks had sought to spread their geographical and demographic reach in a bid to expand their markets, most respondents rated it at moderately high (median = 5.00). This rating was not unanimous however as the inter quartile range showed a sharp contrast of opinion at 4.00. 16.7% the respondents rated it at moderately low, 23.3% at moderately high, 10% at high while 36.7% of the respondents opined that it was very high.

From the findings, it can be deduced that on average reengineering and innovation practises amongst commercial banks in Kenya can be rated at high (median = 6.00). This conclusion is informed by the fact that most items under this category attracted a median of 6.00. However, the item that attracted the highest inter quartile range amongst these two categories was leadership style with a range of 3.00. This points to the different importance attached to leadership styles in pursuit of organizational objectives by the commercial banks. Restructuring was the least popular form of radical change amongst the commercial banks. The highest rating for restructuring efforts was 5.0. The opinions in the ratings amongst the items making restructuring practises was polarised. The inter quartile range was between 2.00 and 4.00 for all items under restructuring. Respondents were on average undecided on whether the commercial banks pursued operational restructuring and top management restructuring. Downsizing of employees was rated at moderately low (median = 3.00).

4.3.2 Organizational Changes among Commercial Banks in Kenya

The study aimed to establish the types of organizational change that have taken place among commercial banks in Kenya. The types of organizational change for the purpose of the study were categorised into three; radical change, incremental change and a mix of radical and incremental change. To actualise this objective, respondents were asked to best describe the organizational changes that have been experienced by their respective banks. Respondents were then asked to choose the most common form of change among the three forms of organizational change viz; radical, incremental and a mix of radical and incremental change. Table 4.22 below highlights the nature of organizational changes amongst commercial banks in Kenya in the last 15 years.

Table 4. 22: Organizational Changes among Commercial Banks in Kenya

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Radical	3	10.0	10.0	10.0
Incremental	5	16.7	16.7	26.7
A mix	22	73.3	73.3	100.0
Total	30	100.0	100.0	

Source: Research Data, 2016

22 respondents out of the possible 30 intimated that they had undergone a mix of radical (revolutionary) and incremental (evolutionary) changes. This represents 73.3% of the total respondents. 5 respondents reported incremental irregular changes affecting just a few sections of the bank accounting for 16.7% of the respondents. 3 banks reported radical (revolutionary) change accounting for 10% of the total respondents. These findings are sync with common practises amongst firms. Radical change rarely happens in isolation. Organizational change that mixes radical and incremental change offers an organization more balance. It allows for smooth transition from one form of organization to another.

4.3.3 Radical Changes among Commercial Banks in Kenya

Radical change affects the entire organization. To establish the frequency of radical change among commercial banks, the respondents were asked to opt between the following choices; none, less than 3, between 3 to 5 and more than 5. Table 4.23 below describes the frequency of radical changes amongst correspondents' banks in the last 15 years.

Table 4. 23: Radical Changes among Commercial Banks in Kenya

	Frequency	Percent	Valid Percent	Cumulative Percent
None	3	10.0	10.0	10.0
Less Than three	11	36.7	36.7	46.7
Valid Between 3 and 5	13	43.3	43.3	90.0
More than 5	3	10.0	10.0	100.0
Total	30	100.0	100.0	

Source: Research Data, 2016

13 respondents representing 43.3% of the total respondents reported between 3 to 5 radical changes. 11 respondents accounting for 36.7 % of the total respondents reported less than 3 radical changes in their respective banks. 3 respondents representing 10% of the total respondents reported more than 5 radical changes. While 3 respondents representing 10% of total respondents reported nil radical changes.

The findings point to a dynamic sector. The Commercial Banking industry has undergone a number of transformations over the last 15 years. Most banks (13) have undergone 3 to 5 radical changes in a space of 15 years. This finding on the frequency of radical changes may be credited to among other factors the; rapid technological developments, changing regulations governing the commercial banking sector, rise of competition from non-traditional competitors such as the mobile telephony companies with their money transfer services and changing customers' expectations.

4.4 Knowledge Management Strategy and Organizational Change

This study sought to establish the relationship between knowledge management strategy and organizational change amongst Commercial Banks in Kenya. To operationalize this objective, the identified knowledge management strategies (moderate and proactive strategy) were regressed against the most visible forms of organizational change viz; reengineering, innovation and restructuring. Ordinal regression was done and pseudo R square statistics used to interpret the results. The pseudo R square coefficients were used to provide measures of association between the knowledge management strategy employed with the three elements of organizational change (i.e reengineering, innovation and restructuring). Table 4.24 summarises the pseudo R square coefficients for the association between knowledge management strategy and organizational change.

Table 4. 24: Knowledge Management Strategy and Organizational Change

Strategy	Element of Organizational Change	Pseudo R square Coefficient			
		Cox and Snell	Nagelkerke	McFadden	P Value
Proactive	Reengineering	0.946	1.00	1.00	0.000
	Innovation	0.898	1.00	1.00	0.000
	Restructuring	0.782	0.807	0.437	0.004
Moderate	Reengineering	0.950	1.00	1.00	0.001
	Innovation	0.835	1.00	1.00	0.044
	Restructuring	0.912	1.00	1.00	0.007

Source: Research Data, 2016

22 commercial banks employed proactive knowledge management strategy. The proactive strategy explained 94.6% of the variations in reengineering practises among the 22 commercial banks according to Cox and Snell statistic. The P value stood at 0.000 which is less than 0.05. This indicates that the model does not fit the data well. This could be explained by the small sample size of 22 respondents. Proactive strategy also explained 89.8% in the variation of innovation practises amongst the respondents as per the Cox and Snell coefficient. The significance value (P Value) was less than 0.05 standing at 0.000. This again suggest that the model does not fit the data though this can be accounted to the small sample size ($n = 22$). Proactive strategy also explained 78.2% of the variation in reengineering practises as per the Cox and Snell coefficient. The P Value stood at 0.004 showing that the model does not fit the data well. This is due to the small sample size ($n = 22$).

8 commercial banks practised moderate knowledge management strategy. Moderate strategy explained 95% of the variations in reengineering practises of the commercial banks practising the strategy as per the Cox and Snell statistic. The P Value was recorded at 0.001 which is less than 0.05 hence the model does not fit the data primarily due to small sample size ($n = 8$). Moderate strategy explained 83.5% of the variations in innovation practises of commercial banks on the basis of the Cox and Snell statistic. The P Value was recorded at 0.044 which is less than 0.05 hence the model does not fit the data well which can be accounted to the small sample size ($n = 8$). The Cox and Snell statistic further showed that moderate strategy explained 91.2% of the variations in restructuring practises amongst commercial banks. The significance value stood at 0.007 which is less than 0.05 hence the model does not fit the data due to small sample size ($n = 8$).

The findings point to a strong association of knowledge management strategy and the three elements of organizational change viz; reengineering, innovation and restructuring. It can therefore be inferred that a strong relationship exists between knowledge management strategy and organizational change. This finding however may not be conclusive as only 30 respondents were under study hence the lower significance values recorded. Further, restructuring practises were found to be low amongst commercial banks hence the study findings may make more sense when related to the high innovative and reengineering practises of commercial banks.

4.5 Discussion of Findings

This study sought to achieve three objectives. The objectives are to; identify the knowledge management strategy used by commercial banks in Kenya, establish the types of organizational change that have taken place among commercial banks in Kenya and to determine the relationship between knowledge management strategy and organizational changes among commercial banks in Kenya. Two types of knowledge management strategies were found to be practised amongst the commercial banks. These strategies were moderate and proactive knowledge management strategies. As regards the types of organizational changes that have occurred amongst the commercial banks in Kenya, the three forms of organizational change (radical, incremental and a mix of radical and incremental change) clearly manifested. The organizational change that encompasses radical and incremental change was found to be the most prevalent. A strong relationship was also established between knowledge management strategy and organizational change amongst the commercial banks in Kenya.

The above findings are significant. While the P values were recorded at less than 0.05 denoting that the model does not fit the data primarily due to small sample size ($n = 30$), the findings show how an integrative and comprehensive knowledge management strategy impacts on important goals such as organizational change. The strong association between knowledge management strategy and the various aspects of organizational change means that the creation of a knowledge management strategy with an optimal balance of its elements (knowledge strategy, knowledge management tools and implementation support systems) is crucial in enabling a firm obtain dynamic capabilities (Schiuma, 2012). These dynamic capabilities have allowed the banks to change in line with the ever changing operating environment they operate in. The fluid and uncertain environment the commercial banks have been operating in has seen among others; changes in regulations governing the sector, rapid technological developments and the coming up of non-traditional competitors. The dynamic capabilities obtained through the use of optimal knowledge management strategies has enabled the banks keep abreast with the dynamism of their operating environment. Organizational change is just but one measure of coping with changes in the environment.

The strong association between knowledge management strategy and organizational change can thus be interpreted to mean that a good knowledge management strategy confers to an organization dynamic capabilities.

A narrowly defined strategy that does not reflect the organization's customs, norms and value may not yield any utility. A strategy that is not supported by human resource practices and backed by cultural principles and leadership may not translate the organizational knowledge into novel products that are profitable. This is important in building the theory concerning knowledge management strategy constructs. The use of knowledge management strategy which enables the control of the knowledge management process can assist in creating competences that are hard to replicate due to use of protection tools such as patents amongst others (Gold et al., 2001; Felin and Hesterly, 2007). It can be argued that the apt use of knowledge management strategy by Commercial Bank of Africa helped it together with Safaricom (a mobile telephony company) create M Shwari which is a product that has bestowed competencies to the bank that are hard to replicate primarily due to protection tools covering it. M Shwari was developed in November 2012 by Commercial Bank of Africa in collaboration with Safaricom which is essentially a bank account that uses the mobile money transfer platform (Consultative Group to Assist the Poor, n.d.). This was a pioneering product that has enabled Commercial Bank of Africa obtain more than 10 million saving accounts while also enabling it to process over 50,000 loans daily (Consultative Group to Assist the Poor, n.d.). The first mover advantage coupled with other protection mechanisms saw the other players in the commercial banking sector try to cope with this proposition with difficulty. A rival could only manage to come up with a competing product in 2015 dubbed KCB M Pesa account.

This study found that on average commercial banks have undergone 3 to 5 radical changes in the last 15 years. This is fundamental as radical change tend to affect the building blocks of an institution. It affects amongst others the; structures, systems, staff and shared values and norms. A radical change that is not well managed can result to loss of organizational memory. Organizational memory can be defined as a set of tools and instruments that allow the collection, access and utilization of knowledge and experiences that an organization has accumulated over time (Olivera, 2000).

Organizational memory can be eroded especially since people remain the primary source of knowledge and yet they get impacted by radical change through measures such as rightsizing. Scalzo (2006) saw the importance of proper knowledge management process in preserving institutional memory. The strong association between knowledge management strategy and organizational change validates this importance. The findings of this study contribute to theory by showing how knowledge management strategy can enable a successful radical change without the affected organization losing its competence through the erosion of institutional memory.

This study found that commercial banks rated their innovative patterns at high (median = 6.00). As a matter of fact, the modal score for the majority of the innovative measures was rated at 7.00 (very high) by majority of the respondents. Corno et al (1999) alludes to the importance of having mechanisms in place to allow for the leveraging a firm's knowledge bases to ensure its ability to pursue novelty and maintain its competitiveness. This is consistent with the study findings as the strong association between knowledge management strategy and innovative patterns of commercial banks in Kenya point to such a tool as alluded by Corno et al (1999). A comprehensive knowledge management strategy whose knowledge management concept is aligned to its knowledge management tools and implementation support systems is bound to support innovation practises. This is supported by Tsai and Ghoshal (1998) who held the view that when firms have competent knowledge distribution and creation systems they are able to be more inventive. This is consistent with the study findings.

Results of this study indicate that knowledge management strategy has a strong association to organizational change among commercial banks. The findings are consistent with theory as knowledge management strategy has been associated with innovation and reengineering. This successful organization change is a consequence of free exchange of knowledge within the firms' in question (Hamel, 1991). Moderate and proactive knowledge management strategies provide the basis for a free exchange of knowledge.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the findings of the study of the relationship of knowledge management strategy and organizational change. It will outline the implications of the study on theory, policy and practise and offer recommendations therein. Recommended area for further research will also be identified for future studies.

5.2 Summary of the Findings

The study aimed to; establish the type of knowledge management strategies, the nature of organizational changes the banks have under gone and the relationship of knowledge management strategy and organizational change among commercial banks in Kenya. Two major strategies were identified namely proactive strategy and moderate strategy. 22 commercial banks were found to have employed proactive knowledge management strategy. 8 commercial banks were found to have employed moderate knowledge management strategy. Banks were found to be employing fairly robust knowledge management strategies but were facing challenges in knowledge transfer and application and in cultural principles and leadership essential for implementing a knowledge management strategy. However, the commercial banks studied were found to have a wide breadth of the concept of knowledge management. The banks were also found to have consistent knowledge management tools and implementation support systems.

Three forms of organizational change namely; revolutionary, evolutionary and a mix of both revolutionary and evolutionary change was discerned. The most common form of organizational change practised by commercial banks was found to be a mix of incremental and radical change. 22 commercial banks reported the prevalent use of a mix of radical and incremental change in their pursuit for organizational change. This translates to 73.3% of the total respondents.

5 commercial banks (16.7% of the respondents) reported the use of only incremental changes while 3 commercial banks (10% of the respondents) utilised only radical changes. Amongst the radical change elements; reengineering and innovation were the most prevalent. Restructuring practises were found to be low.

A close association between knowledge management strategy and organizational change was also determined. A strong association between knowledge management strategy and following forms of organizational change was ascertained viz; reengineering, innovation and restructuring. P values for the measures of association were less than 0.05 suggesting that the data does not fit the model well. However this could be accounted to the small sample size of 30 respondents.

5.3 Conclusion

In configuring the knowledge strategy, commercial banks were observed to have a wide understanding of the concept of knowledge management. Knowledge management as a collection of techniques and tools used for the coming up with new knowledge, sharing and use of knowledge in pursuit of a firm's goals and objectives drew strong concurrence amongst all elements in knowledge management conception. The understanding of the concept of knowledge was also extended to the use of information technologies whose application is fairly excellent amongst the banks. The study also found that knowledge strategy objectives played a crucial in the banks' operation. Knowledge strategy objectives played a key role in cost reduction, product/service quality improvement, innovation capacity improvement and customer service improvement. This is crucial since the macro objective of any firm is shareholders' wealth maximization. It is also important because the objectives of the knowledge management strategy are consistent with organizational change through innovation.

On knowledge management tools; storage and protection tools were found to be comprehensive amongst commercial banks with robust application. Few issues were however noted in transfer and application of knowledge as part of knowledge management tools.

Most respondents felt that the banks could do more by setting up multi-disciplinary project teams to facilitate knowledge transfer and by creating some groups of learning. This would enable the creation of learning organization which is consistent with knowledge management strategy objective.

On implementation support systems for knowledge management strategy; support based on human resource practises was found to be good. Implementation support systems based on cultural principles and leadership had some few issues. Respondents pointed to lack of opportunities for experimenting and to a lower threshold for mistakes tolerance.

On organizational change; reengineering and innovation practises were found to be the most common. Restructuring was reported to be between moderately low and moderately high. The most common form of organizational change encompassed a mix of radical and incremental changes amongst the respondents' banks.

5.4 Implications on Theory, Policy and Practice

The findings of this study are consistent with theory. Knowledge management practices including knowledge management strategy is a function of the organization's internal characteristics and the external environment in which it operates (Bierly and Daly, 2007; Haggie, 2003; Maier and Remus, 2002). Commercial banks in Kenya operate in a competitive environment marked with rivals from other industries such as the mobile telephony industry. With their resource capabilities coupled with the competition, it's no surprise that they employ proactive and moderate strategies which are consistent with innovation practises in the sector. Indeed knowledge management strategy has conferred the banks with dynamic capabilities which in turn has built up their competitive advantage. This postulation of knowledge based theory is manifested amongst the banks.

The findings suggest that policies need to be put in place to ensure knowledge management strategy is fully comprehensive. A knowledge management strategy that is not consistent with the organizational culture and leadership style is bound to fail.

A culture of openness, sharing and experimenting is crucial for knowledge to proffer any competitive advantage. The leadership must ensure that human resource practises are consistent with their knowledge management strategy and knowledge management practices for any success to be found (Gloet and Berrel, 2003; Soliman and Spooner, 2000).

This study has validated the importance of knowledge management strategy in building up dynamic capabilities of banks in a dynamic environment. Lack of knowledge management strategy can rob a firm of its capability to cope with the ever changing environment that marks the banking industry. Knowledge is a strategic asset which when appropriately leveraged can confer an organization with competitive advantage. The continued unveiling of innovative financial products such the Equitel (a sim technology inspired platform to reach the unbanked who have access to mobile phones) is a mark of a good knowledge management strategy.

5.5 Limitations of the Study

The study's inherent weakness lay its research design. The research design was a descriptive cross sectional design. Any form of strategy (knowledge management strategy included) is fluid cognisant of the changing environment. Research carried out at a static point in time may not bring out the effects of changing knowledge management strategy across time. The results of this research therefore might be different if a longitudinal study is chosen.

The study might also have some weakness inherent in the use of the 7 scale Likert scale questionnaire. Respondents might fail to choose the lowest rating due to negativity attached to it despite its level of accuracy. When given a choice, respondents tend to opt for answers that lie in the middle as they offer a safety net. Personal issues like respondent fatigue might influence a respondent to just tick the questionnaire to complete it without due consideration of the questions at hand.

5.6 Suggestion for Further Research

This study targeted commercial banks in Kenya. The concept of knowledge management strategy and organizational change can also be studied in other industries both in the public and private sector. This will enable researchers to compare and contrast results for this industry with others within the same cultural environment. Further, it will allow for generalization of findings with respect to the association between knowledge management strategy employed and organizational change across different industries.

5.7 Recommendations

The study found that the type of knowledge management strategy the banks had a strong association to reengineering, restructuring and innovation. This is knowledge is of fundamental importance to the banks. It means that the banks might have to consider sharpening the weaknesses in their knowledge management strategies. Two areas that most banks had weaknesses revolved around transfer and application of knowledge and cultural principles and leadership essential for implementing a knowledge management system thus strategy. Over 50% respondents in some elements of the two thematic areas afore mentioned provided a rating of 5 and below in the Likert scale showing their lack of conviction in the banks' endeavour.

On transfer and application of knowledge, banks need to embrace projects that are made up of individuals from different specialities and functions. This will enable the sharing of more knowledge amongst employees. They also need to set up groups of learning amongst employees while aiming to be organizations of learning. While it is acknowledged that bank's culture is based on secrecy, mechanisms need to be put in place for employees to access organizational data bases and repositories within reason. This will facilitate the growth of the employees and thus enable them execute their duties in a more informed manner.

On cultural principles and leadership, employees need to be given more latitude to experiment and put into practise their new found knowledge. The threshold for tolerance of mistakes should be raised so as employees can experiment freely. No new knowledge can be created without making mistakes.

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APPENDICES

Appendix 1: Questionnaire

Kindly answer the questionnaire by ticking the appropriate box.

Section A: General Information

1. Name of the bank..... (Optional).
2. Indicate the ownership of the bank
 - a. Local public owned bank ()
 - b. Local private owned bank ()
 - c. Foreign owned banks ()
3. Categorize the bank using weighted composite index of the Central Bank 2015
 - a. Large bank () b. Medium bank ()
 - c. Small bank ()

Section B: Knowledge Management Strategy

1. Knowledge Strategy

Knowledge management conception. For the bank, knowledge management is (from 1-totally disagree, 2- Disagree, 3- Disagree somewhat, 4- Undecided, 5- Agree somewhat, 6- Agree or 7- totally agree): Kindly answer by ticking the appropriate box.

	1	2	3	4	5	6	7
A concept integrated within the company's culture, which facilitates the exchange of information, knowledge and experience between employees and departments.							
A concept related to the information technologies use, as data bases or intranets.							
An array of methods and tools used for the creation, transfer and application of knowledge to achieve firm objectives and goals.							
A tool for evaluating and quantifying the firm's intellectual capital.							

Knowledge strategy objectives. Importance of each objective for the bank and importance of knowledge strategy for its fulfilment: (from 1- very low, 2- Low, 3- Moderately low, 4- Undecided, 5- Moderately high, 6- High or 7- very high). Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
Product/service quality improvement.							
Cost reduction (efficiency).							
Innovation capacity improvement.							
Customer service improvement.							

2. Knowledge Management Tools

Storage. In the bank: (from 1-totally disagree, 2- Disagree, 3- Disagree somewhat, 4- Undecided, 5- Agree somewhat, 6- Agree or 7- totally agree): Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
Organizational procedures are documented through quality rules, handbooks, etc.							
There are databases that allow gathered knowledge and experiences to be used later.							
There are phone or e-mail directories (referring to departments) to find an expert in specific area.							
It is possible to access knowledge repositories, databases and documents through some kind of internal computer network (such as intranet).							
There are customer databases with updated information about them.							
Database area frequently updated.							
There are procedural handbooks about problems and methods that have been successfully applied.							

Transfer and application. In the bank: (from 1-totally disagree, 2- Disagree, 3- Disagree somewhat, 4- Undecided, 5- Agree somewhat, 6- Agree or 7- totally agree):

Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
Periodical reports are made and distributed to all organizational members in which the firm's achievements are explained.							
Periodical meetings are accomplished to inform the employees about organizational developments.							
There are formal mechanisms to allow the sharing of the best practices between areas and/ or departments.							
There are projects with interdisciplinary teams in order to share knowledge.							
There some employees that compile suggestions from employees, customers and suppliers and distribute structured reports of these within the bank.							
There some communities of practices or groups of learning to share knowledge and experiences.							
All employees can access organizational databases and repositories.							
Customer suggestions are frequently incorporated into products and services.							
New knowledge is structured in modules to create new, different applications.							

Protection methods. Importance of these protection mechanisms for the bank:(from 1- very low, 2- Low, 3- Moderately low, 4- Undecided, 5- Moderately high, 6- High or 7- very high). Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
Patents							
Secrecy							
Knowledge characteristics (innovation complexity)							
Complementary assets (marketing skills, financial resources access, distribution channels, etc.).							
To be the first into the market (pioneer).							
Brands and/or the bank's reputation.							

3. Implementation Support Systems

Cultural principles and leadership. In the bank: (from 1-totally disagree, 2- Disagree, 3- Disagree somewhat, 4- Undecided, 5- Agree somewhat, 6- Agree or 7- totally agree): Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
There is a common language to support knowledge exchange and sharing between employees and departments.							
Employees experiment and implement new ideas in their working day.							
Mistakes are a learning consequence and they are tolerated up to a certain limit.							
The bank's culture is based on confidence and openness.							
We encourage employees to share knowledge at an informal level.							
Employees have responsible behaviour and a high learning disposition.							
All organizational members perceive the same purpose and they feel bound to it.							
Leadership generates qualities towards responsible behaviour of teams and employees.							
Directors assume their role of knowledge managers, based on facilitating the sharing and transfer processes, and in the mediator role to achieve organizational objectives.							
Managers act as assessors. Controls are just an evaluation of the objectives.							
Managers promote the acquisition of external knowledge.							

Support based on human resources practices. In the bank :(from 1-totally disagree, 2- Disagree, 3- Disagree somewhat, 4- Undecided, 5- Agree somewhat, 6- Agree or 7- totally agree): Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
Managers reward employees who share and apply knowledge.							
We have developed financial / non-financial incentives systems to reward teams, instead of individuals systems.							
We have developed programs of internal rotation that facilitates employees to move from one function/department to another.							
We have set up some methods to assess and control the knowledge management processes							

Section C: Organizational Change

1. Reengineering

A redesign on how the organization carries out its processes. Assessment of the level of results obtained in the last 15 years for the bank:(from 1- very low, 2- Low, 3- Moderately low, 4- Undecided, 5- Moderately high, 6- High or 7- very high). Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
Development of new service delivery methods and procedures							
Development of improvements for existing methods and procedures.							
Introduction of more new (or improved) methods and procedures than its major competitors.							
Development of new formal regulations, policies and procedures such as reward system, performance evaluation methods, budget systems etc							
Development of a new vision							
Alteration of strategy through variation of long term goals							
Development of new organizational culture i.e. development of novel collective values, norms and basic assumptions.							
Adoption of new leadership style							

2. Innovation

Product innovation. Assessment of the results obtained in the last 15 years for the bank:(from 1- very low, 2- Low, 3- Moderately low, 4- Undecided, 5- Moderately high, 6- High or 7- very high).Kindly answer by ticking the appropriate box

	1	2	3	4	5	6	7
Development of new products							
Modification and /or improvement of existing products							
Introduction of more new (or improved) products than its major competitors.							

3. Restructuring.

Assessment of the restructuring efforts for the bank in the last 15 years:(from 1- very low, 2- Low, 3- Moderately low, 4- Undecided, 5- Moderately high, 6- High or 7- very high).Kindly answer by ticking the appropriate box.

	1	2	3	4	5	6	7
Downsizing employees							
Simplifying organization structure through; elimination of hierarchies, vertical disintegration or horizontal differentiation.							
Top management restructuring							
Operational restructuring through assets reduction							
Widening the breadth of the bank business through penetration of new geographical and/or demographic markets.							

4. How best can you describe the organizational changes in your bank in the last 15 years? Kindly answer by ticking the appropriate box.

- a. Radical affecting the entire bank (all sections/departments) ().
- b. Incremental irregular changes affecting few sections of the bank ().
- c. A mix of radical and incremental changes ().

5. What has been the frequency of radical changes (big changes affecting the entire bank) in the last 15 years? Kindly answer by ticking the appropriate box.

- a. None ().
- b. Less than 3 ().
- c. Between 3 to 5 ().
- d. More than 5 ().

Thank you for your participation

Appendix 2: List of Commercial Banks as at 8th April, 2016

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd.
4. Bank of India
5. Barclays Bank of Kenya.
6. CFC Stanbic Bank Ltd.
7. Charterhouse Bank Ltd (under statutory management).
8. Chase Bank (K) Ltd (under statutory management with effect from 7th April, 2016).
9. Citibank N.A Kenya Ltd.
10. Commercial Bank of Africa Ltd.
11. Consolidated Bank of Kenya Ltd.
12. Co-operative Bank of Kenya Ltd.
13. Credit Bank Ltd.
14. Development Bank of Kenya Ltd.
15. Diamond Trust Bank of Kenya Ltd.
16. Ecobank Kenya Ltd.
17. Equatorial Commercial Bank Ltd.
18. Equity Bank Ltd.
19. Family Bank Ltd.
20. Fidelity Commercial Bank Ltd.
21. Fina Bank Ltd.
22. First Community Bank Limited.
23. Giro Commercial Bank Ltd.
24. Guardian Bank Ltd.
25. Gulf African Bank Limited.
26. Habib Bank A.G Zurich.
27. Habib Bank Ltd.
28. Imperial Bank Ltd (under statutory management with effect from 13th October, 2015).
29. I & M Bank Ltd.
30. Jamii Bora Bank Limited.

31. Kenya Commercial Bank Limited.
32. K-Rep Bank Ltd.
33. Middle East Bank Ltd.
34. National Bank of Kenya Ltd.
35. NIC Bank Ltd.
36. Oriental Commercial Bank Ltd.
37. Paramount Universal Bank Ltd.
38. Prime Bank Limited.
39. Standard Chartered Bank Kenya Ltd.
40. Trans-National Bank Ltd.
41. UBA Kenya Bank Limited.
42. Victoria Commercial Bank Ltd.

Source: Central Bank of Kenya (n.d.). *Directory of licenced Commercial Banks, Mortgage Finance Institutions and authorised Non-Operating Bank Holding Companies*. Retrieved from <https://www.centralbank.go.ke>