ORGANIZATIONAL STRATEGIC CAPABILITIES, COMPLIANCE WITH REGULATIONS AND COMPETITIVE ADVANTAGE OF COMMERCIAL BANKS IN KENYA

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DECLARATION

I declare that this thesis is my original work and has not been presented in any other university

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This thesis has been submitted for examination with our approval as the university supervisors

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DEDICATION

I dedicate this thesis to my family whose words of encouragement and push for tenacity ring in my ears.

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ABSTRACT

The business environment today is characterized as Volatile, Uncertain, Complex and Ambiguous thus the capability to sense and respond to market threats and opportunities with speed and surprise has become essential for survival of organizations. The commercial banks operating in Kenya are experiencing a fast pace of change characterized by customers' sophistication, strict regulation and supervision, technology advancement and liberalization of banking license leading to rapid internationalization. With a demonstration of three commercial banks in Kenya collapsing in the last five years, there is perhaps a need to reevaluate how to compete and gain competitive advantage in this sector. In such a situation, scholars agitate for agility. However, empirical literature on the relationship between organizational agility and competitive advantage is scarce. Thus this study sought toestablish the effect of Information Technology Capability, Knowledge Management Capability, organizational adjustment agility and market capitalizing agility on competitive advantage of commercial banks in Kenya. The study also tested for the mediating effect of higher order capabilities as well as moderating effect of compliance with central bank regulations. The study was anchored on the McKinsey 7S Framework Model, the Resource Based View, the dynamic capability Theory and the Market Power Theory. A positivist research philosophy was adopted for the study. A descriptive survey design was adopted.A pilot study was conducted on 2 commercial banks and hence the remaining 37 were used in the main survey. A total of 259 respondents were sampled from the 37 commercial banks to participate in the survey. The relationship between the variables was tested using ordinary least square regression model. On the other hand, the moderating effects of compliance with Central Bank of Kenya regulations was also tested using the moderated multiple regression model. The study findings are that organizational strategic capabilitiesnamely knowledge management capability, information technology capability, operational adjustment agility and market capitalizing agility are moderately developed (M = 4.00) on a scale of 1 to 5 and have a positive and significant effect on competitive advantage of commercial banks in Kenya. The regression results established that the strategic capability with the highest effect is ICT capability followed by Market Capitalizing agility then Knowledge Management Capability and the one with the least effect is Operational Adjustment Agility. It was also established that organizational strategic capabilities(Knowledge Management, ICT capability, Market Capitalizing agility and Operational Adjustment Agility) accounts for up to 59.3% of the variation in competitive advantage of commercial banks in Kenya. Furthermore, compliance with central bank regulations have a significant moderating effect on the relationship between organizational strategic capabilitiesand competitive advantage of commercial banks in Kenya. It is recommended that commercial banks intensify the development and employment of both lower level and higher level dynamic capabilities because they were found that they positively and significantly influence competitive advantage. Further, more focus should be directed to market capitalizing agility and operational adjustment agility because these capabilities were found to be less developed at (M < 4.00).

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ABBREVIATIONS AND ACRONYMS

BI &A	-	Business Intelligence and Analytics
CA	-	Competitive Advantage
CBK	-	Central Bank of Kenya
HOC	-	Higher Order Capabilities
ICT	-	Information Communication Technology
IT	-	Information Technology
ITC	-	Information Technology Capability
KM	-	Knowledge Management
KMC	-	Knowledge Management Capability
LOC	-	Lower Order Capabilities
NACOSTI	-	National Commission for Science, Technology & Innovation
RMP	-	Relative Market Power hypothesis
RBV	-	Resource-Based view
SACCOs	-	Savings and Credit Cooperative Societies
SCP	-	Structure-Conduct-Performance
VUCA	-	Volatile, Uncertain, Complex and Ambiguous

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The business environment today is characterized as Volatile, Uncertain, Complex and Ambiguous (VUCA). In such an environment, thecapability to sense and respond to market threats and opportunities with speed and surprise has become essential for survival of organizations (Huang et al., 2012). To respond effectively, firms need strategies to respond effectively to these changes.

Firms can sustain competitive advantage by developing and deploying strategic capabilities which include knowledge and technological capabilities; information technology and organizational agility which comprises of operational adjustment and market capitalizing agility. This is because environments are rapidly changing, leading to high uncertainty level. The increasing uncertainty may result from higher customer expectations, dilution of borders between competitive environments and the move towards global competition. Once the firm achieves a sustainable competitive advantage, then the next hurdle is how to gain and sustain high performance (Kraaijenbrink et al., 2011).

In the highly volatile market, firms ought to be agile and be able to sense and respond to market changes quickly and smoothly to maintain their competitiveness. By agility we mean the ability of a firm to detect and respond to opportunities and threats with ease, speed and dexterity (Lu & Ramamurthy, 2011).

It is basically the organizational ability to react quickly and effectively to an environment which can change radically. In these days of globalization and internationalization of markets, only firms that have the ability to create and sustain a competitive advantage within the turbulent environment survive (Hung, 2015).From the period 1997 to present,

there have been several significant structural adjustments that have been made by the banking industry in Korea. Some of the changes saw entry into the market by foreign banks, amalgamation of existing banks or exit from the market. The banks that were doing well sought to consolidate their services to place themselves in globally competitive positions so as to lead in the banking industry (Gamra&Plihon, 2011). As a result, Korea's largest commercial bank was formed as by Kookmin Bank & Commercial Bank consolidating their operations in November 2001. This merger consequently generated a surge in competition thus setting a precedent for a flurry of subsequent consolidations and restructuring.

The debate on association between banks' scope and efficiency/stability of commercial banks around Europe has gained momentum in recent years (Landi, &Venturelli, 2001). Diversification among commercial banks in the US has resulted to repeal of Glass Steagall Act that has allowed extension of banking conglomerates power in the securities industry. There has been significant improvement in the performance of the financial sector as a result of diversification in the US. For the purpose of getting clues about merger trends in the country, a lot of literature has been confined to the estimate of scope economies and on risk effects aspects of diversification among commercial banks (Landi, &Venturelli, 2001).

Following the 2001 banking crisis in Turkey, the country expedited its reforms for adoption of diversified measures of regaining financial power of banks as exemplified by BRSA that outlined adjustments in the financial asset prices on banks' capital adequacies. In contrast to many other countries around the world, universal dynamics in the banking sector have had less negative effect in Turkey. This is a result of high capital adequacy ratio, better risk management measures, effective public supervision, low currency and liquidity risks among other measures (Turkmen, &Yigit, 2012).

The period between 1990 and 2009 witnessed massive entry of 17 banks to the Ghanaian banking sector (Ghana Association of Bankers [GAB] 2009). As a result, the success or failure of banks in the country is highly dependent on competition that has also been aggravated by entry into the fray by new banks resulting to traditional unable to leverage on their investment in short term government securities. Competition and poaching for talented workforce has also been at the core of operations of the Ghanaian banks (Awuah&Hammond,2014). To further highlight the effect of the competition in the country, banks are forced to engage in cut-throat persuasive promotional efforts to fend off competitors despite dealing in uniform products. Consequently, all the banks are now licensed offer loans and overdrafts, export and import financing and have in place arrangements to accommodate corporate SME financing (Awuah & Hammond, 2014).

With regard to South African situation, companies are exposed to economic sanctions that limit them from investing offshore (Bhana, 2004). Consequently, large organizations in the country opted to diversify as they were only allowed to invest locally. However, from the year 1990, there has been a substantial reduction in amalgamations in the country. Corporate restructuring provided further aggravation which meant that large corporations had to downsize to the effect that they only focused on the core competencies. For the purpose of spreading risks, firms in different sectors in Nigeria have opted to diversify product-market portfolios. It is also for the purpose of improving performance and manage incessant hardships of having to compete in a deregulated economy that the firms have opted to diversify (Oyedijo, 2012).

1.1.1Competitive Advantage

Competitive advantage is an advantage over competitors gained by offering consumers greater value, either by means of lower prices or by providing greater benefits and services that justifies a higher price (Ganguly et al., 2009). Porter (2008) defines competitive advantage along the three dimensions of cost, differentiation and focus with competitors trying to set themselves apart from those perceived as "stuck in the middle" without competitive advantage. Porter's (2008) work suggests that being able to produce an event at a lower cost compared to the competitors is one-way to competitive advantage.

Firms may gain competitive advantage through the initial position, managerial choices, resources and the firm's activities. The strongest competitive advantage is the strategy that cannot be imitated by other companies. For a firm to attain sustainable competitive advantage, it has to achieve a superior position, superior skills and superior resources within the industry (Kamukama et al., 2011).

Sources of competitive advantage include but not limited to technology, resources, superior skills and mergers this to the ability of the organization to either do more of something or do something better than can possibly be done by its competitors. The firms should ensure that it achieves a strategic fit by matching its capabilities and resources with the opportunities available in the external business environment (Helfat et al., 2009).

Competitive advantage is measured using indicators such as market coverage, market share, profitability and efficiency. Market share refers to the percentage of the customers served by a particular bank over a specified time period. Profitability on the other hand refers to the ability of the banks to earn profits. Furthermore, efficiency refers to the ability of the banks to serve their clients to their satisfaction at minimum costs (Barney, 2014).

The agility literature has argued that rapid response and innovative response are fundamental to organizational agility. In this view, IT capability has been identified as a critical ability to influence the rapidness of firm, namely the speed of sense and response to market changes by the high velocity of information transfer (Lu & Ramamurthy, 2011). However, scholars have indicated that IT capability normally requires complementary organizational capability so that it can be deployed and then play a role. In this view, scholars increasingly realized that knowledge management (KM) capability may act as such a complementary capability, which is an essential ability to promote innovation of a firm (Kamhawi 2012).

In this view, the study has considered Information Technology Capability, Knowledge Management Capability, operational adjustment agility and market capitalizing agility and their impact on competitive advantage of commercial banks in Kenya.

1.1.2Organizational strategic capabilities

By definition, Kraaijenbrink et al. (2011) refer to organizational strategic capabilities as the firm's ability to build and extend their current abilities to cope with the changing environment. These capabilities cannot be termed as rare or inimitable or sources of competitive advantage but are those critical to survival of a firm in an extremely changing and volatile environment. According to the view of a hierarchy of capabilities, various kinds of resources and specialized knowledge could be combined and integrated to generate lower-order capabilities. These lower-order capabilities are combined to generate higher-order capabilities, which can enhance the performance or competitive advantage of organizations (Grewal & Slotegraaf, 2007). As a result, this study focused on both lower order and higher order strategic capabilities. The lower order organizational strategic capabilities are IT capability and Knowledge Management while the higher order

capabilities are Market Capitalizing agility and operational adjustment agility as discussed in this section.

Organizational Agility: Organizational agility, which emphasizes rapid and innovative response to market change, thus is becoming a critical weapon to respond to market uncertainties and opportunities (Chung et al., 2012). This agility reflects a firm-wide capability to deal with unexpected changes via rapid and innovative responses (Trinh-Phuong et al., 2012).

Agility has increasingly become indispensable for survival and prosperity for organizations operating in an environment that is characterized as Volatile, Uncertain, Complex and Ambiguous (VUCA). Given its significant role in a turbulent business environment, agility has garnered considerable research attention over the past few years (Huang et al., 2012).

Nafei (2017) argued that one of the main higher order capabilities that every firm needs in this competitive era is organizational agility. According to Nafei (2017), organizational agility can enhance the performance over a relatively long time frame by effectively responding to customers' demands. Specifically, as a dynamic capability, organizational agility facilitates integrating and assembling resources, such as assets, knowledge, and relationships.

The role of organizational agility in enhancing competitive advantage lies in concentrating on the integration of operational processes to provide a support to the innovative ideas, putting the ideas and decisions into implementations more easily. The term "agile" explains the amount of quickness and responsiveness of an organization's capability in dealing with its internal and external events (Zhang, 2011). Dunlop-Hinkler et al. (2011) argue that responding to change in proper ways and exploiting and taking advantages of

changes are the main factors of agility. An agile organisation has capabilities (hard and soft technologies, human resources, educated management, and information) to meet the rapidly changing needs of the marketplace (speed, flexibility, customers, competitors, suppliers, infrastructure, and responsiveness) (Yauch, 2011).

Agility emphasizes the speed and flexibility as the primary attributes of an agile organization (Wendler,2013). An equally important attribute of agility is the effective response to change and uncertainty (Zhang, 2011).Cai et al. (2013) argue that there are two main types of organizational agility namely market capitalizing agility and operational adjustment agility.

Market capitalizing agility refers to a firm's ability to quickly respond to and capitalize on changes through continuously monitoring and quickly improving product/service to address customers' needs. This agility emphasizes a dynamic, aggressively change-embracing, and growth-oriented entrepreneurial mindset about strategic direction, decision making, and judgment in uncertain conditions.

Lu and Ramamurthy (2011) argue that operational adjustment agility refers to a firm's ability in its internal business processes to physically and rapidly cope with market or demand changes. This agility highlights flexible and rapidly responding operations as a critical foundation for enabling fast and fluid translation of innovative initiatives in the face of changes. Both types of agility entail a continual readiness to change, with the former focusing on entrepreneurial mindset and the latter emphasizing speedy execution/ implementation.

Information Technology Capability: Tallon and Pinsonneault (2011) argued that lower order capabilities such as IT capability and KM capability are critical in further enhancing a firm's competitive advantage according to the Dynamic Capability Theory (Dunlop-

Hinkler et al., 2011).The ubiquitous nature of (ICT) and leveraging information technology (IT) to derive competitive advantage is emerging as a top priority for firms as they often enable an organization to be a marketplace differentiator.

Firms that have IT capability are able to act upon opportunities with speed but through actions that are simultaneously cost-effective to confer profitable outcomes (Lu & Ramamurthy, 2011). IT capability speeds up decision making, facilitating communication and responding quickly to changing conditions. IT improves operational and management competencies in enterprise systems (Ngai et al., 2011) and helps in achieving competitive advantage by improving interaction with customers (Roberts &Grover, 2012a).

Knowledge Management Capability: Liao et al. (2011) define knowledge management capability as the degree to which the firm mobilizes and deploys knowledge resources such as product knowledge, customer knowledge, and managerial knowledge across functional boundaries. Nazir and Pinsonneault (2012) argued that product knowledge refers to research and the knowledge of development and operations by which the firm develops and produces its products and services; customer knowledge refers to the needs, preferences, and buying behaviors of customers and markets of the firm; managerial knowledge refers to the knowledge required for governing the firm.

Knowledge management promotes competitive advantage through improving innovative response (Trinh-Phuong et al., 2012). Specifically, with a favorable level of knowledge management, tacit knowledge processed by individual can be converted to explicit knowledge in order to transfer it. Collaboration within a firm can be achieved through continuous communication and knowledge sharing, which can enhance the distribution of know-how knowledge.

Knowledge sharing throughout the organization enhances existing organizational business processes, introduces more efficient and effective business processes and removes redundant processes. It is a discipline that promotes a collaborative and integrated approach to the creation, capture, organization access and use of an enterprise's knowledge assets. With the economy increasingly becoming a more knowledge-based economy, knowledge is becoming the most important asset for organizational success among other assets such as capital, materials, machineries, and properties (Kiseli&Senaji, 2016; Senaji & Nyaboga, 2011).

Seethamraju and Sundar (2013) argued that capability ensures that the firm has the ability to integrate the transferred knowledge with the existing knowledge within the firm and then apply such knowledge to improve the managerial practices or behavioral norms and as a consequence, innovative responds are emerged to cope with market turbulence.

1.1.3Commercial Banks in Kenya

Kenya currently has 39 operational commercial banks, with two banks being under receivership (Chase bank and Imperial bank), another bank being under statutory management (Charter house Bank), one bank being in transition to be acquired (Fidelity Commercial bank) while Dubai bank is closed. Banks in Kenya are classified into three strata; large peer, Medium peer group and Small peer group according to their total assets base (Central Bank of Kenya [CBK], 2016).

In the recent years, there has been a rapid technological development in the banking industry in Kenya. Globalization has changed the way banks use technology, information and communication to better serve their customers. More banks are rolling out diverse products with the help of technology in order to meet the client’s needs. As the banks

become more integrated into the global economy, they are facing opportunities and challenges (Gitonga, 2012).

The Central Bank of Kenya Report 2015 revealed that Kenya's commercial bank sector exhibits differences in performance, with some banks reporting very high profits while others report losses before tax on their annual report. The banking sector is characterized by different banking products, increased choices, security concerns and accessibility. Thus, the strategic ability of commercial banks to effectively and efficiently deliver products and services to clients is key to performance and relevance. Over the years, the banking industry has continually introduced a wide range of new products prompted by increased competition, ICT growth and enhanced customer needs (CBK, 2015).

As a marketing strategy, the new products offered assume local brand names to suit the domestic environment in targeting the larger segment of the local customer base (CBK, 2015).This study focuses on the commercial banks because, the banking sector has grown as a knowledge sector becoming dynamic and attempting to cope with the competition due to globalization of economies. Gathungu and Mwangi (2012) argued that globalization has accelerated change in innovation-based industries such as banking, finance and information industries. During the past few years, players in this sector have experienced increased competition due to increased innovation among the existing players and new entrants into the market.

The sector is also contending with new regulations and challenges triggered by the global financial crisis (Nyangosi, 2011). Advances in technology, increasingly informed customers, information overload, new regulatory requirements and liberalization of the world economy have created a common playing ground for all organizations making it more difficult for any organization to gain sustainable competitive advantage (De Groote, 2011). Reacting to these changes, some studies (Aburub, 2015) have suggested that an

advanced competitive strategy that organizations should possess is organizational agility. This is why this study focuses on this context.

1.1.4Central Bank of Kenya Regulations

Harash et al. (2014) indicated that government policies directly affected performance of companies. According to the scholar, governments in various countries create the rules and frameworks which may hinder or catalyze the performance of organizations based on their nature and scope.

Whether in developed or developing countries, favorable government policies that provide support are critical for organizational performance. In the financial sector, government policies guide against money laundering, fraud and security risks (Aduda & Kingoo, 2012). In Kenya, regulatory authorities like Central Bank of Kenya are charged with coming up with these policies. The CBK regulations form part of the external environment which has been described as those factors and situations that are capable of dictating and influencing the performance of firms irrespective of the strategy that they may deploy.

Harash et al. (2014) indicated that based on political policies, governments regularly change laws necessitating financial institutions to respond to changes in the legal frameworks. In the case of the Kenyan banking sector, the government came up with policies which were meant to provide minimum operational regulations and prudential standards required in the sector (Otieno et al., 2013).

1.2 Statement of the Problem

Commercial banks have encountered increasing competition as a result of innovation by existing players (Chiorazzo et al., 2008; Gathungu & Mwangi, 2012). The Commercial banks are also experiencing a fast pace of change. They are now characterized by customers' sophistication, strict regulation and supervision, technology advancement,

liberalization of banking license leading to rapid internationalization. Currently, there have been new regulations on interest rate capping and the CBK (2018) report indicates that it has affected commercial banks negatively.

The Central Bank of Kenya Banking Sector Stability Report 2018 indicated that due to the changes in the regulations, there has been an increase in value of gross non-performing loans (loan defaults) in the banking sector by 47.5% in the year 2017, decrease in profits as well as quality of assets. In order to survive, commercial banks need to have the best strategic capabilities. This is because arguments from studies such as DeGroote (2011), Gathungu and Mwangi (2012) and Nyangosi (2011)acknowledge that firms experiencing high level of competition and low performance can cope by investing in organizational strategic capabilities which enables them to be up to par with the changing and volatile environment of operation. This therefore motivated this study to find out the extent to which commercial banks have invested in organizational strategic capabilities and level of compliance with Central Bank regulations and the effect it is having on competitive advantage.

The fact that there exist research gaps in the previous studies also motivated this study. Empirical literature on the relationship between organizational strategic capabilities and competitive advantage is scarce and those that exist indicate knowledge gaps. Studies, for instance, Almahamid et al. (2010) linked organizational agility and knowledge sharing to competitive advantage but the focus was in Jordan thus indicating a contextual knowledge gap. Cai et al. (2013) on the other hand examined the development of organizational agility through IT capability and knowledge management capability but presented a contextual gap since it focused on China as well conceptual gaps since the relationship between organizational agility and competitive advantage has scarcely been examined. It

also presented conceptual knowledge gap since it moderated the relationship with organizational climate.

In Kenya, Kiseli and Senaji (2016) established the effect of knowledge management capabilities on competitive advantage in the Kenyan hospitality industry. The study however, focused on only one strategic capability, that is, knowledge management thus creating conceptual knowledge gap. Another study by Karuoya and Senaji(2017) focused on establishing knowledge conversion capability and organizational effectiveness among private universities in Kenya.

The study focused on private universities as well as knowledge conversion capability which present conceptual and contextual knowledge gaps. This study sought not only to focus on knowledge management, but also IT capability, market capitalizing agility and operational adjustment agility so as to fill the conceptual and contextual knowledge gap derived from previous studies (Almahamid et al., 2010; Cai et al., 2013;Kiseli&Senaji,2016).

Specifically, this study examined the moderating effect of compliance with central bank regulations on the relationship between organizational strategic capabilities and competitive advantage and the influence of knowledge management and IT capability and that of operational adjustment agility and market capitalizing agilities on competitive advantage. These relationships constitute gaps because empirical literature on them is scarce. Further, the Kenyan context as opposed to Jordanian and Chinese contexts present an opportunity to examine the research phenomena in a different transition economy context.

1.3 Purpose of the Study

The purpose of the study was to examine the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya. The study also moderated the relationship using Central Bank of Kenya regulations.

1.4 Objectives of the Study

The general and specific objectives of the study are as follows:

1.4.1General Objective

To examine the relationship between organizational strategic capabilities, compliance with regulations and competitive advantage of commercial banks in Kenya.

1.4.2Specific Objectives

The study was guided by the following specific objectives;

i). To establish the effect of knowledge management capability on competitive advantage of commercial banks in Kenya

ii). To assess the effect of information technology capability on competitive advantage of commercial banks in Kenya

iii). To determine the effect of market capitalizing agility on competitive advantage of commercial banks in Kenya

iv). To examine the effect of operational adjustment agility on competitive advantage of commercial banks in Kenya

v). To establish whether higher order capabilities mediates the relationship between lower order capabilities and competitive advantage

vi). To establish the moderating role of compliance with central bank regulations on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya

1.5 Research Hypotheses

H_{o1} Knowledge Management capability has no significant influence on competitive advantage of commercial banks in Kenya

H_{02} Information Technology capability has no significant influence on competitive advantage of commercial banks in Kenya

H_{03} Market capitalizing agility has no significant influence on competitive advantage of commercial banks in Kenya

H_{04} Operational Adjustment agility has no significant influence on competitive advantage of commercial banks in Kenya

H_{05} Higher Order Capabilities has no significant mediating effect on the relationship between lower order capabilities and competitive advantage

H_{06} Compliance with Central Bank Regulation has no significant moderating role on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya

1.5 Justification of the Study

The competition among commercial banks in Kenya has intensified. The banks have encountered increasing competition as a result of innovation by existing players as well as banks entering the market. They are also facing new regulations and problems prompted by global financial crisis as well as government regulations. The commercial banks play a significant role in economy of any country since provision of financial services is

important. However, the environment of operation of commercial banks in Kenya has been volatile and competitive and that has seen three commercial banks collapsing in the last five years.

Identification of the right strategy to enable the sector perform well is hence a top priority. Ranging from internal factors, strategies to the regulations of CBK, there is a need to find a balance on how well the sector should operate. This study was hence relevant in establishing whether organizational strategic capabilities and are important in achieving competitive advantage and whether, higher order capabilities can intervene. The study is also timely in establishing the relevance of the existing central bank of Kenya regulations in moderating the competitive advantage of the commercial banks.

Furthermore, there are various beneficiaries of the study findings. The study is important to the government through the relevant ministries and other stakeholders. This is because; the result of this study may be used by government through the relevant ministries and other stakeholders in policy formulation that can enhance firm's operations to enhance market share. Therefore, the results of the study and its recommendation can act as guidelines to formulation of these policies.

Further, the study contributes to the pool of knowledge in areas of organizational agility. Therefore, this study is important to scholars and academicians, as it will form part of reference material in the areas mentioned. Also, the study has identified gaps in literature for further studies which future scholars and academicians may seek to fill.

1.6Limitation of the Study

The study faced limitations at the stage of data collection where some respondents felt that the information being sought was very sensitive since it was touching on essential strategic capabilities. However, to mitigate this, the researcher obtained permission from the

management of the commercial banks before proceeding to collect data as well as assuring the respondents of their confidentiality by asking them not to indicate their names on the questionnaires. As a result, the response rate established was high.

The researcher also obtained a letter of introduction from the University which aided in assuring the respondents that the information obtained are purely for academic research purposes and would be treated with utmost confidentiality. A letter was also obtained from the National Commission for Science, Technology & Innovation (NACOSTI) before data collection process commences.

In order to ensure that the respondents provided accurate information without fear of breach of confidentiality, the researcher informed them that the data that was to be collected as well as their identities would be ensured in accordance with the ethical requirements of confidentiality that were upheld by the researcher including informed consent to participate in the study.

1.7 Scope of the Study

The conceptual scope of the study was to examine the relationship between strategic capabilities, compliance with regulations and competitive advantage of commercial banks in Kenya. Specifically, the study sought to establish the effect of knowledge management capability on competitive advantage of commercial banks in Kenya, to assess the effect of information technology capability on competitive advantage of commercial banks in Kenya, to determine the effect of market capitalizing agility on competitive advantage of commercial banks in Kenya, to investigate the effect of operational adjustment agility on competitive advantage of commercial banks in Kenya, to establish whether higher order capabilities mediates the relationship between lower order capabilities and competitive advantage and to establish the moderating role of compliance with central bank regulations

on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya.

The contextual scope of the study was the commercial banks in Kenya due to the competition as a result of the new regulations, challenges triggered by the global financial crisis, advances in technology, increasingly informed customers, information overload, new regulatory requirements and liberalization of the world economy which have created a common playing ground for all organizations making it more difficult for any organization to gain sustainable competitive advantage. The study hence targeted 39 operational commercial banks. The time scope of the study was the year 2018. The study was conducted within a period of six months.

1.8Significance of the study

The study is expected to add to the existing knowledge on the effect of organizational strategic capabilities on competitive advantage of commercial banks in Kenya. So far, most studies have focused on organizational strategic capabilities in developed economies. This study is expected to add more to this area. The study is also expected to develop and test a conceptual framework that can apply to the Kenya scenario in as far as linking organizational strategic capabilities and competitive advantage is concerned.

The commercial banks are expected to benefit from the findings in reorganizing their organizational strategic capabilities and giving more emphasis to the lower order organizational strategic capabilities which were established to be more critical to the commercial banks than the higher order capabilities. Based on the recommendations, the commercial banks can improve their competitive advantage.

The study tests whether Compliance with central bank regulation has a significant moderating effect on the relationship between organizational strategic capabilities and competitive advantage of the banking sector in Kenya. It further establishes whether organizational strategic capabilities have a significant effect on competitive advantage of commercial banks in Kenya.

This is expected to help build more knowledge on organizational strategic capabilities and competitive advantage. By testing the moderating effect of CBK regulations, the findings are expected to assist the regulator in revising their regulations to further ensure an efficient banking sector.

1.9Assumptions of the study

In achieving the objectives of the study, several assumptions were made. The study assumed that the respondents in the study understood the questions they were responding hence the information given was reliable. The study also assumed that the commercial banks have the targeted organizational strategic capabilities in place. Another assumption of the study is that the choice of the commercial banks only as compared to all the players in the financial sector as the target population did not have an effect on the quality of data collected due to bias.

1.10 Operational Definition of Terms

Agility is the ability to respond to unpredictable changes with quick response and profitability. It's the ability to react quickly and effectively to an environment which can change radically

Operational adjustment agility refers to a firm's ability in its internal business processes to physically and rapidly cope with market or demand changes

Competitive advantage is an advantage over competitors gained by offering consumers greater value, either by means of lower prices or by providing greater benefits and services that justifies a higher price

IT capability is a kind of organizational ability to support organizational activities and integrate other resources and activities of organizations by disposing IT resources. It serves as a fundamental lower-order capability to support the process of sensing and responding to market change, as well as taking responsibility for synergizing resources among different parts of the organization

Knowledge management capability refers to the degree to which the firm mobilizes and deploys knowledge resources across functional boundaries

Market capitalizing agility refers to a firm's ability to quickly respond to and capitalize on changes through continuously monitoring and quickly improving product/service to address customers' needs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews related literature materials depicting the research study. It comprised of theoretical review, conceptual framework, and empirical review, critique of existing literature, research gap and summary of the chapter. The chapter has established the literature existing on the theme of the study.

2.2 Theoretical Framework

Saunders et al. (2009) argue that a theoretical framework guides the researcher in determining what statistical variables need to be measured. Thus the theoretical literature helps the researcher to see clearly the variables of the study, provides a general framework for data analysis and helps in selection of applicable research design. The theories reviewed underpin the study variables. These theories are the McKinsey 7S Framework Model, the Resource Based View and the dynamic capability Theory and the Market Power Theory.

2.2.1 The McKinsey 7S Framework Model

The McKinsey 7S Framework is a management model developed by Waterman et al. (1980) as a strategic vision for groups, to include businesses, business units, and teams. The McKinsey 7S model involves seven independent factors which are: strategy, structure, systems, shared values, style, skills and staff (Waterman et al., 1980).

According to the model, for an organization to perform well, these seven elements need to be aligned and mutually reinforced during strategy implementation. The 7-S model can be used in different situations which are useful to the organization such as; determining how best to implement a proposed strategy, aligning departments and processes during a

merger or acquisition and examining the likely effects of future changes within an organization. If something in the organization is not working well then it shows that there is inconsistency between some of the identified elements in the model. The model is hence used to identify the needs that should be realigned to improve performance of a firm through better strategy implementation or to maintain it when an organization is incorporating changes (Hanafizadeh & Ravasan, 2011).

The theory is relevant to the study as it highlights the link between strategy alignments with the internal resources of the firm in order to achieve the firm's targets. Organizational agility which is a higher order capability, as well as a strategy, should be aligned alongside the lower order capabilities such as KMC and ITC so as to achieve better results that enhance competitive advantage. In the 7s, Information Technology capability forms part of the organizational systems while knowledge management capability falls part of the skills and staff according to the framework. An alignment and organization of these can enhance the competitive advantage of the firm according to the model. This model presents a way of mutually reinforcing the firm's strategy and resources so as to achieve the desired goals. The model anchors on hypothesis one and two.

H_{o1} Knowledge Management capability has no significant influence on competitive advantage of commercial banks in Kenya

H_{02} Information Technology capability has no significant influence on competitive advantage of commercial banks in Kenya

2.2.2 Resource Based View

The approach known as Resource-Based view (RBV), originated from Penrose's idea in 1959. In the year 1984, Wernerfeldt suggested a link between firms' resources and competitive advantage. He viewed firms in terms of their resources rather than in terms of

their product markets and developed economic tools for examining and managing the relationship between firms' resources and profitability (Wernerfeldt, 1984).

The theory argues that resources have been found to be important antecedents to products and ultimately to performance (Armstrong & Taylor, 2020). Resource may be tangible or intangible and are harnessed into strengths and weaknesses by organizations and in so doing lead to competitive advantage. The resource based theory continues to be refined and empirically tested (Bharadwaj et al., 2010).

The resource based theory addresses the resources and capabilities of the firm as underlying factors of performance. Knowledge management and information technology resources do not depend only on firm resources: they are more than resource sets, more than a function of prior resource deployment. Capabilities govern how resources are transformed into products through firm specific organizational norms and routines; through the development, management and interchange of information and knowledge via human capital and through the creation of an organizational culture that supports the firm's global activities and derives from a collective learning process (Medcof & Song, 2013).

2.2.3 Dynamic Capability Theory

The dynamic capability theory proposed by Teece et al. (1997) suggests that the success of a firm relies on its ability to integrate, build, and reconfigure internal and external competencies to achieve new forms of competitive advantage. Scholars further proposed that the view of a hierarchy of capabilities and the view of capability embeddedness could constitute the basic views of the dynamic capability perspective.

According to the view of a hierarchy of capabilities, various kinds of resources and specialized knowledge could be combined and integrated to generate lower-order

capabilities. These lower-order capabilities are combined to generate higher-order capabilities, which can enhance the performance or competitive advantage of organizations (Grewal &Slotegraaf, 2007).

Some researchers claim that the lower-order capabilities contain operational routines and higher-order ones contain dynamic capabilities. In the existing literature, organizational agility has been treated as one type of dynamic capability, which refers to a higher-order capability (Dunlop-Hinkler et al., 2011). It is widely acknowledged that as a higher-order capability, organizational agility not only can enhance performance directly but also it can be developed as a consequence of other capabilities, such as Knowledge management capability and IT capability (Sambamurthy et al., 2003).

The relevance of the theory lies in its ability to link organizational agility as a capability with other lower level capabilities such as knowledge management and IT capability. The theory argues that organizational agility not only enhances performance directly but also it can be developed as a consequence of other capabilities, such as Knowledge management capability and IT capability. It therefore supports the role of KMC and ITC as predictor variables. The theory also predicts a positive relationship between organizational strategic capabilities and competitive advantage. The theory anchors on hypothesis three and four.

H_{03} Market capitalizing agility has no significant influence on competitive advantage of commercial banks in Kenya

H_{04} Operational Adjustment agility has no significant influence on competitive advantage of commercial banks in Kenya

2.2.4 Market Power Theory

The theory is mostly applied in banking and it states that the market structure of a banking industry influences individual banks' competitive advantage and performance. According to Tregenna (2009), this theory holds on two major approaches to define market power: Relative Market Power hypothesis (RMP) and Structure-Conduct-Performance (SCP).

RMP hypothesis explains that competitive advantage and profitability for individual commercial banks is influenced by market share. The assumption underlying this hypothesis is that, big banks with the capacity to differentiate their products have the ability to influence the industry's market prices and be more competitive and make more profits as corporates. They do this by exercising their market power that affords them high non-competitive profits. Smaller banks don't have the ability to influence prices and increase profits (Tregenna, 2009).

The SCP approach on the other hand, states that when clients are highly concentrated in a banking market, they create potential market power for the banks and create a competitive advantage thus increasing bank profitability. Banks that operate in highly concentrated markets will potentially have a competitive advantage thus making very high profits. This is because they have the viable option of charging high interest rates through monopolistic or collusive approaches; or lowering their rates charged on bank deposits (Tregenna, 2009).

This theory is relevant to the study as it explains some of the determinants of competitive advantage of the commercial banks. The theory argues that competitive advantage of commercial banks is not only established internally through strategies but also externallythrough other factors in the macro-economic variables such as inflation. This theory underpins the market capitalizing agility which deals with the ability to effectively

perceive the changes in the market and take action which guarantees market phase from where profits will arise depending on the appropriate products and services that the bank introduces into the market. The theory anchors on hypothesis five.

H_{05} Compliance with central bank regulation has no significant moderating role on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya

2.3Empirical Review

This section discusses past studies on a similar theme as this study. The section has reviewed literature on the relationship between organizational agility, capability and competitive advantage from different contexts. According to Zikmund et al.(2010), the review of similar studies is used along with empirical data collected to establish a theoretical relation between variables. This section presents the empirical review per objectives of the study.

2.3.1 Operational Adjustment Agility and Competitive Advantage

Almahamid et al. (2010) conducted a study to establish the effect of organizational agility and knowledge sharing on competitive advantage by focusing on firms in Jordan. The study used regression modeling to establish that agile capabilities have a significant effect on organizational competitive advantage. The study further established that knowledge sharing practices have a significant positive effect on organizational competitive advantage. The focus on Jordan however presents a contextual knowledge gap since there is a need to compare the results with other contexts. There is a need to focus on other organizations as well as moderate the relationship by internal environment of the organization. In another study, Yaghoubi et al. (2011) sought to assess organizational agility via Fuzzy Logic. The study modeled the relationships using quantitative data

through a regression model. The findings of the study revealed that the greatest obstacle to attainment of high agility in an organization is lack of the strategy of communicating with the customers.

The study by Yaghoubi et al. (2011) focused on establishing the strengths and weaknesses to gaining the required agile level in an organization. The study however presents a knowledge gap since organizational agility was not linked to competitive advantage thus a conceptual knowledge gap. The study suggested that several similar surveys (agility assessment) can be conducted on different organizations.

Yousif et al. (2017) conducted a study to establish the recent quantitative assessment of IT agility in Swedish Firms. Informed by contingency theory, the results are analyzed and discussed in relation to future research for IT agility. The study adopts a quantitative survey analysis and establishes that there are six organizational contingencies expressed as six hypotheses that should be addressed within future IT agility research.

These are IT agility is not contingent upon sectoral belonging; IT Agility is negatively associated with increased organization size; IT Agility is not contingent upon the geographical spread of the organization; IT personnel's perception of IT Agility level is not contingent upon the functional positioning; IT personnel's perception of IT Agility capability is positively associated with higher hierarchal positioning and that IT personnel's perception of IT Agility level is not contingent upon tenure.

Horlach et al. (2018) conducted a study to establish the IT governance in scaling agile frameworks. The study analyzed how scaling agile frameworks as blueprints for agile IT organizations solve the contrast between structuration embedded in IT governance and agility. The study established converging business and IT in structure and strategy as facilitator for resolving this conflict. In detail, the study compared eight scaling agile

frameworks on how IT governance is covered, how IT governance decisions are made and whether business IT convergence is achieved. It was conclude that IT governance is still predominantly top down decision-making and focuses on traditional business IT alignment instead of business IT convergence.

Dadras (2016) conducted a theory-building research to establish IT agility through service-oriented architecture. With reliance on the real options theory, complemented by the dynamic capabilities, the study developed an initial theoretical framework and argues that Service-Oriented Architecture characteristics, when embedded in a system at the design time, will provide future knowledge and process options.

The embedded future options, when executed, will facilitate the IT sensing and responding capabilities. By collecting and analyzing data from twenty-two in-depth interviews as well as project documents across multiple cases in a Bank, an Airline company, and an Airport, this study extended its initial conceptual framework to a mid-range theory that explains the interaction between Service-Oriented Architecture and IT agility. Results of the study contribute to the Service-Oriented Architecture literature by conceptualizing the Service-Oriented Architecture in three sets of characteristics including: 'information-centric', flexibility-centric' and 'structure-centric', as well as theorizing the effects of each set on the effectiveness of process options and 'change detection' and 'shared insight' knowledge options (Dadras, 2016).

DeGroote and Marx (2013) conducted a study to investigate the impact of information technology (IT) on supply chain agility measured by the ability to sense and respond to market changes, and the impact supply chain agility has on firm performance. Data were collected from supply chain executives at 193 U.S. manufacturing firms. The results suggest that IT improves the supply chain's ability to sense market changes by improving

the adequacy, accuracy, accessibility, and timeliness of the information flows among members of the supply chain.

The study by DeGroote and Marx (2013) also established that IT also increases the supply chain's ability to respond to market changes by reducing the cost, and improving the quality and timeliness of developing and executing coordinated plans to respond to market changes throughout the supply chain. Importantly, the results indicate that enhanced supply chain agility has positive impacts on the firm's sales, market share, profitability, speed to market, and customer satisfaction.

2.3.2Market Capitalizing Agility and Competitive Advantage

Another study that sought to establish effective determinations on organization agility Practices was conducted by Alhadidand As' Ad (2015). The study conducted a survey of all the Information Technology organization in Jordan. Using primary data collected through questionnaires and analyzed using a regression model; the study established that organization agility and organizational performance have a positive effect. The study presented a conceptual knowledge gaps since there was less effort to moderate or intervene the relationship between the two variables.

Tallon and Pinsonneault (2011) also conducted a study seeking to establish whether alignment of organizational agility strategy and IT infrastructure has an effect on the performance of the firm. The study used structural equation modeling with IT infrastructure as a latent variable modeled by five indicators: user involvement, connectivity, distributed computing, flexibility, and IT awareness. The modeling revealed that alignment between organizational and IT infrastructure predicts firm performance positively.

Chakravarty et al. (2013) also conducted a study on Information technology competencies, organizational agility, and firm performance and established its enabling and facilitating roles. This research proposed two distinct roles to understand how information technology competencies shape organizational agility and firm performance. In their enabling role, IT competencies are expected to directly enhance entrepreneurial and adaptive organizational agility. In their facilitating role, IT competencies should enhance firm performance by helping the implementation of requisite entrepreneurial and adaptive actions.

Furthermore, the study established that the effects of the dual roles of IT competencies are moderated by multiple contingencies arising from environmental dynamism and other sources. The study tested the model and hypotheses through a latent class regression analysis on data from a sample of 109 business-to-business electronic marketplaces. The results provide support for the enabling and facilitating roles of IT competencies.Roberts and Grover (2012a) conducted a study to investigate firm's customer agility and firm performance and determine the importance of aligning sense and respond capabilities. The study proposed that agility comprises two distinct capabilities, sensing and responding, and we address the issue of alignment between these capabilities and its impact on performance. Using a dynamic capabilities framework, the study formulated both matching and mediating perspectives on customer agility. Based on data collected from marketing managers, the study tested hypotheses pertaining to the two methods of alignment. The results indicated significant support for the role of both forms of alignment on performance. Implications for research and practice are discussed (Roberts & Grover, 2012b).

Cegarra-Navarro et al. (2016) conducted a study to establish the relationship between structured knowledge processes and firm performance and determined the role of organizational agility in the relationship. The study develops a research model that

explores the relationships among knowledge management structures, organizational agility, and firm performance. The empirical study examined these relationships using partial least squares structural equation modeling on a dataset of 112 large Spanish companies.

The results of this modeling exercise support the effectiveness of a specific set and sequence of knowledge management processes and confirm not only the direct effect of knowledge application on organizational performance, but also the mediating effect of organizational agility in this relationship. Tallon and Pinsonneault (2011) focused on competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model. The study conducted a survey of 241 firms and revealed that there exists a significant link between information technology alignment and organizational agility in that, the latter supports organizational agility as a higher order strategic capability.

2.3.3Information Technology Capability and Competitive Advantage

Tallon and Pinsonneault (2011) also conducted a study to establish the competing perspectives on the link between strategic information technology alignment and organizational agility using IT as a mediating variable. The study adopted a descriptive approach and established that IT infrastructure flexibility and alignment has a positive and significant main effect on agility. The study however uses IT alignment as a mediating variable on the success of organizational agility as a strategy with less focus on the effect of organizational agility on competitive advantage of the organization. This presents a conceptual knowledge gap.

Mithas et al. (2011) conducted a study to establish how information management capability influences firm performance. The study develops a conceptual model linking IT-enabled information management capability with three important organizational capabilities (customer management capability, process management capability, and performance management capability). The study argued that these three capabilities mediate the relationship between information management capability and firm performance. The study by Mithas et al. (2011) used a rare archival data set from a conglomerate business group that had adopted a model of performance excellence for organizational transformation based on the Baldrige criteria. This data set contained actual scores from high quality assessments of firms and intraorganizational units of the conglomerate, and hence provided unobtrusive measures of the key constructs to validate our conceptual model. The study findings revealed that information management capability plays an important role in developing other firm capabilities for customer management, process management, and performance management. In turn, these capabilities favorably influence customer, financial, human resources, and organizational effectiveness measures of firm performance (Mithas et al., 2011).

Liu et al. (2013) conducted a study to establish the impact of IT capabilities on firm performance. The study also established the mediating roles of absorptive capacity and supply chain agility. Based on the dynamic capabilities perspective and the view of a hierarchy of capabilities, the study proposed a model to examine how IT capabilities affect firm performance through absorptive capacity and supply chain agility in the supply chain context. Survey data showed that absorptive capacity and supply chain agility fully mediate the influences of IT capabilities on firm performance. In addition to the direct effects, absorptive capacity also has indirect effects on firm performance by shaping supply chain agility. We conclude with implications and suggestions for future research.

Focusing on the factors that impede Business Intelligence and Analytics platforms from enabling organizational agility, Kretzer et al. (2014) use descriptive and inferential approaches to achieve their objectives. The findings of the study revealed that Business Intelligence and Analytics (BI&A) enable organizational agility in generativity in terms of evoking vast flexibility while providing a stable platform for further developments. The study focused on the effect of various Business Intelligence and Analytics (BI&A) platforms on achieving organizational agility. The study however presents a contextual knowledge gap since it focused on a developing economy.

Chen et al. (2014) focused on establishing the relationship between IT capability and organizational performance and established the role of business process agility and environmental factors. On the basis of matched survey data obtained from 214 IT and business executives from manufacturing firms in China, the study analyses show that even though firm-wide IT capability presents the characteristics of rarity, appropriability, non-reproducibility, and non-substitutability, its impact on organizational performance is fully mediated by business process agility. The study findings showed that the impact of the environment is multifaceted and nuanced. In particular, environmental hostility weakens the effect of IT capability on business process agility, while environmental complexity strengthens it.

Calantone et al. (2002) conducted a study focusing on the relationship between learning orientation, firm innovation capability, and firm performance. Based on in-depth interviews with senior executives and a review of the literature, the present investigation delineates four components of learning orientation: commitment to learning, shared vision, open-mindedness, and intraorganizational knowledge sharing. A framework is tested using data from a broad spectrum of US industries. Learning orientation is conceptualized as a

second-order construct. Its effect on firm innovativeness, which in turn affects firm performance, is examined.

It was established that learning orientation affects firm innovation capability significantly which in turn affects firm performance positively and significantly. Bharadwaj (2000) conducted study to establish a resource-based perspective on information technology capability and firm performance through an empirical investigation. The study established that information technology capability classified as IT infrastructure, human resource IT infrastructure and IT enabled intangibles have a significant effect on firm performance. Santhanam and Hartono (2003) also conducted a study to establish the issues linking information technology capability to firm performance. The findings of the study established that firms with superior IT capability exhibited superior performance as compared to those with low IT capability.

Rai et al. (2006) focused on firm performance impacts of digitally enabled supply chain integration capabilities. The study draws on the emerging IT-enabled organizational capabilities perspective to suggest that firms that develop IT infrastructure integration for SCM and leverage it to create a higher-order supply chain integration capability generate significant and sustainable performance gains. A research model is developed to investigate the hierarchy of IT-related capabilities and their impact on firm performance.

The study by Rai et al. (2006) collected data from 110 supply chain and logistics managers in manufacturing and retail organizations. The study results suggested that integrated IT infrastructures enable firms to develop the higher-order capability of supply chain process integration. This capability enables firms to unbundle information flows from physical flows, and to share information with their supply chain partners to create information-based approaches for superior demand planning, for the staging and movement of physical products, and for streamlining voluminous and complex financial work processes.

Furthermore, IT-enabled supply chain integration capability results in significant and sustained firm performance gains, especially in operational excellence and revenue growth.

Ravichandran et al. (2005) established the effect of information systems resources and capabilities on firm performance using the resource-based perspective. The study developed the theoretical underpinnings of this premise and propose a model that interrelates IS resources, IS capabilities, IT support for core competencies, and firm performance. The model is empirically tested using data collected from 129 firms in the United States. The results provide strong support for the research model and suggest that variation in firm performance is explained by the extent to which IT is used to support and enhance a firm's core competencies. The results also support our proposition that an organization's ability to use IT to support its core competencies is dependent on IS functional capabilities, which, in turn, are dependent on the nature of human, technology, and relationship resources of the IS department (Ravichandran et al. 2005).

2.3.4Knowledge Management Capability and Competitive Advantage

Cai et al. (2013) conducted a study in China focusing on developing organizational agility through IT Capability and Knowledge Management Capability. The study sought to establish the moderating effect of organizational climate on the relationship between organizational agility and capability.

The findings of the study revealed that both knowledge management capability and IT capability have a positive effect on agility. Another finding of the study showed that agility has a positive effect on firm performance while organizational climate plays mixed moderating effect on the relationship. The study presents a contextual knowledge gap since it focused on China which is a developed economy. The findings cannot be

generalized to a developing economy like Kenya hence a need to conduct this study (Cai et al., 2013).

Kiseli and Senaji (2016) conducted a study to establish the effect of knowledge management capabilities on competitive advantage in the Kenya hospitality industry. The study specifically focused on how technology KM infrastructure capability, social KM infrastructure capability, KM process capability and KM innovation agility affect the competitive advantage of five star hotels in Kenya. A descriptive research design was applied in this study. The researcher conducted a multiple regression analysis so as to determine the effects of each of the four variables on competitive advantage. Concerning competitive advantage, the study established that organization uses knowledge management to widen the array of products without increasing costs.

Zott (2003) focused on dynamic capabilities and the emergence of intra-industry differential firm performance gaining insights from a simulation study. A formal model is presented in which dynamic capabilities are treated as a set of routines guiding the evolution of a firm's resource configuration. The model centers on the endogenous choice firms make between resource deployment through imitation and experimentation in order to generate alternative resource configurations.

Three performance - relevant attributes of dynamic capabilities are proposed: timing, cost, and learning of resource deployment. Theoretical propositions are developed that suggest how these attributes contribute to the emergence of differential intra-industry firm performance.Simulation analysis offers insights into the trajectories of evolutionary change engendered by dynamic capability, and serves to refine the theoretical propositions. It is found that timing, cost, and learning effects foster the emergence of robust performance differences among firms with strikingly similar dynamic capabilities.

Moreover, the results show that even small initial differences among firms can generate significant intra-industry differential firm performance, especially when the effects of timing, cost and learning are combined (Zott, 2003).

Morgan et al. (2009) conducted a study to determine the relationship between market orientation, marketing capabilities, and firm performance. Drawing on traditional resource - based theory and its recent dynamic capabilities theory extensions, the study examined both the possession of a market orientation and the marketing capabilities through which resources are deployed into the marketplace as drivers of firm performance in a cross - industry sample.

The study findings indicated that market orientation and marketing capabilities are complementary assets that contribute to superior firm performance. Furthermore, market orientation has a direct effect on firms' return on assets (ROA), and that marketing capabilities directly impact both ROA and perceived firm performance.

Kotabe et al. (2002) conducted a study to determine the relationship between multinationality and firm performance as well as the moderating role of R&D and marketing capabilities. The findings, based on a time series cross-sectional analysis of firms from 12 different industries over a seven-year period, indicate that the impact of multinationality on both financial and operational performance is moderated by firm's R&D and marketing capabilities.

Chen et al. (2004) conducted a study to determine the effect of Knowledge management capability on firm performance through an empirical investigation. This study focused on the impact of the implementation of knowledge management systems (KMS) on firm performance. This research attempted to examine this issue among those firms of adopting KMS by using the data extracted from the COMPUSTAT. With hypotheses developed

from literature and our research design, the study collected financial data of companies that adopted KMS since 1999. The results showed that firms significantly reduce the ratios of costs of selling, general, and administrative (SG&A) to revenues and SG&A to sales in the second year after the adoption of KMS. The findings support some of our hypotheses.

Liu et al. (2014) established the relationship between Knowledge Management Capability and Firm Performance as well as the mediating role of organizational agility. Based on the dynamic capabilities perspective, this study tries to explore how KMC (i.e., exploration KMC and exploitation KMC) affects firm performance through the mediating role of operational adjustment agility and market capitalizing agility.

Survey data from 211 firms indicated that both operational adjustment agility and market capitalizing agility can fully mediate the influence of KMC on firm performance. In addition, the relationship intensions of these two KMC on organizational agility are distinguishing (Liu et al., 2014).

Han and Wang (2012) focused on the relationship between knowledge management, knowledge management system, and organizational performance. The study conducted an empirical study in which 176 organizations with KM practices were involved. One research model is built up in which a mediated variable - KM Capability (KMC) is introduced. The SEM is applied to analyze the model. The study found knowledge creation; knowledge organization and knowledge transfer process can promote knowledge management capability. KMS can improve the KMC and organizational performance indirectly through supporting KM processes.

Hung et al. (2015) conducted a study to establish the relationship between knowledge management implementation, business process, and market relationship outcomes. A survey was conducted. The sampling frame was obtained from the database of the Bureau

of National Health Insurance and Financial Supervisory Commission in Taiwan. After unusable questionnaires excluded, the usable respondents were 256 which are from 63 hospitals and 93 financial firms. Structural equation modeling was used to analyze the relationships among KMI, KMC, business process outcome, and market relationships.

The findings indicated that both KMI and KMC have positive influences on market relationships through business process outcome. The authors also demonstrate how KMI and KMC improve market relationships through business process outcome to deliver the value of KM (Hung et al., 2015)

Alharthy (2018) conducted a study on the role of knowledge creation process in enhancing organizational resilience and performance. It also examines the mediating effect of organisational resilience on the relationship between the knowledge creation process and organisational performance in the Saudi Arabian banking system. A correlational method, quantitative in nature, is employed to collect data in order to test the hypotheses and find the relationship between knowledge creation, organisational resilience, and organisational performance. The research design employed is the survey design in order to collect data on the views of the Saudi Arabian banking employees on issues related to the aforementioned concepts. The correlation test and the structural equation modeling revealed that a significant and positive association exists between the knowledge creation process and overall organisational resilience (Alharthy, 2018).

It was found that except for robustness, other capabilities of organisational resilience i.e. adaptability, agility and innovation are correlated positively and significantly with the knowledge creation process. In addition, the study shows a significant, direct and positive association between the knowledge creation process and organisational performance. More specifically, statistically significant support was found for the effects of knowledge creation and sharing processes on organisational performance in the framework of the four

perspectives of the balanced score card (BSC) (financial perspective, internal business process, customer perspective, and learning and growth perspective) (Alharthy, 2018).

Marhraoui and Manouar (2017) focused on a new Framework linking knowledge management systems and organizational agility. This study aims to shed light on the role of knowledge management processes in workforce agility. The quantitative approach was used for collecting data via questionnaire. The questionnaire was designed based on the related literature. The results indicated the importance role of knowledge acquisition or creation on knowledge application and sharing. In addition, the proactive behavior of workforces is a function of knowledge acquisition and application. Furthermore, workforce adaptive behavior is determined by knowledge processes and proactive behavior.

Badimo (2017) conducted a study to establish the improvement of organisational performance and healthcare service delivery through knowledge management practices in the Gauteng Department of Health. Data was collected using questionnaires with 496 respondents and interviews with 35 interviewees. Exploratory and confirmatory factor analyses and structural equation modeling were utilized and the proposed model was then extracted and content analysis was applied in evaluating the resulting qualitative data.

The findings of this study furthermore indicated that knowledge management concepts were not universally understood in the Gauteng Department of Health. A structural equation model development strategy, postulated in the factor analysis, also produced a new best-fitting knowledge management capability model based on the new constructs. The structural equation model suggested that significant factors influencing the improvement of the organisational performance and healthcare service delivery are those of knowledge management capability. The regression analysis showed that most of the inter-correlations were significant, thus confirming the theory that knowledge management

capabilities have a direct influence on organisational performance and healthcare service delivery (Badimo, 2017).

Alharthy et al. (2018) focused on the impact of knowledge creation on organizational resilience towards organizational performance. This study investigated the influence of knowledge creation process (KCP) for enhancing the organizational resilience capabilities namely – adoptability, agility, and innovation towards organization performance based on the balanced scorecard. Data were collected from the Saudi banks. The study results revealed KCP positively influence the organizational resilience capabilities. The results also showed that the resilience capabilities (agility and innovation) have a positive significant influence on banking performance. However, the relationship between adoptability and organization performance is not significant in the Saudi context (Alharthy et al., 2018).

Panda and Rath (2018) focused on modeling the relationship between information technology infrastructure and organizational agility. The study was conducted in the context of India. Primary data collected from 300 businesses and IT executives working in various publicly owned banking groups functioning across India have been used for this study and a structural equation modeling (SEM) is employed to assess the IT-agility link.

This study reported two-folded research findings. First, IT infrastructure enables both the sensing and responding components of organizational agility. Second, firms should not overlook the IT-agility contradiction, that is, the impeding role of IT towards achieving augmented agility. The study successfully established the significant positive relationship between the critical dimensions of agile human IT infrastructure, namely, business functions, interpersonal management, technology management expertise and organizational sensing and responding agilities (Panda &Rath, 2018).

2.3.5 Competitive Advantage

Muchangi et al. (2017) carried out a study on strategic responses of banks treasury departments towards a competitive environment and its effect on competitive advantage taking a case study of Bank of Africa. The research was carried out through descriptive survey design. The study focused on customer relationship management as a strategic response strategy. Through regression analysis, it was established various customer relationship management had a positive and significant effect on competitive advantage of commercial banks in Kenya.

Ramona (2014) focused on strategic responses to competition by Barclays Bank of Kenya Limited in order to gain competitive advantage. The study focused on strategic responses such as offering wide range of products and services, engaging highly skilled staff, automation of business processes, avoiding use of publicity, outsourcing support, advertisements and also reducing operating staff. It was revealed that those strategic responses led to a positive significant relationship with competitive advantage.

Kamukama (2013) conducted a study on Intellectual capital as a company's invisible source of competitive advantage. The study used a hierarchical regression because of its capacity to indicate precisely what happens to the model as different predictor variables are introduced. This study confirms that the three intellectual capital elements are strong predictors of competitive advantage and they account up to 44 percent of variance in competitive advantage. The order of importance in explaining the variance in competitive advantage (basing on their standardized beta values) is: structural capital, human capital and relational capital.

Otieno (2010) conducted a study on the application of ICT strategy in enhancing competitive advantage among commercial banks in Kenya. The study was a comprehensive evaluation of the response of Kenyan commercial banks to the adoption of ICT strategy in enhancing competitive advantage. Various variables were used to establish the extent of the adoption and implementation of information technology devices in banking processes. These include the nature and degree of adoption of ICT technologies; degree of utilization and the impact of the adoption of ICT devices on banks operations. The study targeted 42 banks in the country of which 35 or 81% responded.

The study by Otieno (2010) revealed that ICT has been discovered to be the main driving force of competition in the banking industry during the period of study. The importance of ICT strategy in banking industry is further confirmed by the fact that 100% of the banks under study had ICT departments adequately staffed and that all have adopted technology devices like Electronic Data Interchange (EDI), M-pesa, ATM, e-mail and Visa card in order to increase operational efficiency, cut costs and to meet the customer demands. Banks also use ICT strategy as a means of increasing switching costs to customers. The adoption of ICT in banks has improved customer services, facilitated accurate records, ensures convenient business hour, prompt and fair attention, and enhances faster services.

Kungu et al. (2014) conducted a study to establish the effectiveness of competitive strategies by commercial banks taking a Case of Equity Bank. The study's population comprised of the employees of equity bank based at the head office in Nairobi. Structured questionnaires were administered to 44 respondent's selected using stratified sampling technique. Data was analyzed in form of frequencies and percentages and presented in form of tables and graphs. The study found that equity bank uses different competitive strategies among them the combination strategy, cost leadership strategy, differentiation strategy, and focus strategy. The main source of competition for equity bank is external.

The study also found that equity bank possesses various strengths that make it survive in the market or compete favorably against other firms.

The research by Kungu et al. (2014) established that equity bank is exposed to opportunities that would enable it to compete favorably against other banks in future. The study found that equity bank makes organizational changes that make it to remain competitive in the banking industry in Kenya. The bank is faced by many challenges in the implementation of the competitive strategies. The study found that there was a positive correlation between competitive strategy effectiveness; and innovation, customer focus, bench marking and differentiation which were found to be statistically significant.

Asava-Kihima (2009) conducted a study to establish the relationship between Knowledge Management and Competitive Advantage within Commercial Banks in Kenya. The study sought to establish the extent to which commercial banks in Kenya have incorporated Knowledge Management as a competitive strategy and whether Knowledge Management yields competitive advantage. The study established that Knowledge management enabled the banks to enhance product innovations, inventory management, employee growth & development, faster & better decision-making, intellectual property rights management, faster response to key business issues, improve quality and improve overall service delivery.

2.3.6 Moderating effect of Regulations

Muchangi et al. (2017) sought to determine the moderating effect of CBK policies on the relationship between mobile technology services and performance of Deposit-Taking Savings and Credit Cooperative Societies (SACCOs) in Kenya. Descriptive and explanatory research designs were adopted based on a sample of 86 Deposit-Taking SACCOs. A structured questionnaire administered to two managers in each SACCO was used for data collection. The study found that government policies positively moderates

the relationship between mobile technology services and performance of Deposit-Taking SACCOs implying that appropriate government policies that are favorable for the Deposit-Taking SACCOs should be formulated.

Omondi (2014) conducted a study to establish the moderating effect of central bank of Kenya prudential guidelines and regulations on the financial performance of commercial banks in Kenya. After secondary data gathered from Bank supervision reports of CBK and published financial statements of commercial banks, descriptive statistics and regression analysis was used to test the relationship between the variables. The study recommended that CBK prudential guidelines positively moderates the financial performance of commercial banks in Kenya.

A study by Bizuayehu (2015) assessed the moderating effect of Compliance with central bank regulations on management of credit risk on profitability of Ethiopian banks. This study established that, the regulations on credit risk has a significant inverse impact on financial performance of Ethiopians commercial banks.

Sufi and Qaisar (2015) carried out a study on importance of Central Bank regulations on management practices of credit risk on the performance of loan when the credit terms are taken and loan policy, appraisal of clients and control of credit risk in Pakistan. The study established that policies on credit terms and appraisal of clients has a positive and a significant impact on performance of loan, whereas credit policy and control of credit risk has insignificant but positive effect on loan performance.

Gavalas and Syriopoulos (2014) investigated the banking performance as far as the moderating effect of lending rates and loan quantity policies were concerned. According to the study findings, policy on higher capital requirements tighten the definition of bank

capital and require that banks hold a larger amount of capital for a given amount of assets and expand the coverage of bank assets thus affecting the commercial banks negatively.

In reference to the US, Sabrinna et al. (2009) while conducting a case study of the United States financial regulatory system argues that the changes which have taken place in the US financial system have necessitated a shift from its decentralized financial regulatory system. They further reviewed the advantages and disadvantages of regulatory consolidation and the effects of consolidation on regulators' incentive. They have also evaluated what would be the best entity to regulate the US financial markets. The authors discuss the four main goals of financial regulation consolidation. These include taking advantage of the economies of scale, eliminating apparent overlaps and duplication that are found in decentralized structures, improving accountability and transparency and adoption to the increased prevalence of financial conglomerates in the financial industry. The paper however acknowledges that there may be disadvantages of consolidation of financial regulation. It argues that if the systems are well articulated, then consolidation is beneficial to an economy.

Table 2.1

Summary of Research Gaps

Author	Title of the Study	Key Findings	Knowledge Gap	Recommendation for Further Studies
Almahamid, et al. (2010).	Effects of organizational agility and knowledge sharing on competitive advantage: an empirical study in Jordan	Agile capabilities have a significant effect on organizational competitive advantage Knowledge sharing practices have a significant positive effect on organizational competitive advantage	The focus on Jordan presents a contextual knowledge gap since there is a need to compare the results with other contexts Conceptual knowledge gaps arise with less effort to moderate or intervene the relationship between the two variables	There is a need to focus on other organizations as well as moderate the relationship by internal environment of the organization
Yaghoubi, et al. (2011).	Assessing Organizational Agility via Fuzzy Logic	The greatest obstacle to attainment of high agility in an organization is lack of the strategy of communicating with the customers	The study focused on establishing the strengths and weaknesses to gaining the required agile level in an organization. Organizational agility was not linked to competitive advantage thus a conceptual knowledge gap	The study suggested that several similar surveys (agility assessment) can be conducted on different organizations
Tallon&Pinsonneault (2011).	Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model	The study reveals that IT infrastructure flexibility and alignment has a positive and significant main effect on agility	There is a focus on the mediating role of IT alignment on organizational agility with less focus on the effect of organizational agility on competitive advantage of the organization. This presents a conceptual knowledge gap.	Future studies should focus on linking IT alignment and flexibility to agility in a volatile environment thus using macro environment as a moderating variable Other studies should also use longitudinal data so as to be able to show how firms react to change Other studies should focus on using firm

Author	Title of the Study	Key Findings	Knowledge Gap	Recommendation for Further Studies
				size as a moderator variable
Cai et al. (2013)	Developing Organizational Agility through IT Capability and Knowledge management Capability: The Moderating Effects of Organizational Climate	Both Knowledge management capability and IT capability have a positive effect on agility Agility has a positive effect on firm performance Organizational climate plays mixed moderating effect on the relationship	The study focused on China a developed economy. The findings cannot be generalized to a developing economy. This is contextual knowledge gap. The use of organizational climate as a moderating variable creates a narrow comparison. A wider scope to include both internal and external environment can be established. This creates a conceptual knowledge gap.	Longitudinal research is needed to further explore this theme There is a need to use external environment as a moderating variable in other studies
Kretzer, et al. (2014).	Barriers to BI&A Generativity: Which Factors impede Stable BI&A Platforms from Enabling Organizational Agility?	Business Intelligence and Analytics (BI&A) enable organizational agility in generativity in terms of evoking vast flexibility while providing a stable platform for further developments	The study focused on the effect of various Business Intelligence and Analytics (BI&A) platforms on achieving organizational agility. It focused on a developing economy thus a contextual knowledge gap. Organizational agility was not linked to performance or competitive advantage thus a	Future studies could investigate what drives organizations to focus either on stability or flexibility, which effects change that, how would an according transformation process look like, and how could a balance be sustained.

Author	Title of the Study	Key Findings	Knowledge Gap	Recommendation for Further Studies
			conceptual knowledge gap.	
Alhadid& As' Ad (2015)	Effective Determinations on Organization Agility Practices: Analytical Study on Information Technology organization in Jordan	Organization agility and organizational performance have a positive effect	The focus on Jordan presents a contextual knowledge gap since there is a need to compare the results with other contexts Conceptual knowledge gaps arise with less effort to moderate or intervene the relationship between the two variables	Other studies can focus on more firms in and out of Jordan for comparison of the findings

2.3.7 Critique of Relevant Literature

The reviewed studies present knowledge gaps that this study sought to fill. The study by Almahamid et al. (2010) was conducted in the context of Jordan which has different economic characteristics from that of Kenya. On the other hand, the study by Yaghoubi et al. (2011) presents a knowledge gap since organizational agility was not linked to competitive advantage but was described via the fuzzy logic. Another study by Alhadid and As' Ad (2015) indicated less effort to moderate or intervene the relationship between the organizational agility and performance.

A study conducted by Tallon and Pinsonneault (2011) used IT alignment as a mediating variable on the success of organizational agility as a strategy with less focus on the effect of organizational agility on competitive advantage of the organization. This presents a conceptual knowledge gap. Furthermore, the study by Cai et al. (2013) in China presents a

contextual knowledge gap since it focused on China which is a developed economy. The findings cannot be generalized to a developing economy like Kenya hence a need to conduct this study. Locally, the study by Kiseli and Senaji (2016) which examined the effect of knowledge management capabilities on competitive advantage in the Kenya hospitality industry did not focus on the banking sector but hotel industry which presents a contextual knowledge gap. Furthermore, the study did not include higher order capability which is organizational agility but focused on lower order capabilities.

Those studies that have tested the moderating effect of CBK regulations have done so in different contexts and different variables. The study by Muchangi et al. (2017) focused on Deposit-Taking Savings and Credit Cooperative Societies (SACCOs) in Kenya while the study by Omondi (2014) examined CBK guidelines and financial performance of commercial banks in Kenya.

The relationship between organizational capabilities (knowledge capability and information technology) and competitive advantage has been previously documented in existing empirical studies. However, literature on the linkage between specific aspects of information technology namely IT resources, IT operations and IT objects with competitive advantage and the linkage between knowledge management attributes namely Product knowledge, Customer knowledge and Managers awareness has received less attention in empirical studies.

Further, it is clear in literature that while knowledge management and information technology are lower order capabilities, organizational agility is a higher order capability which may intervene in the relationship between the organizational capability and competitive advantage. However, relative contribution of the lower order capabilities (Knowledge management and information technology) on creating the higher order capability (organizational agility) is not clear in existing empirical literature. Even more

scarce is the relative contribution of the individual knowledge management capability and information technology capability attributes to organizational agility specifically the IT resources, IT operations and IT objects on one hand and knowledge management attributes of Product knowledge, Customer knowledge and Managers awareness on the other hand, has received minimal attention in empirical studies.

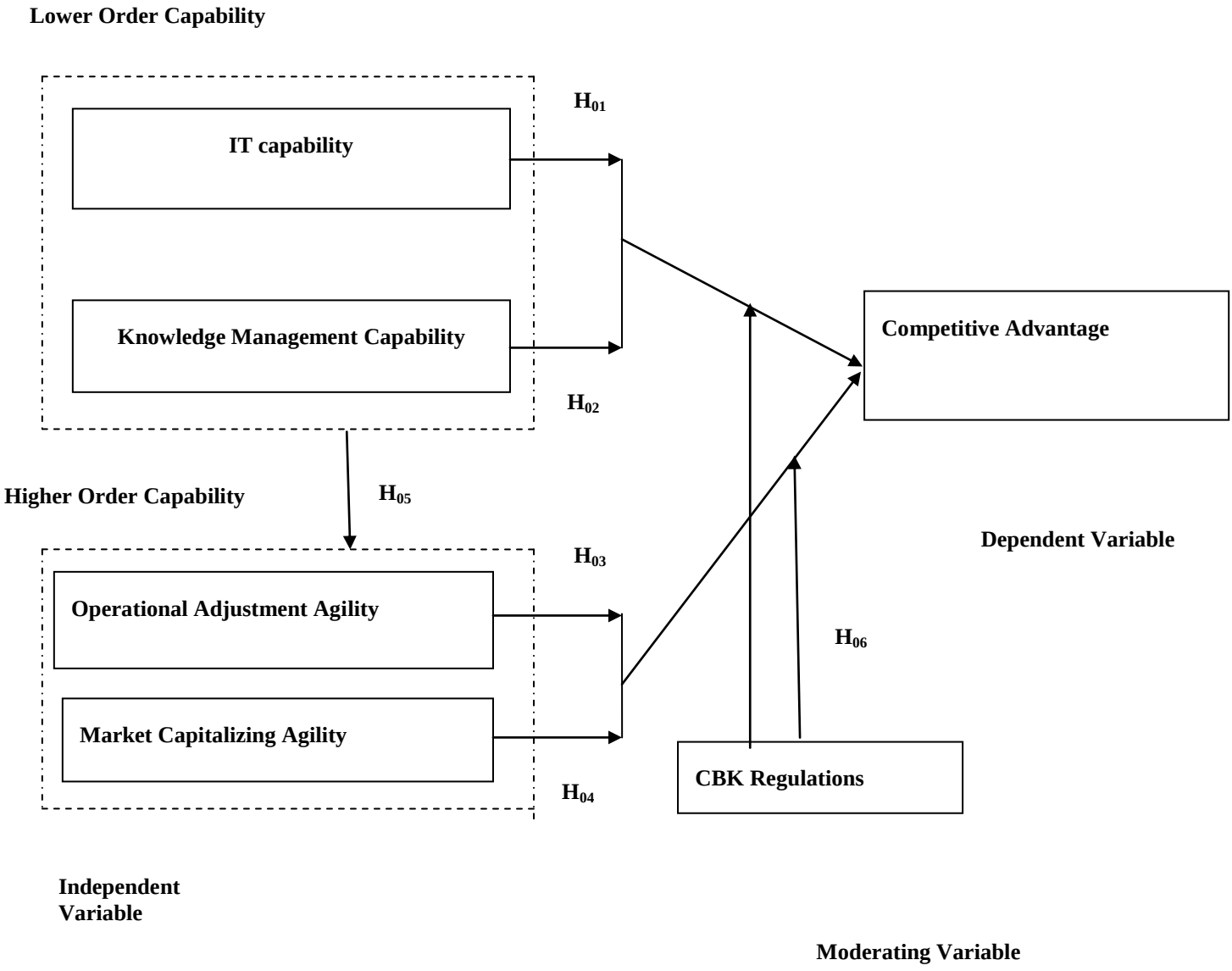
2.4 Conceptual Framework

According to Kombo and Tromp (2009) a concept is an abstract or general idea inferred or derived from specific instances. Finchman (2008) define a conceptual framework as a hypothesized model identifying the model under study and the relationship between the dependent and independent variables. Figure 2.1 is a figurative representation of the variables in this study. The predictor variable of the study is organizational strategic capabilities which are both lower order and higher order strategic capabilities.

Lower order organizational strategic capabilities are IT and KM capability while higher order organizational strategic capabilities are operational adjustment agility and market capitalizing agility. According to the view of a hierarchy of capabilities, various kinds of resources and specialized knowledge could be combined and integrated to generate lower-order capabilities. These lower-order capabilities are combined to generate higher-order capabilities, which can enhance the performance or competitive advantage of organizations (Grewal &Slotegraaf, 2007). Some researchers claim that the lower-order capabilities contain operational routines and higher-order ones contain dynamic capabilities. The relationship between organizational strategic capabilitiesand competitive advantage is moderated by Central Bank of Kenya regulations.

Figure 2.1

Conceptual Framework

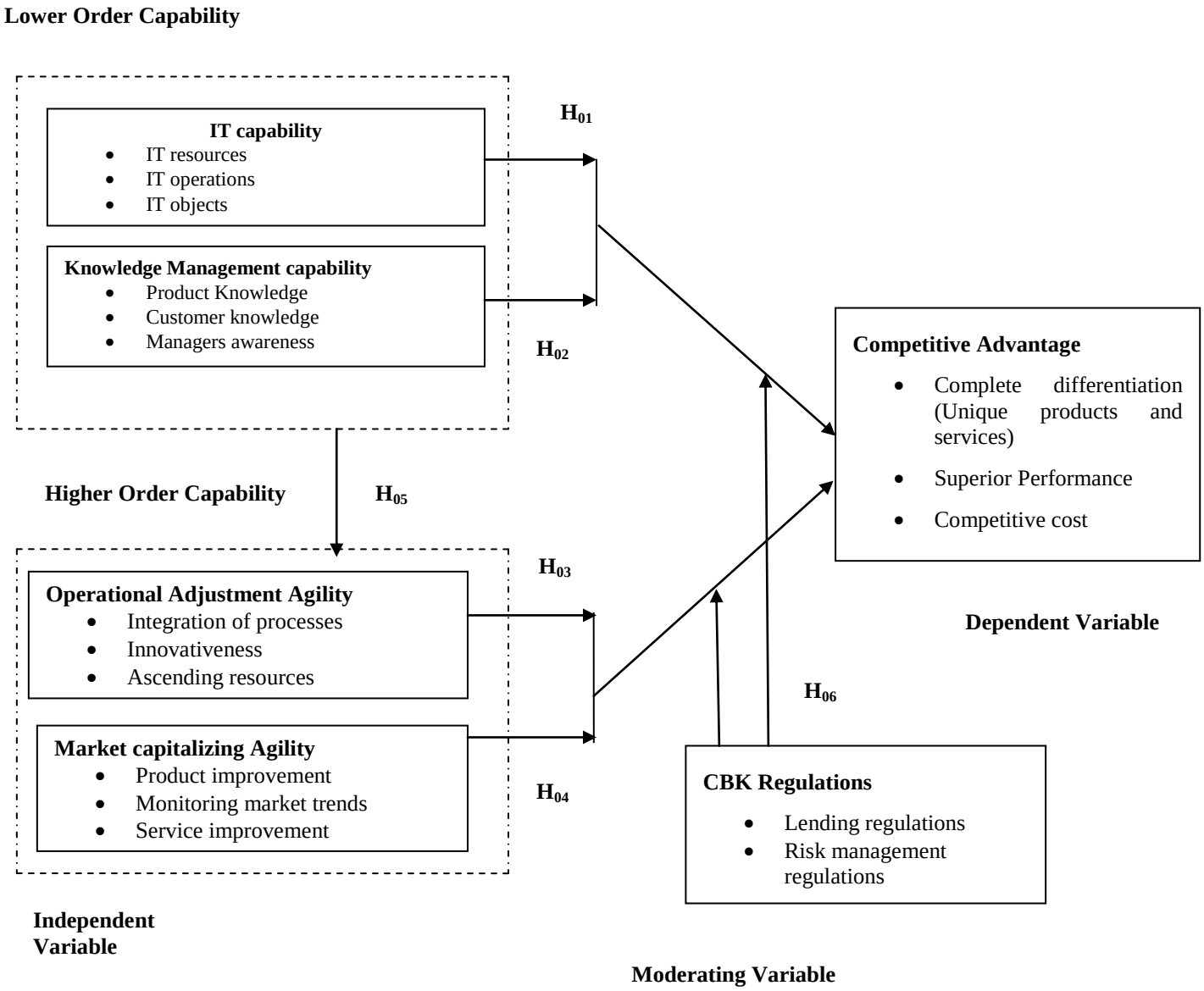


2.4.1 Operational Framework

In this section, the operational indicators of variables are presented in Figure 2.2. An operational framework is a diagrammatic representation of how the study variables will be measured. In this study, indicators of variables derived from empirical studies on similar variables are presented.

Figure 2.2

Operational Framework



As seen in Figure 2.2, IT capability was measured using three indicators that is IT resources, IT operations and IT objects; knowledge management capability was also measured using three indicators that is product knowledge, customer knowledge and managers awareness ; operational adjustment agility was measured using three indicators namely integration of processes, innovativeness and ascending resources while market capitalizing agility was measured using product improvement, monitoring market trends and service improvement. The dependent variable, that is competitive advantage, was measured using three indicators that is complete differentiation (unique products and services), superior performance and competitive cost while the moderating variable CBK regulations was measured through lending regulations and risk management regulations.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology, which was used to carry out the study. It describes the research philosophy, research design, population, the sampling frame, the sample and sampling techniques that will be used to select the sample size. It also presents data collection tool and methods as well as data analysis and presentation.

3.2Research Philosophy

The study was based on the positivist research philosophy. The positivist philosophical approach enables a study to set up hypotheses on the basis of the existing relevant theories (Callegaro et al., 2014). Then these hypotheses are tested and confirmed or disapproved by quantitative and statistical methods in order to answer the research objectives and accomplish the research purposes.

According toDaniel (2018), the positivist approach demands that the research should be conducted in a way that is value free-in and objective, the researcher is independent and should neither affect nor be affected by the subject of research, the end product of research is aimed to be law, like generalizations similar to those that are produced by natural scientists, and positivism emphasizes quantifiable observations that are used for statistical analysis.

The positivist approach was adopted because the study is objective, the researcher is independent of the study population and the results of the study are not shaped by the opinions of the researcher so as to find the exact situations of the effect of organizational strategic capabilities and compliance with CBK regulations on competitive advantage. This approach is also justified since it emphasizes quantifiable observations that can be

used for statistical analysis and since the study soughtto use quantifiable figures in a regression model to back up the findings, this philosophy was appropriate.

3.3 Research Design

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims at combining relevance of the research purpose with economy in procedure (Kothari, 2014). This study employed a descriptive survey research design. Descriptive research is conducted to describe the present situation, what people currently believe, what people are doing at the moment and so forth (Hens et al., 2013). The major purpose of descriptive survey research design is description of the state of affairs as it exists at present (Kothari, 2014). The choice of the research design is because of the need to describe the present situation regarding organizational strategic capabilities and level of compliance with CBK regulations as a strategic tool for achieving competitive advantage. This research design was suitable for answering the what, which and when questions which was the main question of this study as it sought to establish what effect organizational strategic capabilities have on competitive advantage of commercial banks in Kenya.

The choice of this research design was in line with the positivist research philosophy which emphasizes the need to formulate hypotheses which are tested and confirmed or disapproved by quantitative and statistical methods in order to answer the research objectives and accomplish the research purposes. This research design enables quantitative data to be collected through questionnaires after which it can be used to test the hypothesis as the positivist research philosophy demands.

3.4Target Population

A population is the total collection of all the elements about which the study wishes to make some inference (Blumberg et al., 2014). Other scholars such as Daniel (2018) define population as the entire set of relevant units of analysis or data while Ottand Longnecker (2015) argue that a target population consists of a list of elements or individual members of the overall population from which a sample is drawn.

The target population for this study wasall 39 licensed commercial banks operating in Kenya by the year 2017 as reported in the Bank Supervisory Report 2017 (Appendix VI). The study will however study 37 banks. The unit of observation wasthe head of human resource department, operations department, finance department, research and development department, information technology department, head of customer care department and sales and marketing department. Therefore, a total of 7 heads were targeted from each commercial bank making the total target to be259 heads.

3.5 Sampling Procedure

A sampling frame is a list of the target population from which a sample is obtained. Williams (2011) defines a sampling frame as a comprehensive list of all sampling units from which a sample can be selected. The sampling frame of the current study consisted of the list of the 37 operational commercial banks licensed by CBK and operating in Kenya at the time of the study excluding the commercial banks under receivership, statutory management and the bank in transition to be acquired.

A sampling technique involves a procedure used to obtain a smaller sample from a large target population which is believed to have the characteristics of the population (Wilson, 2014). Sampling is important in research because it enables the researcher to minimize the cost since only a portion of the population is involved. Sampling is the procedure a

researcher uses to gather people, places or things to study (Daniel, 2018). It is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of characteristics found in the entire group. This study however conducted a census on 37 commercial banks without adopting a sampling technique. The census approach was used because the sample size was not big enough for sampling. Furthermore, there is a need to have an in-depth opinion from the respondents. Parahoo (2014) argues that a census approach can be adopted for a population less than 200.

At the stage of sampling the respondents, purposive sampling procedure was adopted. The study sampled7 respondents from each of the 37 commercial banks. The respondents were head of human resource department, operations department, finance department, research and development department, information technology department, head of customer care department and sales and marketing department. The choice of the top level respondents from the two departments was due to their role in strategy formulation.

3.6Instrumentation

Parahoo (2014) defines a research instrument as a tool used to collect data. An instrument is a tool designed to measure knowledge attitude and skills. The study used primary data. The primary data collection instrument in this study was a questionnaire. This is because questionnaires allow the respondent to present their feelings on the subject matter enabling a greater depth of response. The study collected primary data using structured questionnaires and captured information through a 5-point Likert scale type.

Likert scale is an interval scale that specifically uses five anchors of strongly disagrees, disagree, neutral, agree and strongly agree. The Likert measures the level of agreement or disagreement. This type of questionnaires is more appropriate because it enables consistency in questions asked and data yielded is easy to analyze. Likert scales are good

in measuring perception, attitude, values and behavior (Upagade&Shende, 2012). A questionnaire was more appropriate for this study as it enabled the researcher to collect first-hand information over a short period of time.

3.7Ethical Consideration

This study adhered to appropriate research procedures and all sources of information will be acknowledged as far as possible. Before the questionnaire was administered, consent was sought and given by the respondents. The respondents were informed of their right not to take part in the survey. Full confidentiality was maintained especially when dealing with questionnaires and the identity of the respondents was kept secret. The sensitivity to the participants' emotions was observed when probing questions that are sensitive. The participants were also informed that the information they provide would not be used in any way to harm the participants or exploited for commercial and selfish personal gain, but only for academic purposes. Full disclosure, fair treatment and privacy were also practiced.

3.8Pilot Study

The questionnaire was pre-tested before being used for actual data collection procedure. Pre-testing of questionnaires is important to avoid drawbacks after administering the data collection tool. Zikmund et al. (2010) argues that pre-testing is a screening method that allows the researcher to try the questionnaire on a smaller group of respondents initially to allow for feed-back and corrections. This approach helps the researcher to minimize on wrong answers due to misinterpretation of questions or blanks in questionnaires due to respondents misunderstanding of questions.

Further pilot tests were used to test the validity and reliability testing of the data collection instrument. A pilot study was undertaken on 5% population of the sample population

which was included in the final research (Saunder et al., 2007). This represents 2 commercial banks. Cooper and Schindler (2014) argue that the respondents in a pilot test do not have to be statistically selected. A 5-10% of the population is sufficient for a pilot. In line with this argument, a pilot test on 2 commercial banks (5% of the target population) was hence sufficient for this study.

3.8.1 Reliability of the Research Instrument

According to Adejimi et al. (2010), reliability refers to the consistency of measurement and is frequently assessed using the test–retest reliability method. Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures. Portney and Watkins (2010) asserts that the positivists' paradigm insists on strict criteria for judging the quality or trustworthiness of the research findings objectivity and that one must show evidence that the findings are consistent with occurrences in the real world.

In this study, reliability was measured using Cronbach alpha. Cronbach alpha is a test of internal consistency frequently used to calculate the correlation values among answers on an assessment tool (Sullivan, 2011). Cronbach alpha calculates correlation among all the variables, in every combination. Cronbach's Alpha (α) indicates the extent to which a set of measurement items could be treated as measuring a single latent variable (Cronbach, 1951).Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items. It can be calculated using the formula;

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

Where;

N= the number of component (items)

$\bar{c}$ = the average inter-item covariance among the items (That is Average Pearson correlation coefficients between the components) and

$\bar{v}$ = the average variance

According to Cronbach (1951) and Cooper and Schindler (2009), reliability is the proportion of variance attributable to the true measurement of a variable and consistency of such measurement over time. It is concerned with the internal properties of a measure and the random error in the data and ranges from nil (0) to perfection (1). Cooper and Schindler (2009); Cronbach (1951) noted that a Cronbach Alpha Coefficient of 0.7 and above was acceptable because random error always exist regardless of the procedure used in the study. Christensen et al. (2011) noted that the threshold for Cronbach's Alpha varies among disciplines and the nature of the study. They argued that a value above 0.7 is generally accepted while a value of 0.6 is normally accepted for completely new instruments.

The measurement scale for reliability was tested using Cronbach Alpha Coefficient for every independent variable and for an alpha (α) of 0.7 and above the instrument will be interpreted as reliable (Cronbach, 1951). A high reliability estimate should be as close to one as possible.

The study adopted a Cronbach alpha of 0.7 which is accepted for instruments that are not completely new. The Cronbach's alpha was calculated so as to measure the reliability of the questionnaire before being used for the main survey. This was done by administering the questionnaire to 14 respondents from two randomly selected commercial banks which were not included in the main survey. The pilot test results for all the variables are presented in Table 3.1 and discussed thereafter.

Table 3.1

Reliability Test Results

Variable	Cronbach's Alpha	Number of Items	Decision
Market capitalizing agility	0.857	7	Reliable
Operational adjustment agility	0.842	8	Reliable
Information Technology Capability	0.875	8	Reliable
Knowledge Management Capability	0.717	9	Reliable
Compliance with central bank regulations	0.843	8	Reliable
Competitive Advantage	0.712	7	Reliable

The Cronbach alpha for the 7 questions which measures market capitalizing agility was 0.857 which is above the cutoff mark of 0.7 implying that the 7 measures show consistency in measurement of market capitalizing agility. No question was hence removed from the questions. The Cronbach alpha for the 8 questions which measures operational adjustment agility was 0.842 which is above the cutoff mark of 0.7 implying that the 8 measures show consistency in measurement of operational adjustment agility. No question was hence removed from the questions

The findings on IT capability also indicated that the Cronbach alpha for the eight questions which measures IT capability was 0.875 which is above the cutoff mark of 0.7 implying that the eight measures show consistency in measurement of IT capability. There was hence no need of adjusting the questions that measure IT capability. The study findings further showed that the Cronbach alpha for the nine questions which measures knowledge

management capability was 0.717 which is above the cutoff mark of 0.7 implying that the nine measures show consistency in measurement of knowledge management capability. Therefore, no question measuring knowledge management capability was removed.

In regard to compliance with central bank regulation, the reliability findings indicated that Cronbach alpha for the eight questions which measures compliance with central bank regulations was 0.843 which is above the cutoff mark of 0.7 implying that the eight measures show consistency in measurement of compliance with central bank regulations. The study therefore did not delete the any of the questions measuring compliance with central bank regulations. Further findings on competitive advantage indicated that the Cronbach alpha for the seven questions which measures competitive advantage was 0.712 which is above the cutoff mark of 0.7 implying that the seven measures show consistency in measurement of competitive advantage. The questions measuring competitive advantage were therefore not revised or deleted.

These findings are consistent with the discussion by Cooper and Schindler (2009); Cronbach (1951) that a Cronbach Alpha Coefficient of 0.7 and above was acceptable because random error always exist regardless of the procedure used in the study. Similarly, the findings are consistent with Christensen et al. (2011) who noted that the threshold for Cronbach's Alpha varies among disciplines and the nature of the study although a value above 0.7 is generally accepted while a value of 0.6 is normally accepted for completely new instruments.

Apart from the Cronbach Alpha values, the item-total statistics are also presented for each of the variables to further show the value of the Cronbach alpha if one of the questions under each variable was deleted. The results are presented in the Appendices four to eight. Since the joint value of Cronbach alpha as a result of all the 23 questions measuring organizational agility, eight questions measuring IT capability, nine questions measuring

knowledge management capability, eight questions measuring compliance with central bank regulation and seven questions measuring competitive advantage was already high and above the cutoff point, no question was deleted.

3.8.2 Validity of Data Collection Instruments

Validity in research refers to how accurately a study answers the study question or the strength of the study conclusions (Sullivan, 2011). In testing for validity, we need to ask whether the questions posed adequately address the objectives of the study. This should include whether or not the manner in which answers are recorded is appropriate (Brace, 2013). There are different forms of research validity and main ones are specified by Cohenet al.(2007) as content validity, criterion-related validity, construct validity, internal validity, external validity, concurrent validity and face validity.

In addition, the questionnaire was proofread to ensure that there are no errors both typographical and in form. Pilot testing helped to detect some, if not all the errors. The pilot respondents were allowed to ask questions relating to clarity of the questions which will help the researcher know the validity of questions framed. The feedback from the pilot test formed a basis for reviewing the questionnaire before final administration.

Construct validity of the research instrument was also tested. Construct validity is the extent to which the items in a scale measure the abstract or theoretical construct (Allred & Ross-Davis, 2011). Testing of construct validity concentrates not only on finding out whether or not an item loads significantly on the factor it is measuring, but also on ensuring that it measures no other factors discriminant (Brace, 2013).In this study, construct validity was assessed using Component Factor Analysis (CFA).

Before quantitative analysis, component factor analysis (CFA) was done as data reduction method to manageable levels. All factor loadings less than 0.4 were eliminated (Cooper & Schindler, 2009). To ascertain whether factor analysis was necessary, Kaiser- Meyer Oklin (KMO) test of sampling adequacy recommended by Brace (2013) was established. If KMO is more than 0.5, then factor analysis is necessary (Brace, 2013). The results are shown in Table 3.2.

Table 3.2

Kaiser-Meyer-Olkin (KMO) Test of Sample Adequacy

Variable	**Kaiser-Meyer-Olkin Value and Approx. Chi-Square**	**Value**
Knowledge Management Capability	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.776
	Approx. Chi-Square	114.22
Information Technology Capability	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.576
	Approx. Chi-Square	50.634
Organizational Agility	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.614
	Approx. Chi-Square	78.724
Central Bank of Kenya Regulations	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.586
	Approx. Chi-Square	58.443
Competitive Advantage	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.509
	Approx. Chi-Square	40.735

The results presented in Table 3.2 indicate that the sample size was adequate for further confirmatory analysis since KMO test on all the factors in the study generated values greater than 0.5, as recommended by Brace (2013). The KMO for knowledge management

capability was 0.776, information technology capability was 0.576, organizational agility was 0.614, Central Bank of Kenya regulations was 0.586 and competitive advantage was 0.509.

These KMO values are greater than 0.5hence a recommendations for factor analysis as recommended by Cohen et al.(2007) and Brace (2013). Since KMO test of sample adequacy recommended suitability of factor analysis, confirmatory factor analysis was conducted to establish the construct validity of the data. In order to increase the research instrument's reliability, communalities and Eigen values were used in the confirmatory factor analysis to establish the specific elements that measure the variables of the study (while also avoiding highly correlated variables). The communalities indicating factor loading are shown in Appendix Nine. The findings showed that all the 23 questions measuring organizational agility, eight questions measuring IT capability, nine questions measuring knowledge management capability, eight questions measuring compliance with central bank regulation and seven questions measuring competitive advantage had factor loadings above 0.5 hence no question was eliminated in accordance with the argument by Cooper and Schindler (2009).

Apart from the factor loadings, the study also established the Eigen values to extract the significant factors. All the factors with Eigen values exceeding one were retained as significant. The organizational agility variable was evaluated using 23 elements from which factor analysis produced seven critical factors constituting organizational agility, and which cumulatively accounted for 97.99% of the total variance of the construct (Appendix 10).

IT capability variable was evaluated using eight items from which factor analysis produced two critical factors constituting the IT capability, and which cumulatively accounted for 81.79% of the total variance of the construct (Appendix 11). The findings also showed that knowledge management variable was evaluated using nine elements from which factor analysis produced three critical factors constituting the knowledge management, and which cumulatively accounted for 88.47% of the total variance of the construct (Appendix 12).

The Eigen value findings further indicated that compliance with central bank regulations variable was evaluated using 8 elements from which factor analysis produced three critical factors constituting compliance with central bank regulations, and which cumulatively accounted for 85.99% of the total variance of the construct (Appendix 13). The competitive advantage variable was evaluated using seven elements from which factor analysis produced two critical factors constituting the competitive advantage, and which cumulatively accounted for 73.79% of the total variance of the construct (Appendix 14).

3.9 Methods of Data Collection

Burns and Grove (2010) define data collection as the precise, systematic gathering of information relevant to the research problems. After obtaining a letter from the university, a research permit was applied for and obtained from NACOSTI after two weeks. These approvals were attached to then attached to the questionnaires and distributed to the target respondents. Data was collected using drop and pick method. The list of banks and their contacts were obtained from the internet and each bank was called to book an appointment with the managers.

Upon obtaining an appointment, the researcher proceeded to the specific commercial banks with the questionnaires and the approvals for research (Introduction letter and NACOSTI permit). During the meeting with the bank manager, the researcher introduced himself and the purpose of the research and requested the manager to help in filling up of the questionnaires by distributing to the relevant staff in the relevant sections (human resource department, operations department, finance department, research and development department, information technology department, head of customer care department and sales and marketing department).

Questionnaires were dropped and picked later to enable the respondents have enough time to respond to them. The respondents were given one week to respond to the questionnaire. When they didn't manage to fill the questionnaires within a week, they were given one more week. The use of drop and pick methodology enhanced the response rate of the study and that is why it was appropriate for this study (Allred & Ross-Davis, 2011). Data was collected at the head quarter branches of the commercial banks in Nairobi. It took up to a month to complete the data collection process. For questionnaires that were not returned, the researcher enquired from the bank managers what the reasons were.

3.10 Methods of Data Analysis

Smith (2015) defines data analysis as a systematic manipulation, processing, arrangement and organization of data in order to produce meaningful information. Data gathered using the questionnaires will be analyzed quantitatively using analyzed by both descriptive statistics and inferential statistics. SPSS which generate both descriptive and inferential statistics will be employed. Descriptive statistics including the mean and standard deviation were used to capture the characteristics of the variables under study.

Descriptive analysis is defined by Nachmias and Nachmias (2006) as statistical procedures that are used to describe the population one is studying. They also contended that descriptive statistics use graphical and numerical summaries to give a picture of a data set. Inferential statistics were also used in the study.

3.10.1 Diagnostic Tests

The regression analysis using the ordinary least square (OLS) model has been assumed for this study. However, before its use, the data needs to be examined to ascertain whether it satisfies the assumptions of the model. The study hence conducted diagnostic tests to ensure that the assumptions of ordinary least square were satisfied before conducting a multiple linear regression analysis and testing the hypothesis. The tests are as follows; normality test, linearity test, multicollinearity, goodness of fit and homoscedasticity test.

Normality Test.A normal distribution is not skewed and is defined to have a coefficient of kurtosis of three or less. In order to assess likelihood that the data set is normally distributed, Kolmogorov-Smirnov (K-S) Test was performed. According to Ghasemi and Zahediasl (2012), K-S test is the most commonly used normality test possibly because of disadvantages of other tests and that it can easily be examined using SPSS.

One-Sample Kolmogorov-Smirnov Test (KS) was conducted to test the normality of the dependent variable. The Kolmogorov-Smirnov test is a non-parametric procedure that determines whether a sample of data comes from a specific distribution, such as normal, uniform, Poisson, or exponential distribution. The null and alternative hypotheses are stated below as follows:

H_o: The data is normally distributed (Not different from a normal distribution)

H_1: The data is not normally distributed (Different from a normal distribution)

The rule is that if the p-value is greater than 0.05 (Not significant), Ho is not rejected and H1 is rejected, if the p -value is less than 0.05 (Significant), Ho is rejected and H1 is not rejected.

Linearity Test. Chan and Tong (1986) argue that linearity means that two variables, "x" and "y," are related by a mathematical equation "y = cx," where "c" is any constant number. The importance of testing for linearity lies in the fact that many statistical methods require an assumption of linearity of data (the data was sampled from a population that relates the variables of interest in a linear fashion).

This means that before using common methods like linear regression, tests for linearity must be performed (otherwise, the linear regression results cannot be accepted). The study used a scatterplot computed using statistical package for social sciences version 21 to test for linearity and then observe the resulting plot for linearity.

Linearity is displayed by the data points being arranged in the shape of an oval. If any other shape other than oval is observed, it is most likely that the population from which the data came from is not linear in terms of the variables being analyzed. Thus, if the oval shape is not observed, it is not indicative of linearity and hence the data will fail the test of linearity. In such a case, a linear regression model is not suitable for the study (Ghasemi & Zahediasl, 2012).

Multicollinearity. Multicollinearity refers to excessive correlation of the predictor variables. When correlation is excessive (using the rule of thumb, r>0.80), standard errors and beta coefficients become large, making it difficult or impossible to assess the relative importance of the predictor variables. Multicollinearity is less important where the research purpose is sheer prediction since the predicted values of the dependent remain stable, but Multicollinearity is a severe problem when the research purpose includes causal

modeling (Ongore, 2008). The study used Variance Inflation Factor (VIF) using the threshold of 10 for severe multicollinearity. A value above 10 indicates that there is absence of multicollinearity.

Homoscedasticity Test. Describes a situation in which the error term (That is, the "noise" or random disturbance in the relationship between the independent variables and dependent variable) is the same across all values of independent variables. Homoscedasticity suggests that the dependent variable has an equal level of variability for each of the values of the independent variables (Garson, 2012). A test for homoscedasticity is made to test for variance in residuals in the regression model used. If there exist equal variance of the error term, we have a normal distribution. Lack of an equal level of variability for each value of the independent variables is known as Heteroskedasticity, The Breusch-Pagan test developed by Breusch and Pagan (1979) was used to test for homogeneity in a linear regression model.

3.10.2Effect of Organizational strategic capabilities on Competitive Advantage

To test the effect of knowledge management capability, information technology capability, market capitalizing agility and operational adjustment agility on competitive advantage, inferential statistics namely; regression coefficient and bivariate correlation wereused. The following multivariate regression model was used in determination of coefficients of the predictor variables (knowledge management capability, information technology capability, market capitalizing agility and operational adjustment agility) in relation to the dependent variable (Competitive advantage).

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon} \quad \text{..... (i)}$$

Where:

Y = Competitive Advantage

X_1 = Knowledge Management Capability

X_2= Information Technology Capability

X_3 = Market Capitalizing Agility

X_4= Operational Adjustment Agility

ε = Error term

In the model, $\beta 0$ = the constant term while the coefficient $\beta_i i$= 1….4 was used to measure the sensitivity of the dependent variable (Y) to unit change in the predictor variables while$\varepsilon$is the error term which captures the unexplained variations in themodel. Results were presented in form of tables, charts and figures.

3.10.3Moderating Effect of Compliance with Compliance with central bank regulations

In testing for the moderating effect of Compliance withCBK regulations, the study adopted the Moderated Multiple Regression (MMR) analysis. Hierarchical regression models were established as below. The R square of the regression models was compared. To establish whether there was a significant moderating effect of CBK regulations, the significance of the interaction was used to test the hypothesis.

$$\mathbf{Y = \beta_0 + \beta_1 X + \varepsilon} \quad \text{…….} \quad \text{(ii)}$$

$$\mathbf{Y = \beta_0 + \beta_2 X + \beta_3 Z + \varepsilon} \quad \text{……} \quad \text{(iii)}$$

$$\mathbf{Y = \beta_0 + \beta_4 X + \beta_5 Z + \beta_6 X.Z + \varepsilon} \quad \text{……} \quad \text{(iv)}$$

Where :

Y = Competitive Advantage

X = Organizational strategic capabilities(Joint)

Z = Moderating variable (compliance with CBKRegulations)

X.Z = Interaction of compliance with CBK Régulation and Strategic Capabilities

ε = Error term and α= constant

$\beta_{1 \text{ to }} \beta_6$ = coefficient of independent variables

The importance of using MMR in evaluating the effect of moderator variables is evident from the fact that this technique has been extensively used by researchers (Evans, 2011). From the regression above, compliance with central bank regulations will be said to have a significant moderating effect if the beta coefficient of the interacting term (β_3) is significant(Has a p-value less than 0.05). T-test and F- Statistic at 5% level of significance will be used to examine significance of coefficients of variables in the model.

3.10.4Mediating Effect of Higher Order Capabilities

To determine whether higher order capabilities mediates the lower order capabilities and competitive advantage, four-step models as Baron and Kenny (1986) recommends were estimated and the coefficients to be tested for significance at each step.

Step 1: Regression analysis with LOC Predicting Y

$Y = \beta_0+\beta_1 LOC+ \varepsilon$ …….…. (v)

Step 2: Regression analysis with LOC predicting HOC

$HOC = \beta_0+\beta_2 LOC+ \varepsilon$ …… (vi)

Step 3: Regression analysis with HOC predicting Y

$Y = \beta_0+\beta_3 HOC+ \varepsilon$ ……..... (vii)

Step 4: Regression analysis with LOC and HOC predicting Y

$Y == \beta_0+\beta_4 LOC+\beta_5 HOC+ \varepsilon$…… (viii)

Where;

Y = Competitive Advantage

LOC = Lower Order Capability (Composite Index for IT and Knowledge Management Capabilities)

HOC = Higher Order Capability (Composite of Operational Adjustment Agility and Market Capitalizing Agility)

β_0= Constant

$\beta_4$and β_7= Beta coefficients

If one or more relationships in steps 1 to 3 are non-significant, then a conclusion of non-mediation is made (Baron & Kenny, 1986). In case of significant relationships form step 1 through 3, then one proceeds to step 4 where mediation is supported when the effect of LOC remains significant after controlling for HOC. If the HOC is not significant when LOC is controlled, there is full mediation; and if both LOC and HOC significantly predict Y, there is partial mediation.

3.10.4 Hypothesis Testing

Multiple regression analysis in the form of analytical model will be applied to test whether or not the null hypotheses stipulated in this study are acceptable. Cooper and Schindler (2009) advocate that multiple regression helps to decide whether the individual hypothesis is statistically supported or not. The influence of organizational strategic capabilities on competitive advantage was tested by comparing the p-value against the level of significance of 0.05. Where the p-value of the beta coefficient was greater than 0.05, the null hypothesis was not rejected, but where the p-value was less than 0.05, the null hypothesis was rejected.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The chapter contains findings of the study. In this chapter, the frequency distributions are first reported followed by descriptive results then correlation results. These are followed by results on the influence of organizational strategic capabilities on competitive advantage. Lastly, the findings on the moderating effect of compliance with Central Bank of Kenya Regulations on the relationship between organizational strategic capabilities and competitive advantage are presented.

4.2 Response Rate and Demographics

The following are the results on the response rate and characteristics of the respondents.

4.2.1 Response Rate

The researcher administered a total of 259 questionnaires to respondents comprising of head of human resource department, operations department, finance department, research and development department, information technology department, head of customer care department and sales and marketing department of 37 commercial banks after 2 (Standard Chartered and Sidian Bank) had been involved in the pilot study. Respondents were drawn from the 37 operational commercial banks licensed by CBK and operating in Kenya. A total of 219 questionnaires were dully filled and returned which represented a response rate of 84.6%. The results are shown in Table 4.1.

Table 4.1

Response Rate

Response	Frequency	Percentage
Questionnaires Responded to	219	84.6%
Questionnaires Not Responded to	40	15.4%
Total	**259**	**100%**

The response rate of 84.6% was adequate since according to Zikmund et al. (2010), a response rate of 50% is acceptable for analyzing and publishing while 60% is good and above 70% is considered very good. On average, five to six responses were received from each commercial bank and all commercial banks responded to the survey. This is also consistent with the argument by Williams (2011) who argued that higher responses above 50% are suitable for survey studies. The high response rate is attributed to the data collection procedures that were used in the study. The procedures included use of competent research assistants, pre-notification of respondents and voluntary participation by respondents; drop and pick of questionnaires to allow for ample time to fill; assurance of confidentiality and anonymity and follow up calls to clarify queries from the respondents.

4.2.2Demographic Characteristics

This section contains study findings on respondents' demographic characteristics comprising of age, level of education and experience. According to Smith (2015), establishing the demographic characteristics of the respondents does not affect the relationship between the variables of the study. It however describes the population under investigation.

4.2.2.1 Respondents Age

The study sought to establish the age of the respondents. The study results are presented in Table 4.2.

Table 4.2

Respondents Age

	Frequency	Percent
21-30 Years	12	5.5
31-40 Years	32	14.6
41-50 Years	91	41.6
Over 50 Years	84	38.4
Total	**219**	**100**

As shown in Table 4.2, majority of the respondents, 38.4% were of age bracket of 50 years and above while those aged between 41 and 50 years were also 41.6%. Similarly, 14.6% of respondents were of age bracket 31 and 40 years while only 5.5% of respondents aged between 21 and 30 years. The results indicate that most of the respondents occupying the positions of head of human resource department, operations department, finance department, research and development department, information technology department, head of customer care department and sales and marketing department in commercial banks in Kenya are of age 41 years and above. In an investigation of the strategic benefits and challenges in the use of customer relationship management systems among commercial banks in Kenya, Muro et al. (2013) established that majority of the employees in management positions in the commercial banks are aged above 40 years.

4.2.2.2 Level of Formal Education

The study sought to establish respondents' level of formal education. The study results are presented in Table 4.3.

Table 4.3

Level of Formal Education

Level of Formal Education	Frequency	Percent
Tertiary	20	9.1
University	199	90.9
Total	**219**	**100**

As presented in Table 4.3, the findings indicated that majority, 90.9%, of the respondents, had acquired university level of education while 9.1% had acquired tertiary level of education. None of the respondent had secondary level of education. The findings of the study show that all respondents included in the study were educated and would understand the contents of the questionnaires and respond to them accordingly. In a study to determine the influence of strategic innovation on performance of commercial banks in Kenya, Lilly and Juma (2014) established that majority of the employees in the management positions among commercial banks in Kenya are university educated.

4.2.2.3 Respondents Experience

The study also sought to establish respondents' level of experience. The results of the study are presented in Table 4.4.

Table 4.4

Respondents Work Experience

Work Experience	Frequency	Percent
Less than 3 Years	12	5.5
3 to 5 Years	88	40.2
6 to 10 Years	60	27.4
Over 10 Years	59	26.9
Total	**219**	**100**

The findings as shown in Table 4.4 indicated that 26.9% of respondents had worked in the bank for more than 10 years while those who had worked between six and ten years were 27.4%. Those who had worked in the bank between three and five years were the majority and accounted for 40.2%. Only 5.5% of respondents had worked in the bank for less than 3 years. The results imply that majority of the respondent had worked in the bank for more than three years.

This was important to the study since the respondents provided important information which added value to the study. Similar findings were established by a study carried out by Ngugi and Karina (2013) on the effect of innovation strategy on performance of commercial banks in Kenya and revealed that the average work experience for top management employment among commercial banks is 6 years.

4.3 Extent of Organizational Strategic Capabilities, Compliance with CBK Regulations and Competitive Advantage

This section presents the major findings of descriptive statistics results indicating the extent of Strategic Capabilities, Compliance with CBK Regulations and Competitive

Advantage among the commercial banks in Kenya. The mean and standard deviation for each objective element are presented and discussed. The findings are presented in form of tables.

4.3.1 Knowledge Management Capability

The first specific objective of the study was to establish the effect of knowledge management capability on competitive advantage of commercial banks in Kenya. First, the respondents were asked to indicate the extent to which the bank provides on the job training to improve employee's knowledge. The results are presented in Table 4.5.

Table 4.5

Extent of on the Job Training

Extent of on the Job Training	Frequency	Percent
Moderate Extent	98	44.7
High Extent	76	34.7
Very High Extent	45	20.5
Total	**219**	**100**

According to the results, majority of the respondent, 44.7% agreed to a moderate extent that their employers provide on job training to improve employee's knowledge. Those who agreed to a high extent with the statement were 34.7% while only 20.5% agreed to a very high extent. The implication of the findings is that most of the commercial banks provide employees on job the training to a moderate extent to improve employee's knowledge.The findings are consistent with the findings of a study by Nzuve and Omolo (2012) on the practice of the learning organization and its relationship to performance among Kenyan

commercial banks and established high frequency of trainings to improve competitive advantage of commercial banks.

In addition, respondents were asked to indicate the frequency in which organization train employees to improve their skills. The results of the study are presented in Table 4.6.

Table 4.6

Frequency of Training

Frequency of Training	**Frequency**	**Percent**
Twice Per Year	61	27.9
Three times per Year	69	31.5
More than three times per Year	89	40.6
Total	**219**	**100**

According to the results, 40.6% of the respondents indicated that their organizations train employees more than three times per year while 31.5% indicated that training is done three times per year. On the other hand, 27.9% percent of respondents indicated that training in the organization happens twice per year. The implication of the findings is that most of the commercial banks in Kenya conduct employee training more than three times per year. These findings are consistent with the findings of a study by Katua (2015) on the effect of training and development strategies on the performance of commercial banks in Kenya and established that commercial banks have embraced training in order to equip their employees to perform in the ever changing business environment.

Further, respondents were asked to indicate their level of agreement with statements on Knowledge Management Practices on a scale of 1-5 where 1=Very low extent, 2=Low

extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The results are presented in Table 4.7.

Table 4.7

Extent of Adoption of Knowledge Management Practices

Statement	Mean	Standard Deviation
In my organization, the recruitment systems favor competent recruits	4.47	0.77
In my organization, the deployment of employees to units is based on competence	4.38	1.07
In my organization, research and development is conducted to enhance the firm's knowledge on products	4.19	1.07
In my organization, research and development is conducted enhance the firm's knowledge on services	4.16	1.05
In my organization, research and development is conducted to enhance the firm's knowledge on services	4.15	0.92
In my organization, mechanisms have been put in place to enhance knowledge on customer needs	3.89	0.85
In my organization, mechanisms have been put in place to enhance knowledge on customer preferences	3.92	0.72
In my organization, mechanisms have been put in place to enhance knowledge on customer buying behavior	3.62	1.05
In my organization, Knowledge sharing to enhance knowledge on governance of the firm is practiced	4.30	1.07
Average	**4.12**	**0.95**

According to the results, it was established that among the commercial banks in Kenya, the recruitment systems favor competent recruits to a high extent (M = 4.47, SD = 0.77), the deployment of employees to units is based on competenceto a high extent (M = 4.38, SD = 1.07) and that research and development is conducted to enhance the firm's knowledge on products to a high extent (M = 4.19, SD = 1.07). Omondi et al. (2011) similarly focused on

strategic human resource among commercial banks and established that conducting research and development to enhance the firm's knowledge on products, deployment of employees to units based on competence and having recruitment systems that favor competent recruits is highly practiced among commercial banks in Kenya.

The findings also indicated that commercial banks in Kenya conduct research and development to enhance the firm's knowledge on services to a high extent (M =4.16, SD=1.05), research and development is conducted to enhance the firm's knowledge on services to a high extent (M =4.15, SD = 0.92) and that Knowledge sharing to enhance knowledge on governance of the firm is similarly practiced to a high extent(M = 4.30, SD =1.07).Maseki (2012) in their interrogation of Knowledge management and performance of commercial banks in Kenya similarly documented that commercial banks in Kenya have embraced the strategy of conducting research and development to enhance the firm's knowledge on services, products and governance in order to sustain a competitive advantage and realize more profits.

Other results also indicated that commercial banks in Kenya have put mechanisms in place to enhance knowledge on customer needs to a high extent (M = 3.89, SD = 0.85), mechanisms have been put in place to enhance knowledge on customer preferences to a high extent (M = 3.92, SD = 0.72) and that they have also put mechanisms in place to enhance knowledge on customer buying behavior to a high extent (M = 3.62, SD = 1.05). Comparing the findings to the findings of a study by Chweya et al. (2014) focusing on knowledge management practices and its effect on firm performance of commercial banks' performance in Kenya, it was established that these commercial banks have made efforts to enhance their knowledge management practices such as having practices to collect and analyse information on the knowledge on customer needs, knowledge on customer preferences and knowledge on customer buying behaviour.

The most prevalent Knowledge Management Capability was recruitment systems favor competent recruits (M = 4.47, SD = 0.77), deployment of employees to units based on competence (M = 4.38, SD = 1.07), conducting research and development to enhance the firm's knowledge on products (M = 4.16, SD = 1.05), conductingresearch and development to enhance the firm's knowledge on services (M = 4.15, SD=0.92), conducting research and development to enhance the firm's knowledge on services (M = 4.15, SD = 0.92) and Knowledge sharing to enhance knowledge on governance of the firm (M = 4.30, SD = 1.07). However, the leastprevalent knowledge management capability is putting in place mechanisms to enhance knowledge on customer needs (M = 3.89, SD = 0.85) andputting in place mechanisms to enhance knowledge on customer preferences (M = 3.92, SD = 0.72).

On the whole, the commercial banks have developed Knowledge Management Capability as seen from the aggregate mean response (M = 4.12, SD = 0.95) and that there was little variability in the responses across the commercial banks (SD = 0.96). The results concur with Teece et al. (1997) who suggested that the success of a firm relies on its ability to integrate, build, and reconfigure internal and external competencies to achieve new forms of competitive advantage.

4.3.2 Information Technology Capability

The second specific objective of the study was to assess the effect of information technology capability on competitive advantage of commercial banks in Kenya. The following subsection presents findings concerning how respondents regarded the various issues under this variable. First, the respondents were asked to indicate how widely IT is applied / implemented in their operations. The results are presented in Table 4.8.

Table 4.8

IT Application

ICT Application	Frequency	Percent
Highly Applied	116	53
Very Highly Applied	103	47
Total	**219**	**100**

The results show that majority of respondents, 53%, agreed that IT is highly applied/implemented in their operations while 47% agreed that IT is very highly applied/implemented in their operations. The results imply that majority of commercial banks highly apply/ implement IT in their operations. The findings are consistent with the findings of a study by Aduda and Kingoo (2012) that focused on the relationship between electronic banking and financial performance among commercial banks in Kenya and established that commercial banks have greatly invested in IT in order to cope and remain competitive as well as cut operational costs.

The respondents were further asked to indicate the frequency in which the organization's IT experts are trained per year. The results are presented in Table 4.9.

Table 4.9

Frequency of Training IT Experts

Frequency of Training IT Experts	Frequency	Percent
Twice Per Year	78	35.6
Three Times per Year	46	21
More than Three Times per Year	95	43.4
Total	**219**	**100**

As indicated in Table 4.9, the results showed that 43.4% of respondents indicated that IT experts in the organization are trained more than three times per year while 35.6% indicated twice per year and only 21% indicated that the IT expert training happens three times per year. The results imply that majority of commercial banks ensure that their IT experts are trained more than three times per year. The findings are consistent with the findings of a study by Nzuve and Omolo (2012) which focused on the practice of the learning organization and its relationship to performance among Kenyan commercial banks and revealed high frequency of employee training among commercial banks in Kenya.

Further, respondents were asked to indicate their level of agreement with statements on Information Technology Capability on a scale of 1-5 where 1=Very low extent, 2=Low extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The results are presented in Table 4.10.

Table 4.10

Extent of Information Technology Capability

Statement	Mean	Standard Deviation
My bank's ICT capability is characterized by investment towards improvement of the ICT hardware	4.19	0.77
My bank's ICT capability is characterized by investment towards improvement of the ICT software	3.97	1.25
My bank's ICT capability is characterized by investment towards improvement of the skills of the ICT personnel	4.41	0.95
My bank's ICT capability is characterized by Continuous recruitment of the best ICT experts available	4.08	0.74
My bank's ICT capability is characterized by continuous utilization of ICT to manage market information and detect change signals	4.05	0.76
My bank's ICT capability is characterized by continuous utilization of ICT to manage customer information	4.10	0.63
My bank's ICT capability is characterized by using ICT to support key business processes	4.39	0.68
Average	**4.18**	**0.82**

The results indicated that the commercial bank's ICT capability is characterized by investment towards improvement of the ICT hardware to a high extent (M =4.19, SD = 0.77), commercial banks ICT capability is characterized by investment towards improvement of the skills of the ICT personnel to a high extent (M =4.41, SD = 0.95) and that the commercial banks ICT capability is characterized by continuous recruitment of the best ICT experts available to a high extent (M =4.08, SD = 0.74).The findings are consistent with that of Otieno (2010) who in his study on application of ICT strategy in

enhancing competitive advantage among commercial banks in Kenyarevealed that commercial banks have investment towards improvement of the ICT hardware, improvement of the skills of the ICT personnel and recruiting best ICT experts so as to enhance their IT capability and improve their dynamic capability.

It was also established that the commercial banks ICT capability is characterized by continuous utilization of ICT to manage market information and detect change signals to a high extent (M = 4.05, SD = 0.76), commercial banks ICT capability is characterized by continuous utilization of ICT to manage customer information to a high extent (M = 4.10, SD = 0.63) and that commercial banks ICT capability is characterized by using ICT to support key business processes to a high extent (M = 4.39, SD = 0.68).Comparing this study to the findings of a study by Wachira and Ondigo (2016) that focused on the effect of technological innovation on the financial performance of commercial banks in Kenya, it was established that there exists consistency since Wachira and Ondigo (2016) established that in Kenya, commercial banks continuously utilize ICT to manage market information and detect change signals, manage customer information and support key business processes in order to improve their performance.

The results also indicated that commercial banks ICT capability is characterized by investment towards improvement of the ICT software to a moderate extent (M = 3.97, SD = 1.25). An implication from the findings is that the most prevalent IT capability is investment towards improvement of the skills of the ICT personnel (M = 4.41,SD = 0.95), followed by using ICT to support key business processes (M = 4.39, SD = 0.68), investment towards improvement of the ICT hardware (M = 4.19, SD = 0.77), Continuous recruitment of the best ICT experts available (M = 4.08, SD = 0.74) and continuous utilization of ICT to manage customer information(M = 4.05, SD = 0.76). The least

prevalent IT Capability is continuous utilization of ICT to manage market information and detect change signals (M = 4.05, SD = 0.76) and investment towards improvement of the ICT software (M = 3.97, SD = 1.25). These needs to be improved more as the commercial banks seek to improve gain competitive advantage.

Overall, it can be implied that the commercial banks in Kenya have adequate IT capability (M = 4.18) and that there is a wide variation in the responses on IT capability (SD = 0.82). The findings are consistent with that of a study by Muriuki (2011) on the effect of technology adoption on agency banking among commercial banks in Kenya and established that there has been investment by commercial banks in Kenya towards improvement in their IT capability.

4.3.3 Market Capitalizing Agility

The third specific objective of the study was to determine the effect of market capitalizing agility on competitive advantage of commercial banks in Kenya. Respondents were asked to indicate their level of agreement with statements on Information Technology Capability on a scale of 1-5 where 1=Very little extent, 2=little extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The results are presented in Table 4.11.

Table 4.11

Extent of Implementation of Market Capitalizing Agility

Statement	Mean	Standard Deviation
My bank continuously conducts market surveys to establish the trends in the market	3.98	1.31
My bank continuously monitors the market trends and adjusting accordingly	3.46	1.50
My bank continuously monitors the market status and adjusting accordingly	4.11	1.32
My bank quickly improves services according to change of customers' preferences	3.34	1.37
My bank quickly improves products according to change of customers' preferences	3.49	1.14
My bank continuous communicates with customers to understand their preferences	4.16	0.77
My bank uses modeling to predict the market trends in the future	3.55	1.19
Average	**3.73**	**1.23**

As indicated in Table 4.11, it was indicated that commercial banks in Kenya continuously monitors the market status and adjusts accordingly to a high extent (M=4.11, SD = 1.32), continuously communicates with their customers to understand their preferences to a high extent (M = 4.16, SD = 0.77) as well as continuously conduct market surveys to establish the trends in the market (M = 3.98, SD = 1.31). Comparing the results to that of a study by Wanjiru and Njeru (2014) who focused on the impact of strategic response to change on financial performance of commercial bank in Kenya, it was established that there is a consistency with the findings by Wanjiru and Njeru (2014) that some of the strategic responses put in place by commercial banks to respond to changes in the market are continuously monitoring the market status and adjusting, having a better relationship with

the customers to understand their preferences and conducting market surveys to understand the market trends.

The results also showed that commercial banks in Kenya continuously monitors the market trends and adjust accordingly to a moderate extent (M = 3.46SD =1.50), commercial banks in Kenya improves services according to change of customers' preferences to a moderate extent (M = 3.34 , SD =1.37), commercial banks in Kenya quickly improves products according to change of customers' preferences to a moderate extent (M = 3.49, SD =1.14) and uses modeling to predict the market trends in the future (M = 3.55, SD =1.19).

Similar findings were established in a study by Njihia (2009) on strategic responses of Kenya Commercial Bank limited to changes in the Kenyan banking industry who indicated that the commercialbanks employed speed to adjust accordingly to the market changes by improving their services according to change of customers' preferences, quickly improving products according to change of customers' preferences and modeling to predict the market trends in the future and adjusting fast.

These results imply that the most prevalent market capitalizing capability is continuously communicating with customers to understand their preferences (M = 4.16, SD = 0.77), continuously monitoring the market status and adjusting accordingly (M = 4.11, SD = 1.32), continuously conducting market surveys to establish the trends in the market (M = 3.98, SD = 1.31) and using modeling to predict the market trends in the future (M = 3.55, SD = 1.19). On the other hand, the least prevalent market capitalizing agility among commercial banks in Kenya are continuously monitoring the market trends and adjusting accordingly (M = 3.46 SD =1.50), improving services according to change of customers' preferences (M = 3.34, SD = 1.37) and quickly improving products according to change of customers' preferences (M = 3.49, SD = 1.14).

These are the market capitalizing agility that needs an improvement in order to improve on competitive advantage. As a whole, there is an agreement that market capitalizing agility among commercial banks in Kenya has been adopted at a high extent (M = 3.72) and that varies across the commercial banks (SD = 1.23).

4.3.4 Operational Adjustment Agility

The fourth specific objective of the study was to find out the effect of operational adjustment agility on competitive advantage of commercial banks in Kenya. First, the respondents were asked whether they considered their business plan flexible. The results revealed that all respondent indicated that their business plan is flexible. This implies that commercial banks adopt business plans that are flexible. Further, respondents were asked whether their business plan is responsive to changes in the business environment. The results revealed that all the respondents agreed that their business plan is responsive to changes in the business environment. This implies that commercial banks adopt business plans that are responsive to changes in the business environment. The findings are consistent with the findings of a study by Musyoka (2012) who focused on the competitive strategies adopted by Kenya Commercial Bank limited in retail banking and indicated that the commercial bank had put in place a number of strategies to respond adequately to changes in the environment of operation.

The respondents were also asked to indicate the extent to which various factors such as short term business opportunities, immediate market presentation of a new product, unpredictability of the changes in market levels and changes in market opportunitiesinfluence the type of organizational agility plan undertaken by the bank. The respondents were to use a scale of 1-5 where 1=Very low extent, 2=Low extent,

3=Moderate extent, 4=High extent and 5= Very high extent. The results are presented in table 4.12.

Table 4.12

Organizational Agility Plan Adoption by Commercial Banks

Factor	Mean	Standard Deviation
Short term business opportunities	2.95	1.39
Immediate market presentation of a new product	2.87	1.26
Unpredictability of the changes in market levels	3.95	1.05
Changes in market opportunities	4.22	0.93
Average	**3.50**	**1.16**

The results established that short term business opportunities affected adoption of organizational agility plan to a moderate extent (M =2.95, SD = 1.39) andimmediate market presentation of new product affected adoption of organizational agility plan to a moderate extent (M = 2.87, SD = 1.26). Similarly, it was shown that unpredictability of the changes in market levels influences adoption of organizational agility plan to a great extent (M = 3.95, SD = 1.05) and that changes in market opportunities also influences the adoption of organizational agility plan to a great extent (M = 4.22, SD = 0.93).

This implies that the factor with the highest influence on adoption of organizational agility was changes in market opportunities (M = 4.22, SD = 0.93) then changes in market levels (M = 3.95, SD = 1.05), short term business opportunities (M =2.95, SD = 1.39) and lastly immediate market presentation of new product (M = 2.95, SD = 1.39). As a whole, it was established that short term business opportunities, immediate market presentation of a new product, unpredictability of the changes in market levels and changes in market opportunities influence the type of organizational agility plan undertaken by the bank to a

great extent (M = 3.51) and that varied from commercial bank to another (SD = 1.16). Overall, the adoption of agility plan was not satisfactory (M = 3.50; SD = 1.16).

Respondents were further asked to indicate the extent to which various principles such as to provide value to the customers, inter / intra cooperation in the organization, readiness for change and importance of individuals guided the commercial banks operations. The respondents were to use a scale of 1-5 where 1=Very low extent, 2=Low extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The results are presented in table 4.13.

Table 4.13

Principles Guiding Commercial Banks Operations

Principle	**Mean**	**Standard Deviation**
To provide value to the customers	4.10	0.96
Inter / Intra cooperation in the organization	4.21	1.03
Readiness for change	4.06	1.01
Importance of individuals	3.99	1.26
Average	**4.09**	**1.06**

As indicated in Table 4.13, it was established that the commercial banks are guided by the urge to provide value to customers to a high extent (M = 4.10, SD= 0.96), Inter / Intra cooperation in the organization to a high extent (M =4.21, SD =1.03) and readiness for change to a high extent (M = 4.06, SD =1.01). It was also established that importance of individuals guides the operations of commercial banks to a high extent (M = 3.99, SD =1.26).

The result implies that the most crucial factor guiding operations of commercial banks is Inter / Intra cooperation in the organization (M = 4.21, SD = 1.03), urge to provide value to customers (M = 4.10, SD= 0.96), readiness for change (M = 4.06, SD = 1.01) and

importance of individuals (M = 3.99, SD = 1.26). As a whole, the results indicated that various principles such as to provide value to the customers, inter / intra cooperation in the organization, readiness for change and importance of individuals guided the commercial banks operations to a great extent (M = 4.09) and the same was varied from commercial bank to the other (SD = 1.06).

Respondents were finally asked to indicate their level of agreement with statements on Operational Adjustment Agility on a scale of 1-5 where 1=Very little extent, 2=little extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The results are presented in table 4.14.

Table 4.14

Extent of implementation of Operational Adjustment Agility

Statement	Mean	Standard Deviation
My bank comes up with new products in a timely manner	4.19	1.45
My bank comes up with new services in a timely manner	4.05	1.39
My bank comes up with new systems in a timely manner	3.44	1.07
My bank comes up with new processes in a timely manner	3.30	1.17
My bank integrates the operational processes to provide support to innovative ideas in a timely manner	4.03	0.76
My bank Continuously revises and adopts new ideas in a timely manner	4.15	0.76
My bank utilizes internal resources towards modification of a product	3.66	1.24
My bank utilizes internal resources towards modification of a service	3.90	1.32
Average	**3.84**	**1.16**

The results presented in Table 4.14 indicated that commercial banks in Kenya comes up with new products in a timely manner to a high extent (M =4.19, SD = 1.45), comes up with new services in a timely manner to a high extent (M = 4.05, SD = 1.39) and integrates the operational processes to provide support to innovative ideas in a timely manner to a high extent (M =4.03, SD = 0.76). The findings demonstrate that the commercial banks are agile in their operations as supported by a study by Barno and Rotich (2018) which established the effect of agile strategies on performance of commercial banks in Kenya and indicated that commercial banks are becoming more and more agile by coming up with new products in a timely manner, new services in a timely manner and integrates the operational processes to provide support to innovative ideas in a timely manner.

The results also indicated that their bank continuously revises and adopts new ideas in a timely manner to a high extent (M = 4.15, SD = 0.76), comes up with new systems in a timely manner to a moderate extent (M = 3.44, SD = 1.07), comes up with new processes in a timely manner to a moderate extent (M = 3.30, SD = 1.17) and utilizes internal resources towards modification of a product to a high extent (M = 3.66, SD = 1.24). The findings are consistent with the findings of a study by Farah et al. (2018) establishing the influence of competitive strategies on performance of commercial airlines in Kenya and revealed that among the most common organizational agility practices in the modern era is continuously revising and adopting new ideas in a timely manner, improving new systems in a timely manner, coming up with new processes in a timely manner and utilizing internal resources towards modification of a product.

Other results showed that commercial banks in Kenya utilizes internal resources towards modification of a service (M =3.90, SD = 1.32). Based on the results, it can be implied that the most prevalent operational adjustment agility among commercial banks in Kenya is coming up with new products in a timely manner (M = 4.19, SD = 1.45), continuously

revising and adopting new ideas in a timely manner (M = 4.15, SD = 0.76), coming up with new services in a timely manner (M = 4.05, SD = 1.39) and integrating the operational processes to provide support to innovative ideas in a timely manner (M = 4.03, SD = 0.76).

On the other hand, the least prevalent operational adjustment agility is utilizing internal resources towards modification of a service (M = 3.90, SD = 1.32), utilizing internal resources towards modification of a product (M = 3.66, SD = 1.24), coming up with new systems in a timely manner (M = 3.44, SD = 1.07) and coming up with new processes in a timely manner (M = 3.30, SD = 1.17).

4.3.5 Compliance with Central Bank Regulations

The fifth objective of the study was to establish the moderating role of compliance with central bank regulations on the relationship between organizational strategic capabilitiesand competitive advantage of commercial banks in Kenya. Respondents were asked to provide the extent of implementation of CBK regulations and policies on a scale of 1 to 5 where 1=Very little extent, 2=little extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The results as presented in table 4.15.

Table 4.15

Extent of Compliance with Central Bank Regulations

Statement	Mean	Standard Deviation
In my bank, regulations on deposit rates have been implemented	4.19	0.73
In my bank, regulations on savings rates have been implemented	4.13	0.83
In my bank, regulations on lending rates have been implemented	4.59	0.49
In my bank, regulations on central bank rates have been implemented	3.98	0.82
In my bank, policies on risk management practices have been implemented	4.15	0.78
In my bank, requirements on corporate governance have been implemented	4.03	0.81
In my bank, requirements on financial information reporting have been implemented	4.81	0.89
In my bank, requirements on approval of new banking products have been followed	4.37	0.91
Average	**4.28**	**0.78**

The results presented in Table 4.15 showed that among the commercial banks in Kenya, regulations on deposit rates have been implemented to a high extent (M = 4.19, SD = 0.73), regulations on savings rates have been implemented to a high extent (M = 4.13, SD = 0.83), regulations on lending rates have been implemented to a very high extent (M = 4.59, SD = 0.49) and regulations on central bank rates have been implemented to a high extent (M = 3.98, SD = 0.82). The findings are consistent with the findings of a study by Kodongo (2018) on Financial Regulations, Financial Literacy, and Financial Inclusion taking insights from Kenya and indicated that regulations on deposit rates, savings rates, lending rates and central bank rates have been implemented to a high extent by the commercial banks in Kenya.

The findings also indicated that the respondents agreed that policies on risk management practices have been implemented in their banks to a high extent (M= 4.15, SD = 0.78), requirements on corporate governance have been implemented by the banks to a high extent (M = 4.03, SD = 0.81), requirements on financial information reporting have been implemented to a very high extent (M= 4.81, SD = 0.89) and that requirements on approval of new banking products have been followed to a high extent (M = 4.37, SD = 0.91).

The findings are consistent with the findings of a study by Mabeya et al. (2016) on the effects implementation of the central bank of Kenya prudential guidelines on profitability of commercial banks in Kenya taking a survey of commercial banks in Kisii County and indicated a high extent of adherence to the prudential regulations such as policies on risk management practices, requirements on corporate governance, requirements on financial information reporting and requirements on approval of new banking products.

The results indicate that the commercial banks are complying with the CBK regulations but in order of extent, the most complied with CBK regulation are requirements on financial information reporting (M = 4.81,SD = 0.89), regulations on lending rates have been implemented (M = 4.59, SD = 0.49), requirements on approval of new banking products have been followed (M = 4.37, SD = 0.91), regulations on deposit rates (M = 4.19, SD =0.73), policies on risk management practices (M = 4.15, SD = 0.78), regulations on savings rates (M = 4.13, SD = 0.83), requirements on corporate governance (M = 4.03, SD = 0.81) and regulations on central bank rates (M = 3.98, SD = 0.82). Overall, it can be implied that the commercial banks in Kenya are complying with the CBK regulations (M = 4.28) and the same varies from one commercial bank to the other (SD = 0.78) although the variance is little.

4.3.6 Competitive Advantage

Respondents were asked to indicate the extent to which the firm had achieved the presented achievements on a scale of 1-5 where 1=Very low extent, 2=low extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The findings are presented in table 4.16.

Table 4.16

Extent of Competitive Advantage

Statement	Mean	Standard Deviation
Competitive cost (Interests on loan)	4.59	0.49
Superior performance	4.00	0.64
Completely differentiated products	4.80	0.40
Completely differentiated services	4.19	0.75
Flexibility in service delivery	4.59	0.81
Reduced transaction lead time	5.00	0.00
Improved customer satisfaction index	4.80	0.40
Average	**4.57**	**0.50**

The findings presented in Table 4.16 indicated that commercial banks in Kenya had achieved to a very high extent reduced transaction lead time (M =5, SD = 0), commercial banks had achieved competitive cost (Interests on loan) to a high extent (M =4.59, SD = 0.49), superior performance has been experienced to a high extent (M = 4.00, SD =0.64), completely differentiated products(Mean= 4.80, SD =0.40), the commercial banks have established completely differentiated services to a high extent (M =4.19, SD = 0.75), flexibility in service delivery has been achieved to a high extent (M = 4.59, SD = 0.81) and improved customer satisfaction index has been experienced to a high extent (M = 4.80, SD = 0.40). The study findings are consistent with Kamukama et al.(2011) who noted that for

a firm to attain sustainable competitive advantage, it has to achieve a superior position, superior skills and superior resources within the industry. Table 4.17 indicates a summary of the development of the strategic capabilities.

Table 4.17

Summary of Descriptive Statistics

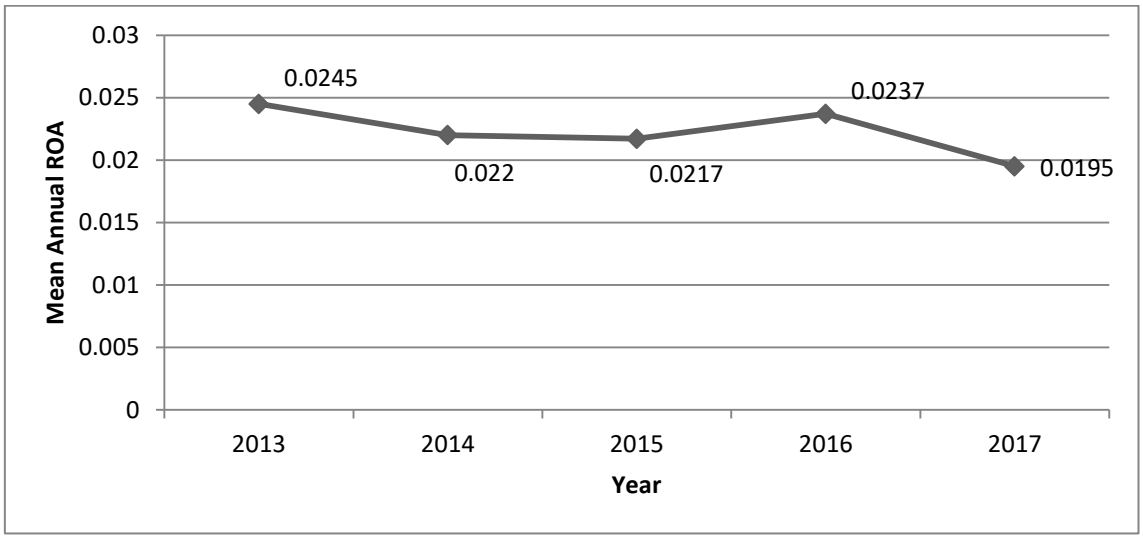
Variable	Mean	SD
Knowledge Management Capabilities	4.12	0.95
Information Technology Capability	4.18	0.82
Market Capitalizing Agility	3.73	1.23
Operational Adjustment Agility	3.84	1.16
Central Bank of Kenya Regulations	4.28	0.78
Competitive Advantage	4.57	0.50

The results in Table 4.17 indicates that market capitalizing agility and operational adjustment agility were not well developed ($M < 4.00$) while knowledge management capabilities and information technology capability were well developed ($M > 4.00$). This call for more improvement in the structures put in place for development of market capitalizing agility and operational adjustment agility among the commercial banks.

The study further collected secondary data to be used in establishing the financial performance of the commercial banks in terms of returns on assets and returns on Equity for the year 2013 to 2017. The trend analysis of the mean annual ROA as well as mean annual ROE for the commercial banks was established. The trend analysis for mean ROA is as presented in Figure 4.1.

Figure 4.1

Trend Analysis of Returns on Asset

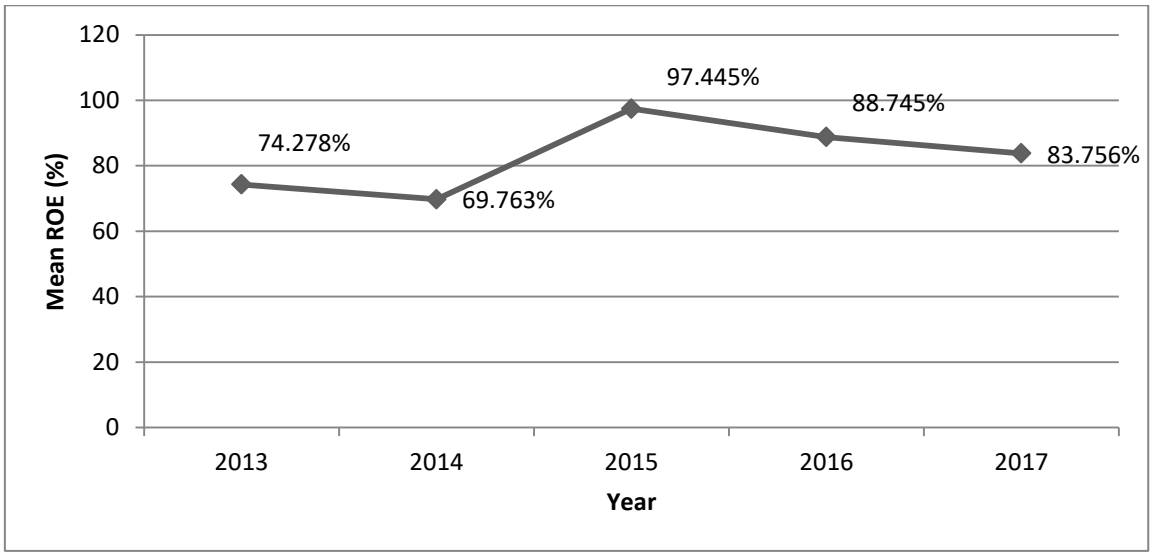


The study results depict unsteady trends in the performance of commercial banks in Kenya in the study period in terms of ROA. The mean ROA for all the commercial banks in the year 2013 was 2.45%. The mean ROA decreased to 2.2% in the year 2014 before decreasing further to 2.17% in the year 2015. The highest mean ROA recorded within the study period was in the year 2016 where 2.37% was recorded and in the year 2017, a mean ROA of 1.95% was recorded by the commercial banks.

This was an indication of unsteady trends in the ROA across the commercial banks in the study period thus revealing usteady performance of commercial banks. The findings are consistent with Onuonga (2014) who revealed that the performance of the commercial banks in Kenya over the last decade has not been impressive.The study also established the trends of Returns on equity for the commercial banks in Kenya in the study period and five years back.The findings are presented in Figure 4.2.

Figure 4.2

Trend Analysis of Returns in Equity



Unsteady trends in the performance of commercial banks in Kenya in the study period in terms of Returns in Equity were also observed. The mean ROE for all the commercial banks in the year 2013 was 74.27% which was higher than the year 2014 which was 69.76%. The mean ROE in the year 2015 increased up to 97.44% which was the highest for the study period before showing a slight decrease to 88.74% in the year 2016. In the year 2017, there was a further drop in the mean ROE to 83.75% for the commercial banks operating in Kenya in the study period. The findings are consistent with Onuonga (2014) who revealed that the performance of the commercial banks in Kenya over the last decade has not been impressive.

4.4 Variation of Strategic Capabilities, Compliance with Regulations and Competitive Advantage across Bank Tiers

There are three peer groups of banks also referred to as Tier 1, Tier 2 and Tier 3 banks categorized by the regulatory body, CBK, based on the assets value base. The study sought to establish the extent of adoption of the strategic capabilities, compliance to regulations as

well as the variations in competitive advantage across the three tiers. Since these are Three categories, comparison was made using analysis of variance (ANOVA) to determine whether there was a significant difference at 5% level of significance ($p<.05$) in the means of strategic capabilities, CBK regulations compliance and competitive advantage across the bank tier. The first of results was the ANOVA followed by post hoc multiple comparisons as presented and discussed in the subsections.

4.4.1 ANOVA Across Strategic Capabilities, Compliance with Regulation and Competitive Advantage

The comparison of whether there were any statistically significant differences in strategic capabilities, CBK regulations and competitive advantage across the tiers was established though ANOVA analysis consisting of Three independent sample groups. The ANOVA sample results are therefore presented in Table 4.18.

Table 4.18

ANOVA of means of Strategic capabilities, Compliance with Regulations and Competitive advantage

Variable		Sum of Squares	Df	Mean Square	F	Sig.
Operational Adjustment Agility	Between Groups	41.354	2	20.677	43.116	**<0.001**
	Within Groups	103.584	216	0.48		
	Total	144.938	218			
Market Capitalizing Agility	Between Groups	5.688	2	2.844	3.477	**0.033**
	Within Groups	176.683	216	0.818		
	Total	182.371	218			
Knowledge management capability	Between Groups	0.518	2	0.259	0.569	0.567
	Within Groups	98.296	216	0.455		
	Total	98.814	218			
ICT capability	Between Groups	0.629	2	0.315	1.807	0.167
	Within Groups	37.586	216	0.174		
	Total	38.215	218			
Compliance with CBK regulations	Between Groups	0.949	2	0.475	5.373	**0.005**
	Within Groups	19.082	216	0.088		
	Total	20.032	218			
Competitive advantage	Between Groups	0.007	2	0.003	0.061	0.941
	Within Groups	12.414	216	0.057		
	Total	12.421	218			

As indicated in Table 4.18, there was at least one significant mean difference, MD ($p<.05$) in the means of operational efficiency, Market capitalizing agility and Compliance withCBK regulations across the bank tiers. The biggest difference is on operational adjustment ability ($F=43.116$, $P <.001$), followed by Compliance with CBK regulations ($F=5.373$, $P =.005 <.05$) and lastly Market capitalizing agility ($F =3.477$, $P<.033 <.05$). The results also suggest that there was no significant variance in the mean differences of Knowledge management capability, ICT capability and competitive advantage with competitive advantage being the most homogeneous across the three bank peer groups.

4.4.2 Post hoc Multiple Comparisons of Mean Differences

Since there was at least one significant variance between a pair of means on some of the variables, post Hoc multiple comparisons were performed to determine the exact nature of the differences in the strategic capabilities, Compliance with regulations and competitive advantage across the three bank tiers. The results are presented in Table 4.19.

Table 4.19

Post-hoc Multiple Comparisons: Bank Tier by Strategic capability, compliance with regulations and Competitive advantage

Dependent Variable	(I) Tier (Size)	(J) Tier (Size)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Operational adjustment agility	Large Peer Group	Medium Peer Group	0.0287	0.13987	0.977	-0.3014	0.3588
		Small Peer Group	.88765*	0.12846	**<0.001**	0.5845	1.1908
	Medium Peer Group	Small Peer Group	.85895*	0.10711	**<0.001**	0.6062	1.1117
Market capitalizing capability	Large Peer Group	Medium Peer Group	0.14635	0.18267	0.703	-0.2847	0.5774
		Small Peer Group	-0.2154	0.16778	0.406	-0.6113	0.1806
	Medium Peer Group	Small Peer Group	-.36170*	0.13989	**0.028**	-0.6918	-0.0316
Knowledge management	Large Peer Group	Medium Peer Group	0.0385	0.1362	0.957	-0.283	0.36
		Small Peer Group	-0.0697	0.1251	0.843	-0.365	0.226
	Medium Peer Group	Small Peer Group	-0.1082	0.1043	0.554	-0.354	0.138
ICT capability	Large Peer Group	Medium Peer Group	-0.0543	0.0843	0.796	-0.253	0.145
		Small Peer Group	-0.135	0.0774	0.191	-0.318	0.048
	Medium Peer Group	Small Peer Group	-0.0808	0.0645	0.424	-0.233	0.071
Compliance with CBK regulations	Large Peer Group	Medium Peer Group	0.0134	0.06003	0.973	-0.1283	0.1551
		Small Peer Group	-0.1231	0.05514	0.068	-0.2532	0.0071
	Medium Peer Group	Small Peer Group	-.13646*	0.04597	**0.009**	-0.245	-0.028
Competitive advantage	Large Peer Group	Medium Peer Group	0.01665	0.04842	0.937	-0.0976	0.1309
		Small Peer Group	0.00868	0.04447	0.979	-0.0963	0.1136
	Medium Peer Group	Small Peer Group	-0.008	0.03708	0.975	-0.0955	0.0795

* *The mean difference is significant at the 0.05 level.*

From the post-hoc multiple comparisons results (Table 4.19), operational adjustment agility is statistically the same (MD =.029, P =.977 > .05) for both large Peer Group (Tier 1) banks and Medium peer group (Tier) 2 banks. However, both Tier 1 and Tier 2 banks have better operational adjustment capability compared to the small peer group (Tier 3) banks (Tier 1-Tier 2: MD =.029, P =.977 > .05; Tier 1-Tier3: MD =.888, P <.001 <.05; Tier 2-Tier 3: =.859, P <.001 < .05).

An examination the mean difference (MD) in aggregate mean compliance with CBK regulations suggests that small peer group (Tier 3) banks comply more significantly than large peer group (Tier 1) banks (MD =.136, P =.009 <.05). Small peer group banks also have a higher Market capitalizing capability than the medium peer group banks (MD =.362, P =.028 <.05). On the other hand, Knowledge management, ICT capability and competitive advantage are similar for all the three bank tiers because the mean difference in their means was not significant (all P >0.05) at 5% level of significance.

The findings basically imply that the extent of adoption of lower order organizational strategic capabilities(Knowledge management capability and IT capability) across the bank tiers is not statistically different. However, adoption of higher order organizational strategic capabilities(Market capitalizing agility and operational adjustment agility) as well as compliance with CBK regulations varies across the bank tiers and is more pronounced among the tier 1 commercial banks compared to tier 1. This may be because of availability of resources (bank size) in adopting higher order capabilities which are more capital intensive compared to lower order capabilities. In that regard, the small banks may be disadvantaged thus the high variation across the tiers.

4.5Relationship Between Organizational strategic capabilities and Competitive Advantage

The study sought to establish the relationship between the dependent variable (competitive advantage) and the independent variables (knowledge management capability, information technology capability, market capitalizing agility, operational adjustment agility) using a Pearson correlation. The results are presented in table 4.20.

Table 4.20

Relationship between Organizational strategic capabilities and Competitive Advantage

		OAA	MCA	ITC	KMC	CBK	CA
Operational Adjustment Agility (OAA)	Pearson Correlation	1					
Market Capitalizing Agility (MC)	Pearson Correlation	-.268**	1				
IT Capability (ITC)	Pearson Correlation	-0.050	-0.026	1			
Knowledge Management Capability (KMC)	Pearson Correlation	-.183**	-.148*	0.012	1		
Compliance with Central Bank Regulations (CBK)	Pearson Correlation	-.336**	.184**	-0.011	0.055	1	
Competitive Advantage (CA)	Pearson Correlation	0.132	.331**	.539**	.220**	-0.062	1
	Sig. (2-tailed)	0.051	0.000	0.000	0.001	0.359	
	N	219	219	219	219	219	219

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

** Correlation is significant at the 0.05 level (2-tailed).*

The correlation results indicate that knowledge management capability has a positive and significant relationship with competitive advantage of commercial banks in Kenya (r = 0.220, P = 0.001< 0.01). The results demonstrate that the relationship between knowledge

management capability and competitive advantage of commercial banks in Kenya is positive but weak.

These findings imply that an increase in knowledge management capability would result to an increase in competitive advantage of the banks. The findings are consistent with the Resource Dependency theory by Salancik and Pfeffer (1978) which argued that the success of a firm relies on its ability to integrate, build, and reconfigure internal and external competencies to achieve new forms of competitive advantage.

The correlation results also indicated that information technology capability has a positive and significant relationship with competitive advantage of commercial banks in Kenya ($r = 0.539$, $P = 0.001 < 0.01$). The results demonstrate that the relationship between information technology capability and competitive advantage of commercial banks in Kenya is positive and strong. The result implies that increase in information technology capability would result to an increase in competitive advantage of the banks. The results are consistent with Tallon and Pinsonneault (2011) who established that IT infrastructure flexibility and alignment has a positive and significant main effect on agility.

The results also indicated that market capitalizing agility has a positive and significant relationship with competitive advantage of commercial banks in Kenya ($r = 0.331$, $P= 0.001 < 0.01$. The results demonstrate that the relationship between market capitalizing agility and competitive advantage of commercial banks in Kenya is positive but weak. The result implies that an increase in market capitalizing agility would result to an increase in competitive advantage of the firm. The results are consistent with Alhadid and As' Ad (2015) who established that organization agility and organizational performance have a positive effect.

The results also indicated that operational agility has a positive and significant relationship with competitive advantage of commercial banks in Kenya ($r = 0.132$, $p = 0.055 > 0.05$). The results demonstrate that the relationship between operational agility and competitive advantage of commercial banks in Kenya is positive but weak. The result implies that an increase in operational agility would result to a positive effect on competitive advantage of the commercial banks. The finding is consistent with Yaghoubi et al. (2011) who argued that operational agility is positively related to performance and competitive advantage of an organization.

The results also indicated that Compliance with Central Bank of Kenya regulations has a negative and not significant relationship with competitive advantage of commercial banks in Kenya ($r = -0.062$, $P = 0.359 > 0.05$). The results demonstrate that the relationship between Compliance with Central Bank of Kenya regulations and competitive advantage of commercial banks in Kenya is negative but weak. The result implies that an increase in strict Compliance with CBK regulations would result to a decrease in competitive advantage of the banks. The results are consistent with Omondi(2014) findings which concluded that CBK prudential guidelines negatively affect commercial banks in Kenya.

Further, the relationship between OAA and all other variables (KMC, ITC, MCA and CBR) is negative except with CA which was positive but insignificant at 5% level of significance ($p = 0.051 > 0.05$). The relationship between OAA and CA was however, significant at 10% level of significance ($p<0.1$). This implies that the operational adjustment agility need to be reviewed to ensure that it results in synergy with other organizational strategic capabilitiesin the banks. The results suggest that Information Technology capability had the strongest positive relationship with competitive advantage followed by market capitalizing agility then knowledge management capability while operational adjustment agility had the least strong relationship.

4.6Model Diagnostic Tests

Before running the ordinary least square regression models, the study conducted diagnostic tests to establish whether the assumptions of linear regressions were violated. The study established the linearity tests, multicollinearity tests, Homoscedasticity Test and normality test. The findings are discussed in the subsections.

4.6.1 Normality Test of Competitive Advantage

In order to make inferences from an analysis, assumption of normally distributed dependent variable is very important. These tests on normality of the dependent variable are conducted using both Kolmogorov-Smirnovaand Shapiro- Wilk normality tests. The results are presented in Table 4.21.

Table 4.21

Kolmogorov-Smirnov test of Normality

	Kolmogorov-Sminorv			**Shapiro-Wilk**		
	Statistic	**Df**	**Sig.**	**Statistic**	**df**	**Sig.**
Competitive Advantage	.329	219	.056*	.414	219	.068

**. This is a lower bound of the true significance.*

. Lilliefors Significance Correction

The results indicated that the dependent variable had insignificant Shapiro Wilk values and Kolmogorov Smirnov values greater than 0.05 implying that the null hypothesis is not rejected hence the variables are normally distributed. Since the data set was normally distributed, it was hence suitable to conduct an ordinary least square regression analysis since there were no violations of the assumptions of classical linear regression.

4.6.2 Multi-Collinearity Test

Multicollinearity test was essential in establishing whether the independent variables were highly correlated or not. Presence of multicollinearity inflates the standard errors of a regression model thus giving spurious results. To establish whether there was a problem of multicollinearity among the independent variables, the study adopted the Variance Inflation Factor (VIF) method where a value above 10 is an indication of presence of multicollinearity (Smith, 2015). The results are as indicated in Table 4.22.

Table 4.22

Variance Inflation Factor Test of Multi-Collinearity

Independent Variable	**Collinearity Statistics**	
	Tolerance	**VIF**
Operational Adjustment Agility	0.874	1.144
Market Capitalizing Agility	0.886	1.128
IT Capability	0.996	1.004
Knowledge Management Capability	0.924	1.082
Dependent Variable: Competitive Advantage		

The results in Table 4.22indicated that there was no problem of multicollinearity since the variables have a VIF value less than 10. The VIF value for IT capability was 1.004, KM capability had 1.082, Operational Agility had 1.144 and Market Capitalizing Agility had 1.128 which wereall less than 10. Based on that, it was suitable to use the same data to run regression analysis.

4.6.3Linearity Tests

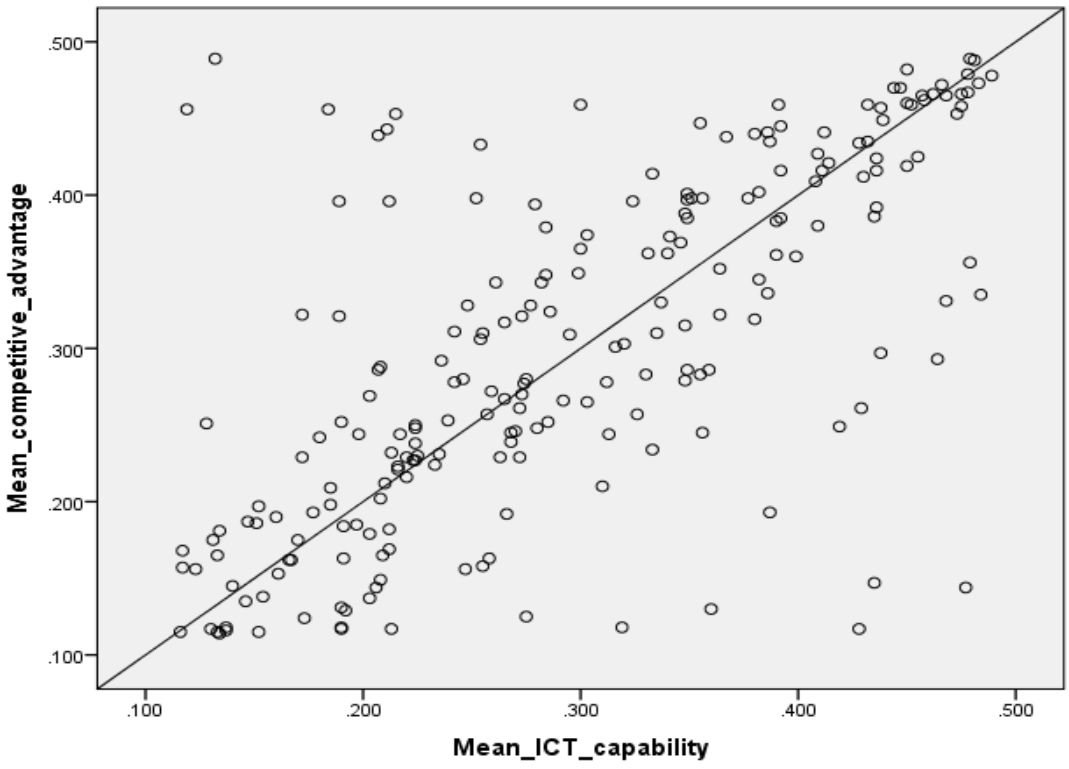
The importance of testing for linearity lies in the fact that many statistical methods require an assumption of linearity of data (the data was sampled from a population that relates the variables of interest in a linear fashion). To ensure linearity, outliers ought to be identified and removed from the data since linearity can be fixed by removing outliers. Assumption

of linearity which is consistent relationship between the independent and dependent variables makes regression easy.

The linear relationship of the independent variables to the dependent variables was tested by plotting a scatter diagram between the dependent and the independent variable. Graphically, a linear relationship is said to exist if the observations form an oval shape. The study established the linearity between each of the independent variables and competitive advantage using a scatter plot as discussed below. The results for the linearity test between IT capability and competitive advantage are presented in Figure 4.3.

Figure 4.3

Linearity Test between IT capability and Competitive Advantage

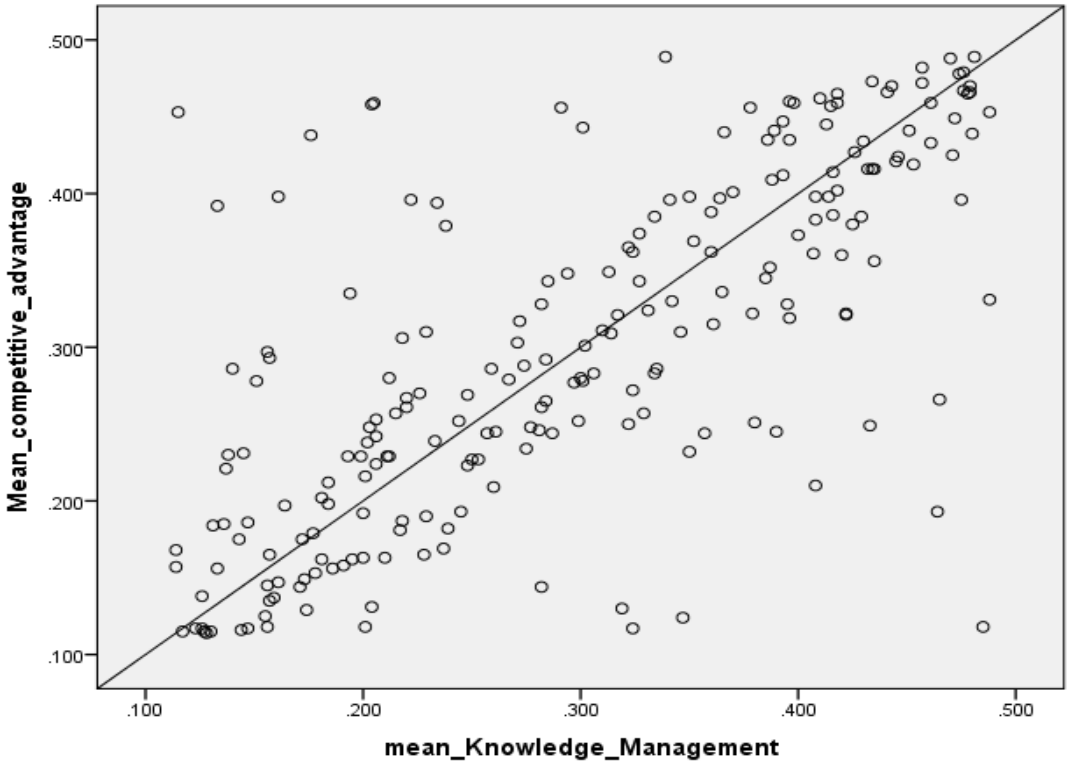


The results in figure 4.3indicate that the scatter plot for IT capability and competitive advantage showed a linear relationship since the observations scattered indicated an oval shape.The shape formed to reflect a positive relationship to imply that an increase in IT

capability leads to an increase in competitive advantage. The results for the linearity test between IT capability and competitive advantage are presented in Figure 4.4.

Figure 4.4

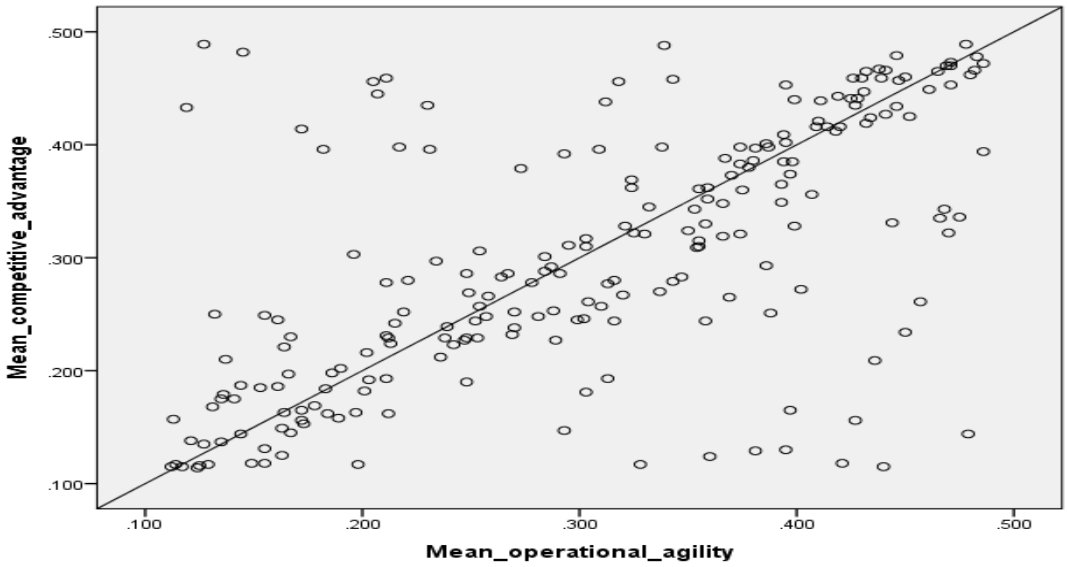
Linearity Test between Knowledge Management capability and Competitive Advantage



The results in figure 4.4demonstrate a linear relationship between knowledge management capability and competitive advantage because the scatter has assumed an oval shape that demonstrates a positive relationship. The shape shows that an increase in competitive advantage is associated with an increase in competitive advantage. The study also established the linearity between operational adjustment agility and competitive advantage as shown in Figure 4.5.

Figure 4.5

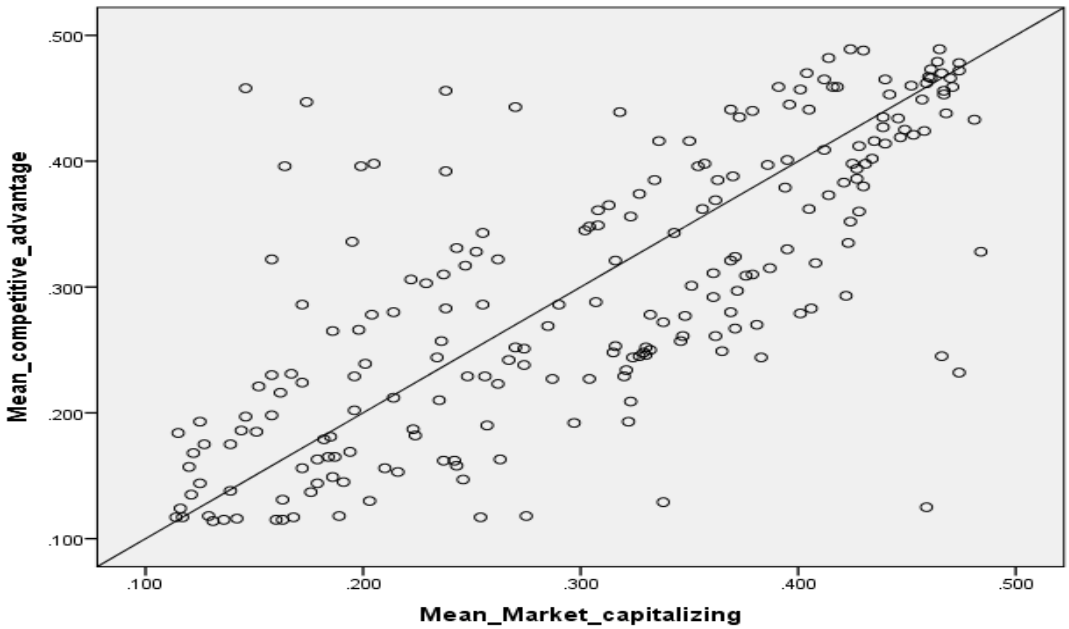
Linearity Test between Operational Adjustment Agility and Competitive Advantage



The results in Figure 4.5showed that there is a linear relationship between competitive advantage and operational adjustment agility since the data is concentrated in an oval shape. This demonstrates that an increase in operational adjustment agility is associated with an increase in competitive advantage. Linearity between market capitalizing agility and competitive advantage was established as indicated in Figure 4.6.

Figure 4.6

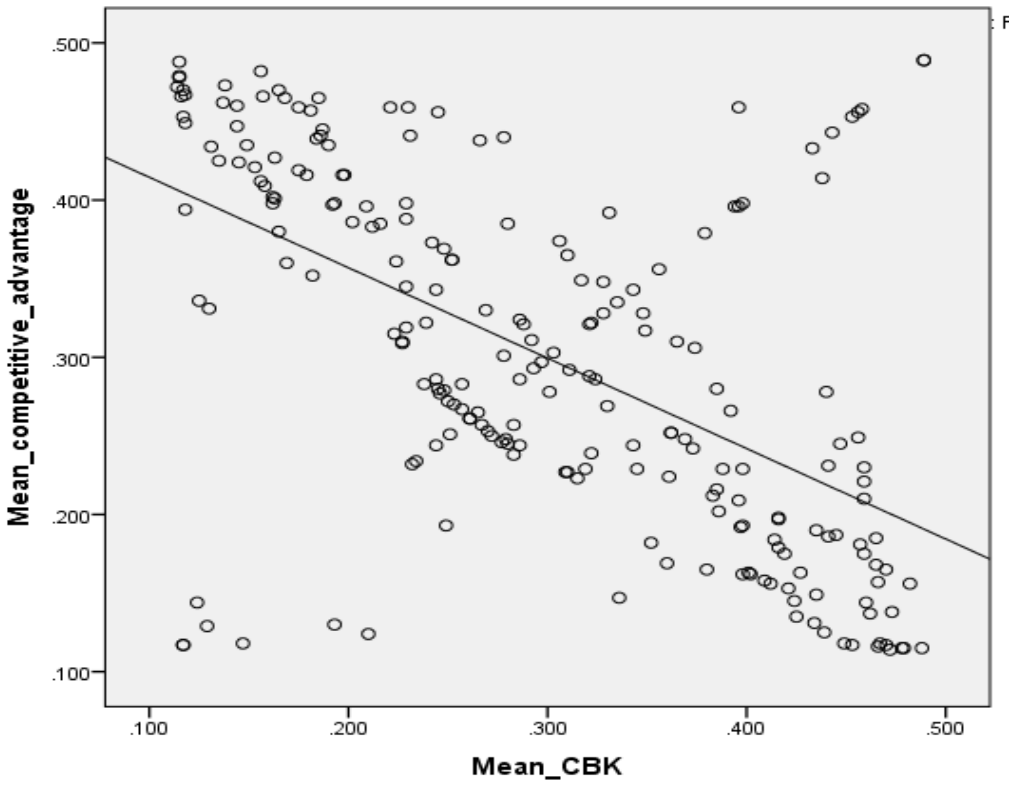
Linearity Test between Market Capitalizing Agility and Competitive Advantage



The results in Figure 4.6demonstrated that market capitalizing agility had a linear relationship with competitive advantage since the scatter assumed an oval shape indicating a positive relationship. The Figure indicates that as market capitalizing agility increases, competitive advantage also increases. Since the study used an ordinary least square regression model to establish themoderating effect of CBK regulations, linearity test was also testedas shown in Figure 4.7.

Figure 4.7

Linearity Test between Compliance with Central Bank Regulations and Competitive Advantage



The scatter plot results in Figure 4.7indicates that the data has concentrated into an oval shape which indicates a negative relationship between CBK regulations and competitive advantage. The oval shape confirms that the relationship is linear but in a negative manner to imply that as the CBK regulations becomes stricter, competitive advantage of commercial banks deteriorates.

4.6.4Homoscedasticity

Homoscedasticity suggests that the dependent variable has an equal level of variability for each of the values of the independent variables (Garson, 2012). A test for homoscedasticity is made to test for variance in residuals in the regression model used. Homoscedasticity test was conducted on the error term after running the regression model.

If there exist equal variance of the error term, then it is said that there is a normal distribution. Lack of an equal level of variability for each value of the independent variables is known as Heteroskedasticity, The Breusch-Pagan test developed by Breusch and Pagan (1979) was used to test for homogeneity in a linear regression model. The test states that the probability value should be greater than .05 meet the homoscedasticity assumption and indicates non-violations of the classical linear assumptions. The results are presented in Table 4.23.

Table 4.23

Breusch-Pagan Test of Homoscedasticity

Breusch-Pagan / Cook-Weisberg test for Homoscedasticity
Ho: Constant variance
chi2(3) = 0.834
Prob> chi2 = 0.765

The results indicated in Table 4.23 indicatedan insignificant p-value which is greater than 0.05 at 5% level of significance. This implies that the null hypothesis of constant variance is not rejected. This shows presence of homogeneity in the error term and hence the assumption of classical linear regression on homogeneity was not violated.

4.7 Effect of Organizational strategic capabilitieson Competitive Advantage

Since all the assumptions for the suitability of the use of a classical multiple linear regression were satisfied upon conducting all the required regression tests, bivariate regression was performed between each of the predictor variables (Knowledge Management, ICT capability, Market Capitalizing agility and Operational Adjustment Agility) and the dependent variable (Competitive Advantage). Univariate regression

analysis was adopted to establish the effect of each strategic capability on competitive advantage before testing the combined effect of the four organizational strategic capabilitieson competitive advantage.

4.7.1 Effect of Knowledge Management Capability on Competitive Advantage

In order to establish the effect of knowledge management capability on competitive advantage keeping other independent variables constant, a univariate regression model of the form $Y= \beta_0+ \beta_1X_1 + \varepsilon$ was established where, Y = Competitive Advantage and X_1 = Knowledge Management Capability. Table 4.24 indicates the model summary results.

Table 4.24

Effect of Knowledge Management capability on Competitive Advantage (Model Summary)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.220	0.048	0.044	0.23339

Predictors: (Constant), Knowledge Management Capability

The results in Table 4.24 indicate that other factors held constant, knowledge management capability accounts for up to 4.8% of the variations in competitive advantage of commercial banks in Kenya (R-square = 0.048). An adjusted value of 0.044 indicated that the regression model was a good fit. An R value of 0.220 confirms that the relationship between knowledge management and competitive advantage is positive.

Table 4.24

Effect of Knowledge Management capability on Competitive Advantage (ANOVA)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.601	1	0.601	11.039	.001
Residual	11.82	217	0.054		
Total	12.421	218			

Dependent Variable: Competitive Advantage

Predictors: (Constant), Knowledge Management Capability

The results presented in Table 4.24indicated that the model linking knowledge management capability and competitive advantage of commercial banks in Kenya was significant (F = 11.039, Sig = .001, <0.05) at 5% level of significance. This implies regression model linking knowledge management capability and competitive advantage of commercial banks in Kenya was a good fit.

Table 4.25

Effect of Knowledge Management capability on Competitive Advantage (Regression Coefficients)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.244	0.098		43.319	0.000
Knowledge Management	0.078	0.023	0.22	3.323	0.001

Dependent Variable: Competitive Advantage

The regression coefficientsresult of the study also showed that knowledge management capability positively and significantly affect competitive advantage of commercial banks in Kenya(B = 0.078, t = 3.323, P= 0.001< 0.05) at 5% level of significance. The results imply thata one-unit increase in knowledge management capability leads to a 0.078 units increase in competitive advantage of commercial banks in Kenya.

The findings are consistent with the findings of a study by Chen et al. (2004) to determine the effect of Knowledge management capability on firm performance through an empirical investigationwhich revealed a positive and significant effect. Similarly, the findings are consistent with Liu et al. (2014) which established the relationship between Knowledge Management Capability and Firm Performance and established that knowledge management was used by organizations to improve their performance significantly.

The findings are also consistent with the findings of a study by Han and Wang (2012) which evaluated and established a positive relationship between knowledge management, knowledge management system, and organizational performance. Furthermore, the findings agree with the study findings of Hung et al. (2015) that there is a positive relationship between knowledge management implementation, business process, and market relationship outcomes as well as the study by Badimo (2017) which indicated a positive and significant improvement of organizational performance and healthcare service delivery through knowledge management practices.

4.7.2 Effect of Information Technology Capability on Competitive Advantage

The study also determined the effect of information technology capability on competitive advantage keeping other independent variables constant, a univariate regression model of

the form $Y= \beta_0+ \beta_1X_1 + \varepsilon$ was established where, Y = Competitive Advantage and X_1 = Information Technology Capability. Table 4.26 shows the model summary results.

Table 4.26

Effect of Information Technology Capability on Competitive Advantage (Model Summary)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.539a	0.291	0.288	0.20147

Predictors: (Constant), IT Capability

The results shown in Table 4.26showed that when other factors are held constant, information technology capability accounts for up to 29.1% of the variations in competitive advantage of commercial banks in Kenya (R-square = 0.291). The resultsfurther demonstrated that information technology capability has a positive effect on competitive advantage of commercial banks in Kenya (R = 0.531). The results also showed that the regression model was a good fit as indicated by an adjusted R-square value close to the R-square.

Table 4.27

Effect of Information Technology Capability on Competitive Advantage (ANOVA)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.613	1	3.613	89.011	.000
Residual	8.808	217	0.041		
Total	12.421	218			

Dependent Variable: Competitive Advantage
Predictors: (Constant), IT Capability

The ANOVA results indicated in Table 4.27indicated that the model linking information technology capability and competitive advantage of commercial banks in Kenya was significant (F = 89.011, Sig = .000, < 0.05) at 5% level of significance. The results imply that the regression model linking information technology capability and competitive advantage of commercial banks in Kenya was a good fit.

Table 4.28

Effect of Information Technology Capability on Competitive Advantage (Model Coefficients)

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	3.283	0.137		24.032	0.000
IT Capability	0.307	0.033	0.539	9.435	0.000

Dependent Variable: Competitive Advantage

The results in Table 4.28 established that IT capability has a positive and significant effect on competitive advantage of commercial banks in Kenya (B = 0.307, t = 9.435, P = 0.000 < 0.05). It can be argued based on the results that a one-unit increase IT capability leads to a 0.307 units increase in competitive advantage of commercial banks in Kenya. The findings are consistent with the findings of a study by Mithas et al. (2011) to establish how information management capability influences firm performance and revealed a positive effect of IT capability. The findings also relate to the findings of a study by Liu et al. (2013) which establisheda positive impact of IT capabilities on firm performance. The findings are also consistent with the findings of a study by Chen et al. (2014) which

focused on establishing the relationship between IT capability and organizational performance and revealed a positive significant relationship.

Furthermore, the study findings are consistent with the findings of a study by Bharadwaj (2000) to establish a resource-based perspective on information technology capability and firm performance through an empirical investigation and revealed a positive relationship as well as the study by Santhanam and Hartono (2003) conducted to link information technology capability to firm performance and established a positive significant relationship between the two variables.

4.7.3 Effect of Market Capitalizing Agility on Competitive Advantage

The study also conducted a univariate regression to establish the effect of market capitalizing agility on competitive advantage keeping other independent variables constant. The regression model of the form $Y= \beta_0+ \beta_1X_1 + \varepsilon$ was established where, Y = Competitive Advantage and X_1 = Market Capitalizing Agility. The model summary results from the regression are shown in Table 4.29.

Table 4.29

Effect of Market Capitalizing Agility on Competitive Advantage (Model Summary)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.331	0.11	0.105	0.22577

Predictors: (Constant), Market Capitalizing

As shown in Table 4.29, it was indicated that other factors held constant, market capitalizing agility accounts for up to 11% of the variations in competitive advantage of commercial banks in Kenya (R-square = 0.110). The results also showed that the relationship between market capitalizing agility and competitive advantage of commercial

banks in Kenya was positive (R = 0.331). An adjusted R-square value close to the R-square value indicated that the regression model was a good fit.

Table 4.30

Effect of Market Capitalizing Agility on Competitive Advantage (ANOVA)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.360	1	1.36	26.691	.000
Residual	11.061	217	0.051		
Total	12.421	218			

Dependent Variable: Competitive Advantage

Predictors: (Constant), Market Capitalizing Agility

The ANOVA results in Table 4.30 showed that the model linking market capitalizing agility and competitive advantage of commercial banks in Kenya was significant (F = 26.691, Sig = .000, < 0.05) at 5% level of significance. The results imply that the regression model linking the two variables was a good fit.

Table 4.31

Effect of Market Capitalizing Agility on Competitive Advantage (Model Coefficients)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.244	0.064		66.148	0.000
Market Capitalizing Agility	0.086	0.017	0.331	5.166	0.000

Dependent Variable: Competitive Advantage

The results presented in Table 4.31 revealed that market capitalizing agility positively and significantly affect competitive advantage of commercial banks in Kenya (B = 0.086, t =

5.166, P = 0.000 < 0.05) at 5% level of significance. This is a demonstration that a one-unit increase market capitalizing agility leads to a 0.086 units increase in competitive advantage of commercial banks in Kenya.

The findings are consistent with the findings of a study by Raymond et al. (2019) to establish whether alignment of organizational agility strategy and IT infrastructure has an effect on the performance of the firm and revealed a positive effect of organizational agility on firm performance. The findings also agree with the findings of a study by Chakravarty et al. (2013) on Information technology competencies, organizational agility, and firm performance and established its enabling and facilitating roles as well as a positive effect of agility on performance. The findings also agree with the findings of a study by Roberts and Grover (2012b) to investigate firm's customer agility and firm performance and determine the importance of aligning sense and respond capabilities and revealed that the alignment of organizational roles to agility significantly improved performance.

4.7.4 Effect of Operational Adjustment Agility on Competitive Advantage

In order to establish the effect of operational adjustment agility on competitive advantage keeping other independent variables constant, the study adopted a univariate regression model of the form $Y= \beta_0+ \beta_1X_1 + \varepsilon$ was established where, Y = Competitive Advantage and X_1 = Operational Adjustment Agility. The model summary results for the bivariate regression are indicated in Table 4.32.

Table 4.32

Effect of Operational Adjustment Agility on Competitive Advantage (Model Summary)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.132	0.017	0.013	0.23716

Predictors: (Constant), Operational Adjustment Agility

It was established as indicated in Table 4.32that other factors held constant, operational adjustment agility accounts for up to 1.7% of the variations in competitive advantage of commercial banks in Kenya (R-square = 0.017). The results also showed that the relationship between operational adjustment agility and competitive advantage of commercial banks in Kenya was positive (R = 0.129).

Table 4.33

Effect of Operational Adjustment Agility on Competitive Advantage (ANOVA)

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	0.216	1	0.216	3.844	.051
Residual	12.205	217	0.056		
Total	12.421	218			

Dependent Variable: Competitive Advantage

Predictors: (Constant), Operational Adjustment Agility

As shown in Table 4.33, the regression model linking operational adjustment agility and competitive advantage of commercial banks in Kenya was not significant (F = 3.844, Sig = .051, > 0.05) at 5% level of significance. This implies operational adjustment agility cannot be used to predict competitive advantage of commercial banks in Kenya.

Table 4.34

Effect of Operational Adjustment Agility on Competitive Advantage (Model Coefficients)

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	4.417	0.077		57.124	0.000
Operational Adjustment Agility	0.039	0.02	0.132	1.961	0.051

Dependent Variable: Competitive Advantage

The regression coefficients results indicated in Table 4.34 demonstrated that operational adjustment agility positively but not significantly affect competitive advantage of commercial banks in Kenya (B = 0.039, t =1.961, P = 0.051 > 0.05) at 5% level of significance. The implication of the findings is that a one-unit increase in operational adjustment agility leads to a 0.039 units increase in competitive advantage of commercial banks in Kenya.

The findings are consistent with the findings of a study by Dadras (2016) conducted to establish IT agility through service-oriented architecture and revealed a positive effect of agility on firm performance. The study findings are also consistent with the findings of a study by Horlach et al. (2018) to establish the IT governance in scaling agile frameworks and revealed that firms that had agility were more competitive than those that did not.

4.7.5 Combined Effect of Organizational strategic capabilities on Competitive Advantage

After establishing the effect of each strategic capability on competitive advantage, the study used a multivariate regression model to establish the effect of all the four organizational strategic capabilities on competitive advantage in one regression model. This is the regression model that was used to test the study hypothesis 1 to 4 at 5% level of significance. For the hypothesis to be accepted or rejected, a P value less than 0.05 was used. The study results for the model summary are presented in Table 4.35.

Table 4.35

Multivariate Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.770a	0.593	0.586	0.15366

Predictors: (Constant), Knowledge Management Capability, IT Capability, Market Capitalizing Agility, Operational Adjustment Agility

The model summary results for the multivariate regression model indicated in Table 4.35 demonstrated that Organizational strategic capabilities(Knowledge Management Capability, IT capability, Market Capitalizing agility and Operational Adjustment Agility) have a joint positive correlation with competitive advantage of commercial banks in Kenya (R = 0.751). This implies that an increase in adoption of organizational strategic capabilitiesleads to a significant improvement in competitive advantage of commercial banks in Kenya.

The results also established that Organizational strategic capabilities(Knowledge Management Capability, IT capability, Market Capitalizing agility and Operational Adjustment Agility) accounts for up to 59.3% of the variation in competitive advantage of commercial banks in Kenya (R^2= 0.593). This therefore implies that organizational strategic capabilities are important in enabling commercial banks to have competitive advantage. Other factors other than organizational strategic capabilities account for the remaining 40.7% of the variation in competitive advantage of commercial banks in Kenya. Further studies can be conducted to establish these factors.

The fitness of the multivariate regression model linking organizational strategic capabilitiesto competitive advantage of commercial banks in Kenya was also established. The results are shown in Table 4.36.

Table 4.36

Multivariate Regression Model ANOVA

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	7.368	4	1.842	78.011	.000
Residual	5.053	214	0.024		
Total	12.421	218			

Dependent Variable: Competitive Advantage

Predictors: (Constant), Knowledge Management Capability, IT Capability, Market Capitalizing Agility, Operational Adjustment Agility

The results from Table 4.36established that the combined regression model linking organizational strategic capabilitiesto competitive advantage of commercial banks was significant (F = 78.011, Sig = .000, < 0.05) at 5% level of significance. The results imply

that the model can be used to predict competitive advantage of commercial banks significantly. It further implies that the regression model linking organizational strategic capabilities(Knowledge Management Capability, IT Capability, Market Capitalizing Agility, Operational Adjustment Agility) to competitive advantage was a good fit.

4.7.6 Hypothesis Testing : Hypothesis one to Four

The regression coefficients were used to test the first four research hypothesis. The significance of the beta coefficients was compared against 0.05 level of significance or the t-statistic value. The results that were used are presented in Table 4.37.

Table 4.37

Multivariate Regression Model Coefficients

	Unstandardized Coefficients		**Standardized Coefficients**		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	1.824	0.160		11.424	0.000
Operational Adjustment Agility	0.105	0.014	0.357	7.662	0.000
Market Capitalizing Agility	0.129	0.012	0.494	10.66	0.000
IT Capability	0.323	0.025	0.566	12.953	0.000
Knowledge Management Capability	0.125	0.016	0.352	7.760	0.000

Dependent Variable: Competitive Advantage

From the regression equation, it can be established that the strategic capability with the highest effect is IT capability (B = 0.323, t = 12.953, P-Value = 0.000 < 0.05) followed by Market Capitalizing agility (B = 0.129, t = 10.66, P-Value = 0.000 < 0.05) then Knowledge Management Capability (B = 0.125, t = 7.760, P-Value = 0.000 < 0.05) and

the one with the least effect is Operational Adjustment Agility (B = 0.105, t = 7.662, P-Value = 0.000 < 0.05). The effect of each of the organizational strategic capabilities was positive and significant at P < 0.01 and P < 0.05 levels of significance.

Hypothesis One (H_1): Knowledge Management capability has no significant effect on competitive advantage of commercial banks in Kenya

The study results presented in Table 4.37indicated that knowledge management has a positive and significant effect on competitive advantage of commercial banks in Kenya (B = 0.125, t = 7.760, P = 0.000 < 0.05). These results imply that a one-unit increase in knowledge management would lead to 0.125 significant improvements in competitive advantage of commercial banks in Kenya. The results imply that the null hypothesis was rejected since the significance value is less than 0.05 thus it can be concluded that knowledge management has significant effect on competitive advantage of commercial banks in Kenya.

The findings are consistent with Cai et al. (2013) who showed that knowledge management improves organizational agility which positively improves firm performance. The findings are also consistent with the findings of Kiseli and Senaji (2016) who conducted a study to establish the effect of knowledge management capabilities on competitive advantage in the Kenya hospitality industry and established that an organization uses knowledge management to widen the array of products without increasing costs.

Hypothesis Two (H_2): Information Technology capability has no significant effect on competitive advantage of commercial banks in Kenya

The results indicated in Table 4.37similarly showed that information technology capability has a positive and significant effect on competitive advantage of commercial banks in Kenya (B = 0.323, t = 12.953, P = 0.000 < 0.05). These results imply that a one-unit increase in information technology capability would lead to 0.323 significant improvements in competitive advantage of commercial banks in Kenya. The results imply that the null hypothesis was rejected since the significance value is less than 0.05 thus it can be concluded that information technology capability has significant effect on competitive advantage of commercial banks in Kenya.

The findings are consistent with the findings of a study by Tallon and Pinsonneault (2011) who focused on establishing the competing perspectives on the link between strategic information technology alignment and organizational agility using IT as a mediating variable and established that IT infrastructure flexibility and alignment has a positive and significant main effect on agility which improves performance of an organization. The findings are also consistent with Kretzer et al. (2014) who argued that Business Intelligence and Analytics (BI&A) enable organizational agility which improves competitive advantage of an organization.

Hypothesis Three (H_3): Market Capitalizing Agility has no significant effect on competitive advantage of commercial banks in Kenya

The results indicated in Table 4.37further showed that market capitalizing agility has a positive and significant effect on competitive advantage of commercial banks in Kenya (B = 0.129, t = 10.66, P= 0.000 < 0.05)). These results imply that a one-unit increase in market capitalizing agility would lead to 0.129 significant improvements in competitive

advantage of commercial banks in Kenya. The results imply that the null hypothesis was rejected since the significance value is less than 0.05 thus it can be concluded that market capitalizing agility has significant effect on competitive advantage of commercial banks in Kenya.

The study findings are consistent with the findings of a study by Alhadid and As' Ad (2015) which revealed that organization agility and organizational performance have a positive effect. The findings are also consistent with the findings of a study by Raymond et al. (2019) conducted to establish whether alignment of organizational agility strategy and IT infrastructure has an effect on the performance of the firm and established a positive effect.

Hypothesis Four (H_4):Operational Adjustment agility has no significant effect on competitive advantage of commercial banks in Kenya

The results from Table 4.37also indicated that operational adjustment agility has a positive and significant effect on competitive advantage of commercial banks in Kenya (B = 0.105, t = 7.662, P = 0.000 < 0.05)). These results imply that a one-unit increase in operational adjustment agility would lead to 0.105 significant improvements in competitive advantage of commercial banks in Kenya. The findings imply that the null hypothesis was rejected since the significance value is less than 0.05 thus it can be concluded that operational adjustment agility has significant effect on competitive advantage of commercial banks in Kenya.

The findings of the study are consistent with the findings of a study by Almahamid et al. (2010) conducted to establish the effect of organizational agility and knowledge sharing on competitive advantage by focusing on firms in Jordan and revealed that agile capabilities have a significant effect on organizational competitive advantage.

4.8 Moderating Effect of Compliance with CBK Regulations

The study conducted hierarchical regression models to establish the moderating effect of Compliance with central bank regulations on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya. The first regression model was established between the joint independent variable (strategic capabilities) and competitive advantage, the second regression model was between the joint independent variable (strategic capabilities), Compliance with central bank regulations and competitive advantage while the third regression model was between the joint independent variable (strategic capabilities), Compliance with central bank regulations, interaction variable (interaction of the joint independent variable and Compliance with central bank regulations) and competitive advantage. The significance of the interaction term was used to determine whether compliance with central bank regulations have a significant moderating effect. The model summary results are presented in Table 4.38.

Table 4.38

Moderating Regressions Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
$Y = \beta_0 + \beta_1 X + \varepsilon$	.612	0.375	0.372	0.18915
$Y = \beta_0 + \beta_2 X + \beta_3 Z + \varepsilon$	.612	0.375	0.369	0.18959
$Y = \beta_0 + \beta_4 X + \beta_5 Z + \beta_6 X.Z + \varepsilon$	.624	0.389	0.38	0.18788

Predictors: (Constant), Strategic capabilities

Predictors: (Constant), Compliance with CBK, Strategic capabilities

Predictors: (Constant), Interaction variable, Compliance with CBK, Strategic capabilities

The results in Table 4.38indicated that organizational strategic capabilities account for up to 37.5% (R^2 = 0.375) of the variations in competitive advantage of commercial banks in Kenya, while both organizational strategic capabilities and Compliance with central bank regulations account for a similar percentage 37.5% (R^2 = 0.375) of the variations in competitive advantage of commercial banks in Kenya and both strategic capabilities, Compliance with central bank regulations and the interaction of the two account for up to 38.9% (R^2 = 0.389) of the variations in competitive advantage of commercial banks in Kenya. Based on the results, it can be argued that there is a small difference in the R square when central bank of Kenya regulations are introduced (38.9% > 37.5%). The study also established the model significance and the ANOVA results are shown in Table 4.39.

Table 4.39

Moderating Regressions Model ANOVA

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
$Y = \beta_0 + \beta_1X + \varepsilon$	Regression	4.657	1	4.657	130.166	.000
	Residual	7.764	217	0.036		
	Total	12.421	218			
$Y = \beta_0 + \beta_2X + \beta_3Z + \varepsilon$	Regression	4.657	2	2.329	64.789	.000
	Residual	7.764	216	0.036		
	Total	12.421	218			
$Y = \beta_0 + \beta_4X + \beta_5Z + \beta_6 X.Z + \varepsilon$	Regression	4.831	3	1.61	45.622	.000
	Residual	7.59	215	0.035		
	Total	12.421	218			

TheANOVA resultsindicated in Table 4.39 demonstrated that the regression model linking organizational strategic capabilitiesto competitive advantage of commercial banks was significant (F = 130.166, Sig = 0.000, < 0.05). Furthermore, the regression model linking organizational strategic capabilities and Compliance with central bank regulation was also

significant (F = 64.789, Sig = 0.000, < 0.05). Lastly, the regression model linking strategic capabilities, interaction term and Compliance with central bank regulation was also significant (F = 45.622, Sig = 0.000, < 0.05). This implies that the regression models can be relied on to make inferences about competitive advantage. They were good fits.

Hypothesis Five: Compliance with Central Bank Regulations has no significant moderating role on the relationship between organizational strategic capabilitiesand competitive advantage of commercial banks in Kenya

In order to establish whether Compliance with central bank regulations have a significant moderating effect on the relationship between organizational strategic capabilities and competitive advantage, the study established whether the interaction term was significant. The results are shown in Table 4.40.

Table 4.40

Moderating Regressions Coefficients

		Unstandardized Coefficients		**Standardized Coefficients**		
		B	**Std. Error**	**Beta**	**t**	**Sig.**
$Y = \beta_0 + \beta_1 X + \varepsilon$	(Constant)	4.127	0.040		101.92	0.000
	Strategic Capabilities	0.002	0.000	0.612	11.409	0.000
$Y = \beta_0 + \beta_2 X + \beta_3 Z + \varepsilon$	(Constant)	4.117	0.124		33.179	0.000
	Strategic capabilities	0.002	0.000	0.613	11.324	0.000
	Compliance with CBK Regulations	0.004	0.043	0.005	0.083	0.934
$Y = \beta_0 + \beta_4 X + \beta_5 Z + \beta_6 X.Z + \varepsilon$	(Constant)	4.898	0.372		13.154	0.000
	Strategic Capabilities	-0.002	0.002	-0.517	-1.011	0.313
	Compliance with CBK Regulations	-0.302	0.144	-0.383	-2.098	0.037
	Interaction Variable	0.001	0.001	1.16	2.221	0.027
	Dependent Variable: Competitive Advantage					

The results indicated that the interaction term had a positive and significant effect (B= 0.001, t = 2.221, P-value = 0.027 <0.05) which implies that Compliance with central bank regulations have a positive and significant moderating effect on the relationship between organizational strategic capabilitiesand competitive advantage of commercial banks in Kenya.Compliance with Central Bank of Kenya regulationshad a negative and significant effect on competitive advantage (B = - 0.302, t = -2.098, P-value = 0.037 <0.05). This shows that unfavorable Compliance with CBK regulations affects commercial banks negatively.

4.9 Mediating Effect of Higher Order Capabilities

The fourth objective of the study was to establish whether higher order capabilities mediates the relationship between lower order capabilities and competitive advantage. To determine whether higher order capabilities mediates the lower order capabilities and competitive advantage, four-step models as Baron and Kenny (1986) recommends were estimated and the coefficients to be tested for significance at each step.

Step 1: Regression analysis with LOC Predicting Y

A regression model between LOC and competitive advantage was conducted. The model summary results are indicated in Table 4.41.

Table 4.41

Model Summary (LOC Predicting Y)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.455	0.207	0.203	0.21304

Predictors: (Constant), LOC

The results in Table 4.41 indicates that lower order capabilities can account for up to 20.7% of the variation in competitive advantage of commercial banks (R^2 = 0.207). The results also show that lower order capabilities have a positive correlation with competitive advantage (R = 0.455). The ANOVA results are shown in Table 4.42.

Table 4.42

ANOVA (LOC Predicting Y)

	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Regression	2.572	1	2.572	56.678	.000
Residual	9.849	217	0.045		
Total	12.421	218			

Dependent Variable: CA

Predictors: (Constant), LOC

The regression model linking lower order capabilities to competitive advantage was a good fit as shown in Table 4.42 (F = 56.678, Sig = .000, < 0.05) at 5% level of significance. This demonstrates that lower order capabilities can significantly predict competitive advantage. The regression model coefficients are shown in Table 4.43.

Table 4.43

Model Coefficients (LOC Predicting Y)

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	4.021	0.074		54.49	0.000
LOC	0.032	0.004	0.455	7.529	0.000

Dependent Variable: CA

As indicated in Table 4.43, lower order capabilities have a positive and significant effect on competitive advantage of commercial banks in Kenya (B = 0.032, t = 7.529, P = 0.000 < 0.05). The implication is that lower order capabilities can result to an improvement in competitive advantage of commercial banks by 0.032 units.

Step 2: Regression analysis with LOC predicting HOC

The second step involves running a regression model linking low order capabilities to higher order capabilities. The model summary is indicated in Table 4.44.

Table 4.44

Model Summary (LOC Predicting HOC)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.308	0.095	0.091	4.2258
Predictors: (Constant), LOC			

The results indicate that lower order capabilities have a positive relationship with higher order capabilities among commercial banks in Kenya (R = 0.308). It can also be established that lower order capabilities can account for up to 9.5% of the variation in higher order capabilities of commercial banks in Kenya (R^2 = 0.095). The model ANOVA results were also established as shown in Table 4.45.

Table 4.45

ANOVA (LOC Predicting HOC)

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	406.048	1	406.048	22.738	.000
Residual	3875.048	217	17.857		
Total	4281.096	218			
Dependent Variable: HOC					
Predictors: (Constant), LOC					

The regression model linking lower order capabilities to higher order capabilities was a good fit as shown in Table 4.45 (F = 22.738; Sig = .000, < 0.05) at 5% level of significance. This demonstrates that lower order capabilities can significantly predict higher order capabilities among commercial banks in Kenya. The regression model coefficients are shown in Table 4.46.

Table 4.46

Model Coefficients (LOC Predicting HOC)

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	20.96	1.464		14.32	0.000
LOC	0.398	0.084	0.308	4.768	0.000
Dependent Variable: HOC					

The results show that lower order capabilities have a positive and significant effect on higher order capabilities of commercial banks in Kenya (B = 0.398, t = 4.768, P = 0.000 < 0.05). This demonstrates that an improvement in lower order capabilities would improve higher order capabilities by 0.398 units.

Step 3: Regression Analysis with HOC predicting Y

The third step tested the effect of higher order capabilities on competitive advantage as shown in Table 4.47.

Table 4.47

Model Summary (HOC Predicting CA)

R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
.348	0.121	0.117	0.22429
Predictors: (Constant), HOC			

Compared to the contribution of lower order capabilities on competitive advantage (20.7%), higher order capabilities have a lower contribution to competitive advantage of commercial banks explaining only 12.1% of the variation (R^2 = 0.121). Jointly, higher order capabilities have a positive relationship with competitive advantage (R = 0.348). The model ANOVA results are shown in Table 4.48.

Table 4.48

ANOVA (HOC Predicting CA)

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	1.505	1	1.505	29.917	.000
Residual	10.916	217	0.05		
Total	12.421	218			

Dependent Variable: CA

Predictors: (Constant), HOC

The results in Table 4.48 indicate that the regression model linking higher order capabilities to competitive advantage was significant (F = 29.917; Sig = .000, < 0.05) at 5% level of significance. It can be argued that higher order capabilities can predict competitive advantage of commercial banks significantly. The regression model coefficients are shown in Table 4.49.

Table 4.49

Model Coefficients (HOC Predicting CA)

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	4.301	0.051		84.828	0.000
HOC	0.019	0.003	0.348	5.470	0.000

Dependent Variable: CA

The effect of higher order capabilities on competitive advantage as indicated in Table 4.49 is both positive and significant (B = 0.019, t = 5.470, P = 0.000 < 0.05). The implication is that increasing higher order capabilities would improve competitive advantage of commercial banks by 0.019. This effect is however less than that of lower order capabilities on competitive advantage.

Step 4: Regression analysis with LOC and HOC predicting Y

The last step of mediation tested the effect of both lower and higher order capabilities on competitive advantage. The model summary results are shown in Table 4.50.

Table 4.50

Model Summary (LOC and HOC predicting Y)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.686	0.470	0.466	0.1745

Predictors: (Constant), HOC, LOC

The results in Table 4.50 showed that both lower and higher order capabilities have a positive relationship with competitive advantage of commercial banks in Kenya (R = 0.686). The results also indicate that both lower and higher order capabilities can account for up to 47% of the variation in competitive advantage of commercial banks in Kenya (R^2 = 0.470). This is higher than their individual contribution to competitive advantage. The model ANOVA results are shown in Table 4.51.

Table 4.51

ANOVA (LOC and HOC predicting Y)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.843	2	2.922	95.947	.000
Residual	6.578	216	0.030		
Total	12.421	218			

Dependent Variable: CA

Predictors: (Constant), HOC, LOC

The ANOVA results as shown in Table 4.51indicated that the regression model linking both lower and higher order capabilities with competitive advantage of commercial banks in Kenya was significant (F = 95.947; Sig = .000, < 0.05) at 5% level of significance. The implication of the results is that both capabilities can jointly predict competitive advantage significantly. The regression model coefficients are shown in Table 4.52.

Table 4.52

Model Coefficients (LOC and HOC predicting Y)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.412	0.084		40.474	0.000
LOC	0.043	0.004	0.621	11.936	0.000
HOC	0.029	0.003	0.539	10.364	0.000

Dependent Variable: CA

The results in Table 4.52 reveals that both lower and higher order capabilities have a positive and significant effect with competitive advantage of commercial banks in Kenya (B = 0.043, t = 11.936, P = 0.000 < 0.05 and B = 0.029, t = 10.364, P = 0.000 < 0.05) respectively. This shows that when lower and higher order capabilities are improved, they lead to significant improvement in competitive advantage by 0.043 and 0.029 units respectively. The effect of lower order capabilities is however more than that of higher order capabilities.

To test the hypothesis, the criteria by Baron and Kenny (1986) was adopted.

H_{05} Higher Order Capabilities has no significant mediating effect on the relationship between lower order capabilities and competitive advantage

The condition is that if one or more relationships in steps 1 to 3 are significant, then one proceeds to step 4 where mediation is supported when the effect of LOC remains significant after controlling for HOC. The mediation is however partial since both LOC and HOC significantly predict competitive advantage. The null hypothesis is therefore rejected and conclusion is that Higher Order Capabilities has a significant mediating effect on the relationship between lower order capabilities and competitive advantage. It can therefore be argued that Dynamic Capabilities theory is supported by this study in indicating that, lower order capabilities build higher order capabilities which in turn significantly improve competitive advantage of commercial banks in Kenya.

4.10 Summary of Hypothesis Testing

The study sought to establish the effect of knowledge management capability on competitive advantage of commercial banks in Kenya, to assess the effect of information technology capability on competitive advantage of commercial banks in Kenya, to

determine the effect of market capitalizing agility on competitive advantage of commercial banks in Kenya, to find out the effect of operational adjustment agility on competitive advantage of commercial banks in Kenya, to establish whether Higher Order Capabilities mediate the relationship between lower order capabilities and competitive advantage and to establish the moderating role of compliance with central bank regulations on the relationship between organizational strategic capabilitiesand competitive advantage of commercial banks in Kenya. Using the quantitative primary data collected through structured questionnaire, the hypothesis was tested using multivariate ordinary least square regression models and the summary criteria and results is shown in Table 4.53.

Table 4.53

Summary of Hypotheses Testing

No.	Null Hypothesis	Beta	t-value	P-Value	Conclusion	Reference
1	Knowledge Management capability has no significant effect on competitive advantage of commercial banks in Kenya	0.125	7.760	P- Value = 0.000< 0.05	Reject Null Hypothesis	Table 4.36
2	Information Technology capability has no significant effect on competitive advantage of commercial banks in Kenya	0.323	12.953	P-Value = 0.000< 0.05	Reject Null Hypothesis	Table 4.36
3	Market Capitalizing agility has no significant effect on competitive advantage of commercial banks in Kenya	0.129	10.660	P-Value = 0.000< 0.05	Reject Null Hypothesis	Table 4.36
4	Operational Adjustment agility has no significant effect on competitive advantage of commercial banks in Kenya	0.105	77.62	P-Value = 0.000< 0.05	Reject Null Hypothesis	
5	Higher Order Capabilities has no significant mediating effect on the relationship between lower order capabilities and competitive advantage	0.043 and 0.029	11.936 and 10.354	P-Value = 0.000< 0.05	Reject Null Hypothesis	Table 4.51
6	Compliance with Central Bank Regulations has no significant moderating role on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya	0.001	2.221	P-Value = 0.027< 0.05	Reject Null Hypothesis	Table 4.39

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The aim of this chapter is to present the summary of the findings, the conclusion and recommendations. This was done in line with the objectives of the study. Areas of further research are suggested and limitations of the study also taken into account.

5.2 Summary of Findings

The study sought to establish whether there was a relationship between organizational strategic capabilitiesCompliance with CBK regulations and competitive advantage of commercial banks in Kenya. Specifically, the study sought to establish the effect of knowledge management capability on competitive advantage of commercial banks in Kenya, to assess the effect of information technology capability on competitive advantage of commercial banks in Kenya, to determine the effect of market capitalizing agility on competitive advantage of commercial banks in Kenya, to find out the effect of operational adjustment agility on competitive advantage of commercial banks in Kenya and to establish the moderating role of compliance with central bank regulations on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya. Using both primary and secondary data, the study used multiple regression analysis to test each of the objectives. This section presents the findings of the study per objective.

5.2.1 Knowledge Management Capability

The first objective of the study was to establish the effect of knowledge management capability on competitive advantage of commercial banks in Kenya. The descriptive findings indicated that in the commercial banks in Kenya, the recruitment systems favor

competent recruits to a high extent, the deployment of employees to units is based on competence to a high extent, research and development is conducted to enhance the firm's knowledge on products and services to a high extent, mechanisms have been put in place to enhance knowledge on customer needs, preferences, customer preferences and customer buying behaviour to a high extent and knowledge sharing to enhance knowledge on governance of the firm is practiced to a high extent.

According to the inferential findings, knowledge management has a positive and significant effect on competitive advantage of commercial banks in Kenya implying that an increase in knowledge management would lead to significant improvements in competitive advantage of commercial banks in Kenya. The findings led to the rejection of the following hypothesis:

$H_{01:}$ Knowledge Management capability has no significant effect on competitive advantage of commercial banks in Kenya

5.2.2Information Technology Capability

The second objective of the study was to assess the effect of information technology capability on competitive advantage of commercial banks in Kenya. The descriptive findings revealed that the commercial banks in Kenya invest towards improvement of the ICT hardware and skills of the ICT personnel to a high extent, continuously recruit the best ICT experts available to a high extent, continuous utilization of ICT to manage market information and detect change signals and manage customer information to a high extent and use ICT to support key business processes to a high extent.

The inferential results showed that information technology capability has a positive and significant effect on competitive advantage of commercial banks in Kenya implying that an increase in information technology capability would lead to significant improvements

in competitive advantage of commercial banks in Kenya. The findings led rejection of the null hypothesis:

H_{02}: Information Technology capability has no significant effect on competitive advantage of commercial banks in Kenya

5.2.3 Market Capitalizing Agility

The third objective of the study was to determine the effect of market capitalizing agility on competitive advantage of commercial banks in Kenya. The descriptive findings of the study indicated that commercial banks in Kenya continuously conducts market surveys to establish the trends in the market to a high extent, continuously monitors the market trends and adjusting accordingly to a high extent, continuously monitors the market status and adjusting accordingly to a high extent, quickly improves services according to change of customers' preferences to a high extent, quickly improves products according to change of customers' preferences to a high extent, continuous communicates with customers to understand their preferences to a high extent and uses modeling to predict the market trends in the future to a high extent.

The findings used to test hypothesis indicated that market capitalizing agility has a positive and significant effect on competitive advantage of commercial banks in Kenya implying that an increase in market capitalizing agility would lead to significant improvements in competitive advantage of commercial banks in Kenya. The findings led to rejection of the following null hypothesis:

H_{03}: Market Capitalizing agility has no significant effect on competitive advantage of commercial banks in Kenya

5.2.4Operational Adjustment Agility

The fourth objective of the study was to find out the effect of operational adjustment agility on competitive advantage of commercial banks in Kenya. The descriptive findings of the study indicated that commercial banks in Kenya come up with new products and services in a timely manner to a high extent, integrate the operational processes to provide support to innovative ideas in a timely manner to a high extent, continuously revises and adopts new ideas in a timely manner to a high extent, utilizes internal resources towards modification of a service to a high extent. However, they come up with new systems and processes in a timely manner to a moderate extent.

The regression findings indicated that operational adjustment agility has a positive and significant effect on competitive advantage of commercial banks in Kenya implying that an increase in operational adjustment agility would lead to significant improvements in competitive advantage of commercial banks in Kenya. The findings led to rejection of the null hypothesis:

H_{04}: Operational Adjustment agility has no significant effect on competitive advantage of commercial banks in Kenya

5.2.5 Mediating Effect of Higher Order Capabilities

The fifth objective was to establish whether higher order capabilities mediates the relationship between lower order capabilities and competitive advantage. The results indicated that both lower and higher order capabilities have a positive and significant effect with competitive advantage of commercial banks in Kenya. It was also established that higher order capabilities mediate the relationship between lower order capabilities and competitive advantage partially. Lower order capabilities build higher order capabilities

which in turn significantly improve competitive advantage of commercial banks in Kenya. This led to rejection of the null hypothesis:

H_{05} Higher Order Capabilities has no significant mediating effect on the relationship between lower order capabilities and competitive advantage

5.2.6 Moderating Effect of Compliance with Central Bank of Kenya

The sixth objective of the study was to establish the moderating role of central bank regulations on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya. The descriptive findings indicated that compliance with CBK regulations and policies regarding deposit rates, saving rates, risk management practices, corporate governance, approval of new banking product, financial information reporting, lending rates and central banks rates are implemented to a high extent by the commercial banks in Kenya.

The regression model for testing the moderating effect revealed that compliance with central bank regulations have a have a positive and significant moderating effect on the relationship between organizational strategic capabilities and competitive advantage of commercial banks. The findings also led to rejection of the null hypothesis:

H_{06}: Compliance with Central Bank Regulations has no significant moderating role on the relationship between organizational strategic capabilities and competitive advantage commercial banks in Kenya

5.3 Conclusion

The study findings led to the conclusion that knowledge management practices such as recruitment of competent recruits, deployment of employees to units based on competence, conducting research and development to enhance the firm's knowledge on products and

services, putting in place mechanisms to enhance knowledge on customer needs, preferences, customer preferences and customer buying behaviour and knowledge sharing to enhance knowledge on governance of the firm are associated with a significant improvement in the competitive advantage of commercial banks in Kenya.

The study also concluded that information technology capability management practices such as investing towards improvement of the ICT hardware and skills of the ICT personnel to a high extent, continuously recruiting the best ICT experts available to a high extent, continuous utilization of ICT to manage market information and detecting change signals and managing customer information and using ICT to support key business processes would lead to a significant improvement in the competitive advantage of commercial banks in Kenya.

Another conclusion made by the study is that improving market capitalizing agility by conducting market surveys to establish the trends in the market, continuously monitoring the market trends and adjusting accordingly, continuously monitoring the market status and adjusting accordingly, quickly improving services according to change of customers' preferences, quickly improving products according to change of customers' preferences, continuous communicating with customers to understand their preferences and using modeling to predict the market trends in the future would lead to a significant improvement in the competitive advantage of commercial banks in Kenya.

The study also concluded that improving operational adjustment agilityby coming up with new products and services in a timely manner, integrating the operational processes to provide support to innovative ideas in a timely manner, continuously revising and adopting new ideas in a timely manner and utilizing internal resources towards modification of a service would lead to a significant improvement in the competitive advantage of commercial banks in Kenya.

Another conclusion is that higher order capabilities mediate the relationship between lower order capabilities and competitive advantage partially implying that lower order capabilities build higher order capabilities which in turn significantly improve competitive advantage of commercial banks in Kenya. The effect of lower order capabilities on competitive advantage is however more than that of lower order capabilities.

The study also concluded that harsh Compliance with CBK regulations and policies regarding deposit rates, saving rates, risk management practices, corporate governance, approval of new banking product, financial information reporting, lending rates and central banks rates adversely affect the competitive advantage of commercial banks in Kenya.

5.4 Contribution of the Study to Knowledge

The study sought to establish effect of organizational strategic capabilities on competitive advantage of commercial banks in Kenya. The study focused on lower capabilities: knowledge management capability and information technology capability. It also focused on higher order capabilities; market capitalizing agility and operational adjustment agility. The study contributes to empirical literature on effect of organizational strategic capabilities on competitive advantage of commercial banks in Kenya.

Specifically, it was found that organizational strategic capabilities(both lower order and higher order) significantly affect competitive advantage of commercial banks in Kenya. Therefore, the study findings contribute to the knowledge of strategic management by providing empirical evidence on the effect of organizational strategic capabilities on competitive advantage in the context of the Kenyan banking sector. Focusing on commercial banks.

The study also adds to knowledge by documenting that higher order capabilities mediate the relationship between lower order capabilities and competitive advantage partially. Lower order capabilities build higher order capabilities which in turn significantly improve competitive advantage of commercial banks in Kenya.

It also adds to the empirical literature with the findings that compliance with central bank regulations have a significant moderating effect on the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya. It can be argued that the central bank of Kenya regulations, influence the choice of organizational strategic capabilities a firm build, so as to cope with this regulatory environment, ultimately affecting competitive advantage of commercial banks in Kenya.

Among the critical regulations and policies that moderate the competitive advantages of commercial banks in Kenya are regulations on deposit rates, regulations on savings rates, regulations on lending rates, regulations on central bank rates, policies on risk management practices, requirements on corporate governance, requirements on financial information reporting and requirements on approval of new banking products. This is a new relationship that has specifically been established by the study.

The study also builds on the knowledge by realization that, lower order capabilities are more critical to the commercial banks than the higher order capabilities and if not well implemented, the higher order capabilities (OAA and MCA) may not yield a high effect on competitive advantage. It was established that IT capability has the highest effect on competitive advantage, followed by knowledge management, then market capitalizing agility and lastly operational adjustment agility. This is an important insight which may need further examinations in other sectors. Further, the study is important for practitioners because it clarifies what priority for organizational strategic capabilities should be.

5.5 Contribution of the Study to Theory

The study contributes to the theoretical literature by supporting the proposition of the Resource Based View of the Firm that the resource value and core competencies of the firm can be used to determine competitive advantage of an organization. The study established that strategic capabilities, both lower (Knowledge Management Capability and Information Technology Capability) and higher order (Market Capitalizing Agility and Operational Adjustment Agility) are critical for attaining competitive advantage of a firm. This is because ccapabilities govern how resources are transformed into products through firm specific organizational norms and routines; through the development, management and interchange of information and knowledge via human capital and through the creation of an organizational culture that supports the firm's global activities and derives from a collective learning process. The study established that all the four organizational strategic capabilities had a significant effect on competitive advantage of the commercial banks which supports the Resource Based View.

The study findings also support the Dynamic Capability theory by Teece et al. (1997) which suggested that the success of a firm relies on its ability to integrate, build, and reconfigure internal and external competencies to achieve new forms of competitive advantage. The theory argued that various kinds of resources and specialized knowledge could be combined and integrated to generate lower-order capabilities which can be combined to generate higher-order capabilities, which can enhance the performance or competitive advantage of organizations. The study established that the lower order capabilities are very important in generating the higher order capabilities which then improve the competitive advantage of the commercial banks thus supporting this theory in the banking sector context.

The study also contributes to the Market Power Theory by Tregenna (2009) which explains some of the determinants of competitive advantage of the commercial banks and argues that competitive advantage of commercial banks is not only established internally through strategies but also externally through other factors in the macro-economic variables such as inflation and regulations. By testing the moderating effect of CBK regulations, the study proved that compliance with CBK regulations significantly moderates the competitive advantage of commercial banks thus indicating the applicability of the Market Power Theory to the Kenya scenario.

This study contributes to the strategic management practice by pointing out the relative importance of the organizational strategic capabilities to competitive advantage hence a guide to managers on prioritization of each regarding development of these capabilities. Further, the rating of the capabilities with reference to their status of their current development has been documented. This can guide managers in which capabilities to start developing.

5.6 Recommendations for Policy Implications

The study findings led to the study recommendations. Since the findings revealed a positive significant effect of knowledge management on competitive advantage of commercial banks in Kenya, the study recommends an improvement in knowledge management practices by the commercial banks. Some of the practices to improve include recruitment of competent recruits, deployment of employees to units based on competence, conducting research and development to enhance the firm's knowledge on products and services, putting in place mechanisms to enhance knowledge on customer needs, preferences and customer preferences and customer buying behaviour and knowledge sharing to enhance knowledge on governance of the firm.

Based on the findings that information technology capability has a positive significant effect of knowledge management on competitive advantage of commercial banks in Kenya, the study recommends that the commercial banks should aim to improve their IT capability by investing towards improvement of the ICT hardware and skills of the ICT personnel to a high extent, continuously recruiting the best ICT experts available to a high extent, continuous utilization of ICT to manage market information and detecting change signals and managing customer information and using ICT to support key business processes.

Since the study findings indicated that market capitalizing agility has a positive significant effect of knowledge management on competitive advantage of commercial banks in Kenya, the study recommends that the commercial banks should improve their market capitalizing agility by conducting market surveys to establish the trends in the market, continuously monitoring the market trends and adjusting accordingly, continuously monitoring the market status and adjusting accordingly, quickly improving services according to change of customers' preferences, quickly improving products according to change of customers' preferences, continuous communicating with customers to understand their preferences and using modeling to predict the market trends in the future.

Based on the findings that operational adjustment agility has a positive significant effect of knowledge management on competitive advantage of commercial banks, the study recommends that commercial banks in Kenya should aim to improve their operational adjustment agility by coming up with new products and services in a timely manner, integrating the operational processes to provide support to innovative ideas in a timely manner, continuously revising and adopting new ideas in a timely manner and utilizing internal resources towards modification of a service.

Based on the study findings that compliance with CBK regulations significantly moderates the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya, study recommends that CBK should aim to relook at their regulations and policies regarding deposit rates, saving rates, risk management practices, corporate governance, approval of new banking product, financial information reporting, lending rates and central banks rates.

5.7 Areas for Further Research

The study focused on establishing the relationship between organizational strategic capabilities and competitive advantage of commercial banks in Kenya. Even though this study filled some of the existing knowledge gaps on the previous studies, it opened up some more knowledge gaps which future studies can focus on. The study focused on commercial banks only and not the entire banking sector to include Deposit taking Micro Financial Institutions. This is a contextual knowledge gap which future studies can seek to fill.

The study also focused on two higher order and two lower order capabilities. This presents a conceptual knowledge gap which other studies can seek to fill by expanding the scope to other lower order capabilities and higher order capabilities. This is because the organizational strategic capabilities investigated in this study accounts for up to 59.3% of the variation in competitive advantage of commercial banks in Kenya other factors other than organizational strategic capabilities account for the remaining 40.7% of the variation in competitive advantage of commercial banks in Kenya. Further studies can be conducted to establish these factors.

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APPENDICES

Appendix 1: Introduction Letter

James Gathogo Kamau

Kenya Methodist University

Nairobi.

Dear Sir/Madam,

RE: Academic Research Project

I am currently pursuing a PhD at Kenya Methodist University. One of the requirements for the award of the degree is to write a thesis in my area of study. The title of my research is ***''Organizational Strategic Capabilities, Compliance with Regulations and Competitive Advantage of commercial banks in Kenya''.*** I am in the process of gathering data and I have identified you as one of the respondents in this study. I kindly ask you to take some time to respond to the attached questionnaire. The information you give will be treated with utmost confidentiality and at no time will your name be referred to directly. The information given will only be used for academic research purpose.

Thank you in advance for your time and cooperation.

Yours Sincerely,

James Gathogo Kamau(PhD Student)

Appendix 2 : NACOSTI Authorization Letter

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471.
2241349.3310571.2219420
Fax:+254-20-318245.318249
Email:dg@nacosti.goke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI,Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/19/40392/30320** **Date:** **25th February 2019**

James Gathogo Kamau
Kenya Methodist University
P.O. Box 267-60200
MERU.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on **"Relationship between Strategic Capabilities and Competitive Advantage in the Kenyan Banking Sector."** I am pleased to inform you that you have been authorized to undertake research in Nairobi County for the period ending **25th February 2020.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA,MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The county director of Education
Nairobi County.

Appendix 3 : Questionnaire

Kindly fill your responses in the space provided or tick (√) appropriately.

Section I: Background Information

1. Age:

Below 21 years ☐

21-30 years ☐

31-40 years ☐

41-50 years ☐

Over 50 years ☐

2. Level of formal Education:

Secondary ☐

Tertiary ☐

University ☐

3. Work experience:

Less than 3 years ☐

3- 5 years ☐

6 – 10 Years ☐

Over 10 years ☐

Section II: Knowledge Management Capability

1. To what extent does your bank provide on the job training to improve its employee's knowledge?

   No Extent ☐

   Little Extent ☐

   Moderate Extent ☐

   High Extent ☐

   Very high Extent ☐

2. Indicate the approximate budgetary allocations towards training for the last five years

Year /	**Approximate Total budget**	**Approximate Budgetary Allocations towards Training**
2013		
2014		
2015		
2016		
2017		

3. How frequently are the organization's employees trained to improve their skills per year?

   Once per year ☐

   Twice per year ☐

   Three times per year ☐

   More than three times per year ☐

4. Kindly indicate the extent to which the organization practices the following Knowledge Management practices by ticking (√) where appropriate

Statement	**Very low extent**	**Low extent**	**Moderate extent**	**High extent**	**Very high extent**
In my organization, the recruitment systems favour competent recruits					
In my organization, the deployment of employees to units is based on competence					
In my organization, research and development is conducted to enhance the firm's knowledge on products					
In my organization, research and development is conducted enhance the firm's knowledge on services					
In my organization, research and development is conducted to enhance the firm's knowledge on services					
In my organization, mechanisms have been put in place to enhance knowledge on customer needs					
In my organization, mechanisms have been put in place to enhance knowledge on customer preferences					
In my organization, mechanisms have been put in place to enhance knowledge on customer buying behaviour					
In my organization, Knowledge sharing to enhance knowledge on governance of the firm is practiced					

Section III: IT Capability

1. How widely is ICT applied / implemented in your operations??

   Not Applied ☐

   Little Application ☐

   Moderately Applied ☐

   Highly applied ☐

   Very highly applied ☐

2. Indicate the approximate budgetary allocations towards improvement of the ICT system in the organization for the last five years

Year /	**Approximate total budget**	**Approximate Budgetary Allocations towards improving the IT systems**
2013		
2014		
2015		
2016		
2017		

3. How frequently are the organization's IT experts trained per year

   Once per year ☐

   Twice per year ☐

   Three times per year ☐

   More than three times per year ☐

4. Kindly indicate the extent to which the organization practices the following ICT Capability management practices by ticking (√) where appropriate

Statement	Very low extent	Low extent	Moderate extent	High extent	Very high extent
My bank's ICT capability is characterized by investment towards improvement of the ICT hardware					
My bank's ICT capability is characterized by investment towards improvement of the ICT software					
My bank's ICT capability is characterized by investment towards improvement of the skills of the ICT personnel					
My bank's ICT capability is characterized by Continuous recruitment of the best ICT experts available					
My bank's ICT capability is characterized by continuous utilization of ICT to manage market information and detect change signals					
My bank's ICT capability is characterized by continuous utilization of ICT to manage customer information					
My bank's ICT capability is characterized by using ICT to support key business processes					
My bank's ICT capability is characterized by using ICT to develop key business strategies					

Section IV :Levels of Organizational Agility

1. Do you consider your business plan to be flexible?

i) Flexible

Yes ☐

No ☐

ii) Responsive to changes in the business environment?

Yes ☐

No ☐

2. To what extent have the following factors influenced the type of plan that the bank has in place? (Tick all that apply)

Statement	**Very low extent**	**Low extent**	**Moderate extent**	**High extent**	**Very high extent**
Short term business opportunities					
Immediate market presentation of a new product					
Unpredictability of the changes in market levels					
Changes in market opportunities					

3. Please indicate the extent to which the following principles guide your operations

Statement	**Very low extent**	**Low extent**	**Moderate extent**	**High extent**	**Very high extent**
To provide value to the customers					
Inter / Intra cooperation in the organization					
Readiness for change					
Importance of individuals					

4. Please indicate the extent to which the following apply to yourbank

Statement	Very Little Extent	Little Extent	Moderate Extent	High Extent	Very High Extent
Operational Adjustment Agility					
My bank comes up with new products in a timely manner					
My bank comes up with new services in a timely manner					
My bank comes up with new systems in a timely manner					
My bank comes up with new processes in a timely manner					
My bank integrates the operational processes to provide support to innovative ideas in a timely manner					
My bank Continuously revises and adopts new ideas in a timely manner					
My bank utilizes internal resources towards modification of a product					
My bank utilizes internal resources towards modification of a service					
Market Capitalizing Agility					
My bank continuously conducts market surveys to establish the trends in the market					
My bank continuously monitors the market trends and adjusting accordingly					
My bank continuously monitors the market status and adjusting accordingly					
My bank quickly improves services according to change of customers' preferences					
My bank quickly improves products according to change of customers' preferences					
My bank continuous communicates with customers to understand their preferences					
My bank uses modeling to predict the market trends in the future					

Section V: Compliance with central bank regulations

1. Please indicate the level of implementation of the indicated CBK regulations and requirements by ticking (√) where appropriate

Statement	**Very low extent**	**Low extent**	**Moderate extent**	**High extent**	**Very high extent**
In my bank, regulations on deposit rates have been implemented					
In my bank, regulations on savings rates have been implemented					
In my bank, regulations on lending rates have been implemented					
In my bank, regulations on central bank rates have been implemented					
In my bank, policies on risk management practices have been implemented					
In my bank, requirements on corporate governance have been implemented					
In my bank, requirements on financial information reporting have been implemented					
In my bank, requirements on approval of new banking products have been followed					

Section VI: Competitive Advantage

2. Please indicate the extent to which the firm has achieved the following by ticking (√) where appropriate

Statement	**Very low extent**	**Low extent**	**Moderate extent**	**High extent**	**Very high extent**
Competitive cost (Interests on loan)					
Superior performance					
Completely differentiated products					
Completely differentiated services					
Flexibility in service delivery					
Reduced transaction lead time					
Improved customer satisfaction index					

Appendix 4 :Secondary Data Collection Template

Bank	Year	ROE	ROA
	2013		
	2014		
	2015		
	2016		
	2017		

Appendix 5:Item-Total statistics for Organizational Agility

Statement	Cronbach's Alpha if Item Deleted
Short term business opportunities	0.767
Immediate market presentation of a new product	0.779
Unpredictability of the changes in market levels	0.734
Changes in market opportunities	0.77
To provide value to the customers	0.77
Inter / Intra cooperation in the organization	0.762
Readiness for change	0.777
Importance of individuals	0.791
My bank comes up with new products in a timely manner	0.756
My bank comes up with new services in a timely manner	0.739
My bank comes up with new systems in a timely manner	0.788
My bank comes up with new processes in a timely manner	0.783
My bank integrates the operational processes to provide support to innovative ideas in a timely manner	0.797
My bank Continuously revises and adopts new ideas in a timely manner	0.792
My bank utilizes internal resources towards modification of a product	0.763
My bank utilizes internal resources towards modification of a service	0.798
My bank continuously conducts market surveys to establish the trends in the market	0.805
My bank continuously monitors the market trends and adjusting accordingly	0.778
My bank continuously monitors the market status and adjusting accordingly	0.788
	0.807

Statement	Cronbach's Alpha if Item Deleted
My bank quickly improves services according to change of customers' preferences	
My bank quickly improves products according to change of customers' preferences	0.786
My bank continuous communicates with customers to understand their preferences	0.794
My bank uses modeling to predict the market trends in the future	0.783

Appendix 6 : Item-Total statistics for IT Capability

Statement	Cronbach's Alpha if Item Deleted
My bank's ICT capability is characterized by investment towards improvement of the ICT hardware	0.824
My bank's ICT capability is characterized by investment towards improvement of the ICT software	0.831
My bank's ICT capability is characterized by investment towards improvement of the skills of the ICT personnel	0.881
My bank's ICT capability is characterized by Continuous recruitment of the best ICT experts available	0.838
My bank's ICT capability is characterized by continuous utilization of ICT to manage market information and detect change signals	0.91
My bank's ICT capability is characterized by continuous utilization of ICT to manage customer information	0.882
My bank's ICT capability is characterized by using ICT to support key business processes	0.844
My bank's ICT capability is characterized by using ICT to develop key business strategies	0.838

Appendix 7: Item-Total statistics for Knowledge Management Capability

Statement	Cronbach's Alpha if Item Deleted
In my organization, the recruitment systems favour competent recruits	0.685
In my organization, the deployment of employees to units is based on competence	0.694
In my organization, research and development is conducted to enhance the firm's knowledge on products	0.655
In my organization, research and development is conducted enhance the firm's knowledge on services	0.747
In my organization, research and development is conducted to enhance the firm's knowledge on services	0.618
In my organization, mechanisms have been put in place to enhance knowledge on customer needs	0.655
In my organization, mechanisms have been put in place to enhance knowledge on customer preferences	0.8
In my organization, mechanisms have been put in place to enhance knowledge on customer buying behaviour	0.635
In my organization, Knowledge sharing to enhance knowledge on governance of the firm is practiced	0.687

Appendix 8: Item-Total statistics for Compliance with central bank regulation

Statement	Cronbach's Alpha if Item Deleted

Statement	Cronbach's Alpha if Item Deleted
Regulations on deposit rates	0.817
Regulations on savings rates	0.819
Regulations on lending rates	0.802
Regulations on central bank rates	0.789
Policies on risk management practices	0.803
Requirements on corporate governance	0.85
Requirements on financial information reporting	0.854
Requirements on for approval of new banking products	0.842

Appendix 9: Item-Total statistics for Competitive Advantage

Statement	Cronbach's Alpha if Item Deleted
Competitive cost (Interests on loan)	0.558
Superior performance	0.751
Completely differentiated products	0.78
Completely differentiated services	0.747
Flexibility in service delivery	0.568
Reduced transaction lead time	0.541
Improved customer satisfaction index	0.643

Appendix10 : Communalities

Communalities		
Organizational Agility	**Initial**	**Extraction**
Short term business opportunities	1	0.984
Immediate market presentation of a new product	1	0.998
Unpredictability of the changes in market levels	1	0.971
Changes in market opportunities	1	0.995
To provide value to the customers	1	0.995
Inter / Intra cooperation in the organization	1	0.998
Readiness for change	1	0.995
Importance of individuals	1	0.971
My bank comes up with new products in a timely manner	1	0.993
My bank comes up with new services in a timely manner	1	0.997
My bank comes up with new systems in a timely manner	1	0.913
My bank comes up with new processes in a timely manner	1	0.95
My bank integrates the operational processes to provide support to innovative ideas in a timely manner	1	0.969
My bank Continuously revises and adopts new ideas in a timely manner	1	0.946

Communalities		
My bank utilizes internal resources towards modification of a product	1	0.959
My bank utilizes internal resources towards modification of a service	1	0.995
My bank continuously conducts market surveys to establish the trends in the market	1	0.971
My bank continuously monitors the market trends and adjusting accordingly	1	0.998
My bank continuously monitors the market status and adjusting accordingly	1	0.991
My bank quickly improves services according to change of customers' preferences	1	0.894
My bank quickly improves products according to change of customers' preferences	1	0.971
My bank continuous communicates with customers to understand their preferences	1	0.996
My bank uses modeling to predict the market trends in the future	1	0.984
Knowledge Management		
In my organization, the recruitment systems favour competent recruits	1	0.834
In my organization, the deployment of employees to units is based on competence	1	0.884
In my organization, research and development is conducted to enhance the	1	0.866

Communalities		
firm's knowledge on products		
In my organization, research and development is conducted enhance the firm's knowledge on services	1	0.956
In my organization, research and development is conducted to enhance the firm's knowledge on services	1	0.976
In my organization, mechanisms have been put in place to enhance knowledge on customer needs	1	0.896
In my organization, mechanisms have been put in place to enhance knowledge on customer preferences	1	0.917
In my organization, mechanisms have been put in place to enhance knowledge on customer buying behaviour	1	0.911
In my organization, Knowledge sharing to enhance knowledge on governance of the firm is practiced	1	0.722
IT Capability		
My bank's ICT capability is characterized by investment towards improvement of the ICT hardware	1	0.921
My bank's ICT capability is characterized by investment towards improvement of the ICT software	1	0.853
My bank's ICT capability is characterized by investment towards improvement of the skills of the ICT personnel	1	0.808
My bank's ICT capability is characterized by Continuous recruitment of the best ICT experts available	1	0.811
My bank's ICT capability is characterized by continuous utilization of ICT to manage market information and detect change signals	1	0.803
My bank's ICT capability is characterized by continuous utilization of ICT to manage customer information	1	0.725
My bank's ICT capability is characterized by using ICT to support key business processes	1	0.786
My bank's ICT capability is characterized by using ICT to develop key business strategies	1	0.836
CBK Regulations		
Regulations on deposit rates	1	0.71

Communalities		
Regulations on savings rates	1	0.895
Regulations on lending rates	1	0.815
Regulations on central bank rates	1	0.977
Policies on risk management practices	1	0.774
Requirements on corporate governance	1	0.941
Requirements on financial information reporting	1	0.87
Requirements on for approval of new banking products	1	0.897
Competitive Advantage		
Competitive cost (Interests on loan)	1	0.837
Superior performance	1	0.857
Completely differentiated products	1	0.139
Completely differentiated services	1	0.923
Flexibility in service delivery	1	0.832
Reduced transaction lead time	1	0.75
Improved customer satisfaction index	1	0.827
Extraction Method: Principal Component Analysis.		

Appendix 11:Organizational Agility Eigen Values

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.051	30.659	30.659	7.051	30.659	30.659
2	3.969	17.255	47.914	3.969	17.255	47.914
3	3.282	14.269	62.184	3.282	14.269	62.184
4	3.158	13.732	75.916	3.158	13.732	75.916
5	2.052	8.923	84.838	2.052	8.923	84.838
6	1.744	7.581	92.419	1.744	7.581	92.419
7	1.283	5.58	97.999	1.283	5.58	97.999
8	0.46	2.001	100			
9	3.88E-16	1.69E-15	100			
10	3.58E-16	1.56E-15	100			
11	1.28E-16	5.54E-16	100			
12	1.15E-16	4.98E-16	100			
13	4.77E-17	2.07E-16	100			
14	3.48E-17	1.51E-16	100			
15	-8.69E-33	-3.78E-32	100			
16	-1.71E-17	-7.42E-17	100			
17	-9.56E-17	-4.16E-16	100			
18	-1.45E-16	-6.32E-16	100			
19	-2.19E-16	-9.51E-16	100			
20	-2.48E-16	-1.08E-15	100			
21	-3.20E-16	-1.39E-15	100			
22	-3.70E-16	-1.61E-15	100			
23	-6.19E-16	-2.69E-15	100			
Extraction Method: Principal Component Analysis.						

Appendix 12:IT Capability Eigen Values

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.752	59.402	59.402	4.752	59.402	59.402
2	1.791	22.384	81.786	1.791	22.384	81.786
3	0.649	8.112	89.898			
4	0.345	4.316	94.214			
5	0.318	3.973	98.187			
6	0.115	1.437	99.624			
7	0.021	0.267	99.891			
8	0.009	0.109	100			
Extraction Method: Principal Component Analysis.						

Appendix 13: Knowledge Management Capability Eigen Values

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.226	46.96	46.96	4.226	46.96	46.96
2	2.635	29.277	76.238	2.635	29.277	76.238
3	1.101	12.232	88.47	1.101	12.232	88.47
4	0.47	5.218	93.688			
5	0.316	3.51	97.197			
6	0.189	2.101	99.299			
7	0.052	0.583	99.882			
8	0.011	0.118	100			
9	5.59E-17	6.21E-16	100			
Extraction Method: Principal Component Analysis.						

Appendix 14: Central Bank of Kenya Regulations Eigen Values

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.973	49.658	49.658	3.973	49.658	49.658
2	1.617	20.214	69.872	1.617	20.214	69.872
3	1.29	16.121	85.993	1.29	16.121	85.993
4	0.536	6.7	92.693			
5	0.355	4.433	97.125			
6	0.117	1.465	98.591			
7	0.113	1.408	99.999			
8	8.81E-05	0.001	100			
Extraction Method: Principal Component Analysis.						

Appendix 15 : Competitive Advantage Eigen Values

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.206	45.793	45.793	3.206	45.793	45.793
2	1.96	27.996	73.789	1.96	27.996	73.789
3	0.966	13.802	87.591			
4	0.499	7.128	94.718			
5	0.201	2.868	97.586			
6	0.15	2.142	99.729			
7	0.019	0.271	100			
Extraction Method: Principal Component Analysis.						

Appendix 16: List of Commercial Banks

No	Bank	Status
1	KCB Bank Kenya	Operational
2	Standard Chartered Bank	Operational
3	Barclays Bank	Operational
4	Bank of India	Operational
5	Bank of Baroda	Operational
6	Commercial Bank	Operational
7	Habib Bank Ltd	Operational
8	Prime Bank Ltd	Operational
9	Cooperative bank	Operational
10	National Bank	Operational
11	M Oriental Co	Operational
12	Citibank N.A.	Operational
13	Habib Bank A.	Operational
14	Middle East B	Operational
15	Bank of Africa	Operational
16	Consolidated bank	Operational
17	Credit Bank Ltd	Operational
18	Transnational bank	Operational
19	Stanbic Bank	Operational
20	African Banking Corporation	Operational
21	NIC Bank Ltd	Operational
22	Giro Commercial bank	Operational
23	Ecobank Kenya	Operational
24	Spire Bank Ltd	Operational
25	Paramount Bank	Operational
26	Jamii Bora Bank	Operational
27	Guaranty Trust Bank	Operational
28	Victoria Commercial bank	Operational
29	Guardian Bank	Operational
30	I&M Bank Ltd	Operational
31	Development Bank	Operational
32	Diamond Trust bank	Operational
33	Sidian Bank Ltd	Operational
34	Equity Bank Ltd	Operational
35	Family Bank Ltd	Operational
36	Gulf African bank	Operational
37	First Community Bank	Operational
38	UBA Kenya Ltd	Operational
39	HFC Ltd	Operational
40	Chase Bank Kenya*	Under receiver ship
41	Imperial Bank*	Under receiver ship
42	Charterhouse**	Under statutory management
43	Fidelity commercial bank ***	Undergoing transition to be acquired

Source: Central Bank of Kenya, Bank Supervisory Report (2017)