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RELATIONSHIP BETWEEN STRATEGIC CAPABILITIES AND COMPETITIVE ADVANTAGE IN THE KENYAN BANKING SECTOR

James Gathogo Kamau, Dr. Thomas A. Senaji, R. Eng. And Dr. Susan C. Nzioki



Strategy

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^{1*}James Gathogo Kamau

¹Post Graduate Student: Kenya Methodist University

*Corresponding Author email: gathogokamaujames@gmail.com

²Dr. Thomas A. Senaji, R. Eng.

Lecturer: Kenya Methodist University

³Dr. Susan C. Nzioki

Lecturer: Kenya Methodist University

Abstract

Purpose: The Commercial banks operating in Kenya are experiencing a faster pace of change characterized by customers' sophistication, strict regulation and supervision, technology advancement, liberalization of banking license leading to rapid internationalization. Thus this study sought to link strategic capabilities and competitive advantage in the Kenyan banking sector.

Methodology: The study is 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. Focusing on 39 operational commercial banks in Kenya, a descriptive survey design was adopted. Primary data was collected and applied in the study. The relationship between the variables was tested using ordinary least square regression model. On the other hand, the moderating effects of Central Bank of Kenya regulations was also tested using the moderated multiple regression model.

Findings: The study findings revealed that strategic capabilities that is knowledge management capability, information technology capability, operational adjustment agility and market capitalizing agility have a positive and significant effect on competitive advantage of commercial banks in Kenya. Furthermore, central bank regulations have a significant moderating effect on the relationship between strategic capabilities and competitive advantage of commercial banks in Kenya.

Unique contribution to theory, practice and policy: The study findings led to the recommendation that the commercial banks should enhance the practices that improves their strategic capabilities. On the other hand, the central bank of Kenya on the other hand should aim to come up with favorable policies which won't hurt the operations of the commercial banks.

Keywords: *Information Technology Capability, Knowledge Management Capability, organizational adjustment agility, market capitalizing agility, Central Bank Regulations and Competitive Advantage*

1.0 INTRODUCTION

The business environment today is characterized as Volatile, Uncertain, Complex and Ambiguous (VUCA). In such an environment, the capability to sense and respond to market threats and opportunities with speed and surprise has become essential for survival of organizations (Huang, Ouyang, Pan & Chou, 2012). In this volatile market, competition is causing both demand and supply to fluctuate more rapidly, widely, and frequently than they used to. Under this condition, 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 (Lee, 2013). This is because environments are rapidly changing, leading to high uncertainty level. This 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, Spender & Groen, 2011).

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, Liang, Peng & Chen, 2012). This agility reflects a firm-wide capability to deal with unexpected changes via rapid and innovative responses (Trinh-Phuong, Molla & Peszynski, 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, Ouyang, Pan & Chou, 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.

1.1 Statement of the problem

The Commercial banks operating in Kenya are experiencing a faster pace of change. The industry is 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 and organizational agility is required. However, empirical literature on the relationship between strategic capabilities and competitive advantage is scarce and those that exist indicate knowledge gaps. Studies, for instance, Almahamid, Awwad and McAdams (2010) linked organizational agility and knowledge sharing to competitive advantage but the focus was in Jordan thus indicating a contextual knowledge gap. Cai, Huang, Liu, Davison and Liang (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. 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 Kenya hospitality industry. The study however focused on only one strategic capability, that is, knowledge management thus creating conceptual knowledge gap. This study sought not only to focus on knowledge management, but also higher order strategic capability (organizational agility) so as to fill the conceptual knowledge gap of this study by Kiseli and Senaji (2016).

1.2 Research Objective

The purpose of this study was to examine the relationship between strategic capabilities and competitive advantage in the Kenyan banking sector.

1.3 Research Hypothesis

- H₀₁** Knowledge Management capability has no significant effect on competitive advantage of the banking sector in Kenya
- H₀₂** Information Technology capability has no significant effect on competitive advantage of the banking sector in Kenya
- H₀₃** Market Capitalizing agility has no significant effect on competitive advantage of the banking sector in Kenya
- H₀₄** Operational Adjustment agility has no significant effect on competitive advantage of the banking sector in Kenya
- H₀₅** Central Bank Regulations has no significant moderating role on the relationship between strategic capabilities and competitive advantage of the banking sector in Kenya

2.0 LITERATURE REVIEW AND THEORETICAL REVIEW

The McKinsey 7S Framework Model

The McKinsey 7S Framework is a management model developed by Peters and Waterman (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 (Peters & Waterman, 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 alignment with the internal resources of the firm in order to achieve the firms 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. This model presents a way of mutually reinforcing the firm's strategy and resources so as to achieve the desired goals.

Resource Based View

The approach known as Resource-Based view (RBV), originated from Penrose's idea (1959). In the year 1984, Wernerfeldt (1984) 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 (Robinson, 2008). The theory argues that resources have been found to be important antecedents to products and ultimately to performance (Armstrong & Taylor, 2014). 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, Saxena & Halemane, 2010). The resource based theory addresses the resources and capabilities of the firm as underlying factors of performance. Capabilities 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).

The Dynamic Capability Theory

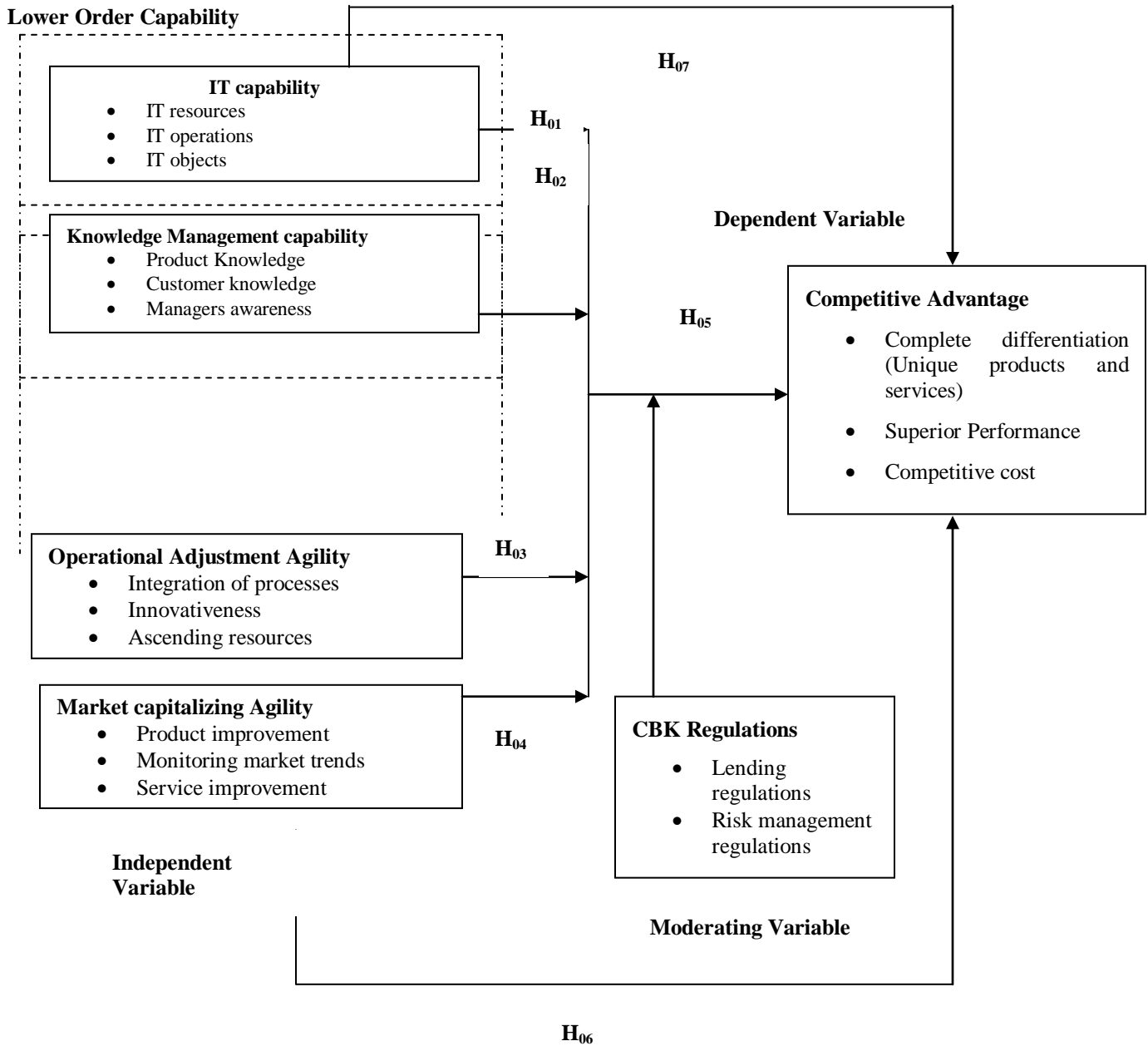
The dynamic capability theory proposed by Teece *et al.* (1997) suggests that the success of a firm relies on its ability to integrate, build, and reconfigure internal and external competencies to achieve new forms of competitive advantage. Scholars further proposed that the view of a hierarchy of capabilities 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 intervening variables. The theory also predicts a positive relationship between organizational agility and competitive advantage.

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 externally through other factors in the macro economic variables such as inflation.

Conceptual Framework



3.0 RESEARCH METHODOLOGY

The study adopted a descriptive survey research design and targeted 259 respondents drawn from 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 each of the 37 commercial bank in Kenya. Primary data was collected through questionnaires with statements captured on a five point Likert scale while secondary data was collected through data collection sheet. Upon completion of the data collection exercise, all completed research instruments were assembled, coded, summarized, entered into the computer; and analyzed using the statistical package for social science (SPSS) version 21.0 to examine relationships between dependent and independent variables.

The data was analyzed using descriptive and inferential statistics. Descriptive statistics include percentages, frequency tables, means, and standard deviations. The study applied inferential statistics by conducting ANOVA, regression, B- coefficient and correlation analysis. To establish the relationship between strategic capabilities (Independent variables) and competitive advantage (Dependent variable), the study used a multivariate regression analysis below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where: Y = Competitive advantage, X_1 = Operational adjustment Agility, X_2 = Market

Capitalizing agility, X_3 = ICT capability, X_4 = Knowledge Management, β_0 = Regression

Constant or Intercept, $\beta_1, \beta_2, \beta_3$ and β_4 = coefficients of various independent variables ϵ = error

term assumed to be normally distributed with a zero variance. Correlation analysis was used to determine the relationship between the research variables and to test the strength of the relationship between the variables. Diagnostic tests were conducted to ensure adherence to assumptions of ordinary least square regression model.

4.0 RESULTS

In this study, the researcher administered a total of 259 questionnaire. A total of 172 questionnaires were filled and returned. This represented a 66% response rate which was adequate since according to Mugenda (2008), a response rate of 50% is acceptable for analyzing and publishing while 60% is good and above 70% is considered very good.

4.1 Results of Pilot Test

The study carried out a pilot study to test reliability and validity of data collection instruments. 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 12

respondents from two randomly selected commercial banks which were not included in the main survey.

4.2 Reliability and Validity of Research Instrument

Reliability refers to the consistency of measurement and is frequently assessed using the test–retest reliability method (Adejimi, Oyediran & Ogunsanmi, 2010). In this study, reliability was measured using Cronbach alpha. The measurement scale for reliability was tested using Cronbach Alpha Coefficient for every variable and for an alpha (α) of 0.7 and above the instrument was interpreted as reliable (Cronbach, 1951). A high reliability estimate should be as close to 1 as possible. All constructs as shown in table 1 depicted that the value of Cronbach’s Alpha are above the suggested value of 0.7 thus the study was reliable (Cooper and Schindler, 2009).

Table 1: Reliability Results

Variables	Cronbach’s Alpha	Comment
Operational adjustment Agility	0.788	Accepted
Central Bank Regulations	0.843	Accepted
ICT capability	0.875	Accepted
Knowledge Management	0.717	Accepted
Competitive Advantage	0.712	Accepted

4.2.1 Validity of the Instruments

In ensuring validity of data collection instrument, the researcher engaged the supervisors to ensure that all items included in the data collection instrument measured the required concepts and covered all areas of the study. Through their opinions and contributions, the researcher managed to remove ambiguities from the data collection instruments. Additionally, their opinions and contributions enabled the researcher to assess the validity of data collection instruments which included relevance, clarity and interpretation of questions and if the respondents could answer the questions without difficulties. The adoption of content validity is consistent with Cohen, Manion, Morrison, *et.al.*, (2007) who argued that content validity enhances the accuracy and meaningfulness of the data collection instruments.

4.3 Descriptive Results

4.3.1 Knowledge Management Capability

The study sought to establish the effect of knowledge management capability on competitive advantage of the banking sector in Kenya. 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 2. According to the results, respondents agreed to a high extent with the statement that in their organizations, the recruitment systems favor competent recruits (mean=4.45 and standard deviation= 0.48), that the deployment of employees to units is based on competence (mean= 4.38 and standard deviation=1.07), that research and development is

conducted to enhance the firm's knowledge on products (mean=4.19 and standard deviation=1.08), that research and development is conducted to enhance the firm's knowledge on services (mean=4.15 and standard deviation=1.05), that research and development is conducted to enhance the firm's knowledge on services(mean=4.15 and standard deviation=0.92) and that Knowledge sharing to enhance knowledge on governance of the firm is practiced (mean=4.30 and standard deviation=1.08). However, respondents agreed to a moderate extent with statements that in their organizations, mechanisms have been put in place to enhance knowledge on customer needs (mean= 3.91 and standard deviation= 0.85), that mechanisms have been put in place to enhance knowledge on customer preferences (mean= 3.91 and standard deviation= 0.73) and that mechanisms have been put in place to enhance knowledge on customer buying behavior (mean= 4.3 and standard deviation= 1.08). On average, respondents agreed to high extent on statements on Knowledge Management Practices as shown by average mean of 4.12 and average standard deviation of 0.96. The results concurs 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.

Table 2: Descriptive Statistics of Knowledge Management Practices

Statement	Me an	Stan Dev
In my organization, the recruitment systems favor competent recruits	4.45	0.78
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	1.08
In my organization, research and development is conducted enhance the firm's knowledge on services	4.15	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	3.91	0.85
In my organization, mechanisms have been put in place to enhance knowledge on customer preferences	3.90	0.73
In my organization, mechanisms have been put in place to enhance knowledge on customer buying behavior	3.62	1.06
In my organization, Knowledge sharing to enhance knowledge on governance of the firm is practiced	4.30	1.08
Average	4.12	0.96

4.3.2 Information Technology Capability

The study sought to assess the effect of information technology capability on competitive advantage of the banking sector 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 low extent, 2=Low extent, 3=Moderate extent, 4=High extent and 5= Very high extent. The findings are presented in table 3. The findings revealed that respondents agreed to a high extent with statements that their bank's ICT capability is characterized by investment towards improvement of the ICT hardware (mean=4.20 and standard deviation= 0.76), that their bank's ICT capability is characterized by investment towards improvement of the skills of the ICT personnel (mean=4.42 and standard deviation= 0.95), that their bank's ICT capability is characterized by Continuous recruitment of the best ICT experts available (mean=4.12 and standard deviation= 0.74), that their bank's ICT capability is characterized by continuous utilization of ICT to manage market information and detect change signals (mean=4.05 and standard deviation= 0.77), that their bank's ICT capability is characterized by continuous utilization of ICT to manage customer information (mean=4.09 and standard deviation= 0.64) and that their bank's ICT capability is characterized by using ICT to support key business processes (mean=4.38 and standard deviation= 0.69). However, respondents agreed to a moderate extent with the statement that their bank's ICT capability is characterized by investment towards improvement of the ICT software (mean=3.99 and standard deviation= 1.22). On average, respondents agreed to high extent with statements on Information Technology Capability as shown by average mean of 4.18 and average standard deviation of 0.82. The findings are consistent with Tallon and Pinsonneault (2011) who established that IT infrastructure flexibility and alignment has a positive and significant main effect on agility.

Table 3: Descriptive Statistics on Information Technology Capability

Statement	Mean	Std Dev
My bank's ICT capability is characterized by investment towards improvement of the ICT hardware	4.20	0.76
My bank's ICT capability is characterized by investment towards improvement of the ICT software	3.99	1.22
My bank's ICT capability is characterized by investment towards improvement of the skills of the ICT personnel	4.42	0.95
My bank's ICT capability is characterized by Continuous recruitment of the best ICT experts available	4.12	0.74
My bank's ICT capability is characterized by continuous utilization of ICT to manage market information and detect change signals	4.05	0.77
My bank's ICT capability is characterized by continuous utilization of ICT to manage customer information	4.09	0.64
My bank's ICT capability is characterized by using ICT to support key business processes	4.38	0.69
Average	4.18	0.82

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 the banking sector 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 findings are presented in table 4. The results revealed that respondents agreed to high extent with statements that their bank continuously monitors the market status and adjusts accordingly (mean=4.10 and standard deviation 1.33) and that their bank continuous to communicate with customers to understand their preferences (mean=4.13 and standard deviation 0.76). However, respondents moderately agreed with the statements that their bank continuously conducts market surveys to establish the trends in the market (mean=3.97 and standard deviation=1.32), that their bank continuously monitors the market trends and adjusting accordingly (mean=3.45 and standard deviation=1.51), that their bank quickly improves services according to change of customers' preferences (mean=3.34 and standard deviation=1.37), that their bank quickly improves products according to change of customers' preferences (mean=3.49 and standard deviation=1.15) and that their bank uses modeling to predict the market trends in the future (mean=3.55 and standard deviation=1.20). On average, respondents agreed with the statements on market Capitalizing agility to a moderate extent as shown by average mean of 3.72 and average standard deviation of 1.23. The results are consistent with Alhadid and As' Ad (2015) who established that organization agility and organizational performance have a positive effect.

Table 4: Descriptive Statistics on Market Capitalizing Agility

Statement	Mea n	Std Dev
My bank continuously conducts market surveys to establish the trends in the market	3.97	1.32
My bank continuously monitors the market trends and adjusting accordingly	3.45	1.51
My bank continuously monitors the market status and adjusting accordingly	4.10	1.33
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	1.15
My bank continuous communicates with customers to understand their preferences	4.13	0.76
My bank uses modeling to predict the market trends in the future	3.55	1.20
Average	3.72	1.23

4.3.4 Operational Adjustment Agility

The study further sought to find out the effect of operational adjustment agility on competitive advantage of the banking sector in Kenya. Respondents were 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 findings as presented in table 5 revealed that respondents agreed to a high extent on the statements that their banks comes up with new products in a timely manner (mean=4.23 and standard deviation= 1.43), that their bank comes up with new services in a timely manner(mean=4.09 and standard deviation= 1.38), that their bank integrates the operational processes to provide support to innovative ideas in a timely manner(mean=4.03 and standard deviation= 0.76) and that their bank continuously revises and adopts new ideas in a timely manner(mean=4.15 and standard deviation= 0.76). However, respondent agreed to a moderate extent that their bank comes up with new systems in a timely manner (mean=3.47 and standard deviation= 1.06), that their bank comes up with new processes in a timely manner (mean=3.33 and standard deviation= 1.15), that their bank utilizes internal resources towards modification of a product (mean=3.69 and standard deviation= 1.23) and that their bank utilizes internal resources towards modification of a service (mean=3.94 and standard deviation= 1.29). On average, respondents agreed to a moderate extent on statements on operational adjustment agility (mean=3.87 and standard deviation= 1.13). The result concurs with Yaghoubi, Kord and Azadikhah (2011) study which revealed that the greatest obstacle to attainment of high agility in an organization is lack of the strategy of communicating with the customers.

Table 5: Descriptive Statistics on Operational Adjustment Agility

Statement	Mean	Std Dev
My bank comes up with new products in a timely manner	4.23	1.43
My bank comes up with new services in a timely manner	4.09	1.38
My bank comes up with new systems in a timely manner	3.47	1.06
My bank comes up with new processes in a timely manner	3.33	1.15
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	3.69	1.23
My bank utilizes internal resources towards modification of a service	3.94	1.29
Average	3.87	1.13

4.3.5 Central Bank Regulations

The sought to establish the moderating role of central bank regulations on the relationship between strategic capabilities and competitive advantage of the banking sector in Kenya. Respondents were asked to provide their assessment of the influence of the CBK regulations and policies on their banks operations in respect to the presented terms. Respondents were asked to provide the extent of implementation of CBK regulations and policies using a scale of 1-5 where 1=Very adversely, 2= adversely, 3= somewhat adversely, 4= little adverse effect and 5=No noticeable effect. The results as presented in table 6 revealed that respondents agreed that in their

banks, regulations on deposit rates have been implemented to a high extent (Mean = 4.19), regulations on savings rates have been implemented to a high extent (Mean = 4.13), regulations on lending rates have been implemented to a very high extent (Mean = 4.59) and regulations on central bank rates have been implemented to a high extent (Mean = 3.98). The findings also indicated that the respondents agreed that policies on risk management practices have been implemented in their banks to a high extent (Mean = 4.15), requirements on corporate governance have been implemented in their banks to a high extent (Mean = 4.03), requirements on financial information reporting have been implemented to a very high extent (Mean = 4.81) and that requirements on approval of new banking products have been followed to a high extent (Mean = 4.37). On average, respondents agreed that CBK regulations and policies have been followed and implemented to a high extent (Average Mean = 4.28). The findings are consistent with Omondi and Aduda (2014) findings which concluded that CBK prudential guidelines are followed by commercial banks but its effect is adverse.

Table 6: Descriptive Statistics on Central Bank Regulations

Statement	Mean	Std Dev
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

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 as presented in table 7 revealed that respondent agreed their firm had achieved to a very high extent reduced transaction lead time (mean=5 and standard deviation =0). Similarly, respondents agreed to a high extent that their firms had achieved competitive cost (Interests on loan) (mean=4.59 and standard deviation =0.49), superior performance (mean=4.00 and standard deviation =0.64), completely differentiated products (mean=4.80 and standard deviation =0.40), completely differentiated services (mean=4.19 and standard deviation =0.75), flexibility in service delivery (mean=4.59 and standard deviation =0.81) and improved customer satisfaction index (mean=4.80 and standard deviation =0.4). On average, respondents agreed to a high extent that their firms had

achieved reduced transaction lead time, competitive cost (Interests on loan), superior performance, completely differentiated products, completely differentiated services, flexibility in service delivery and improved customer satisfaction index(mean=4.57 and standard deviation =0.50). The study findings are consistent with Kamukama, Ahiauzu & Ntayi (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 7: Descriptive Statistics on 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 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 1. The study findings 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 unsteady performance of commercial banks. The findings are consistent with Onuonga (2014) who revealed that the performance of the banking sector in Kenya over the last decade has not been impressive.

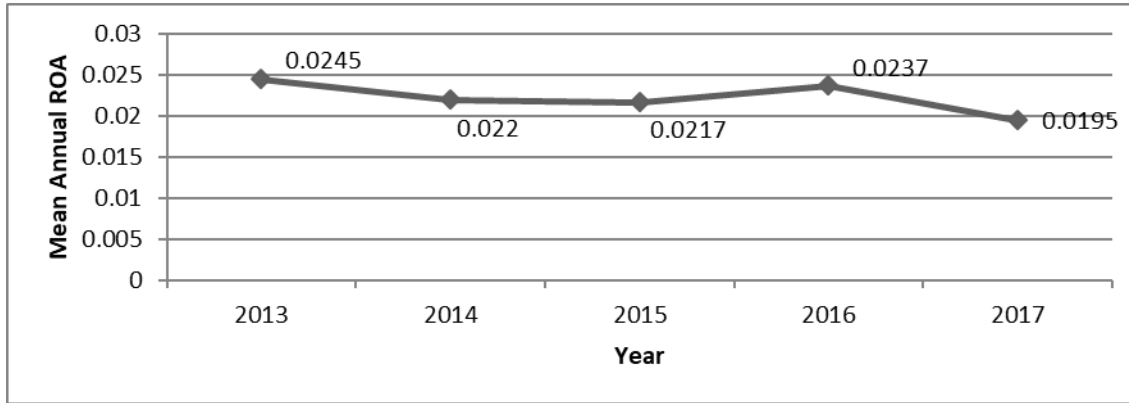


Figure 1 Trend Analysis of Returns on Asset

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 2. 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 banking sector in Kenya over the last decade has not been impressive.

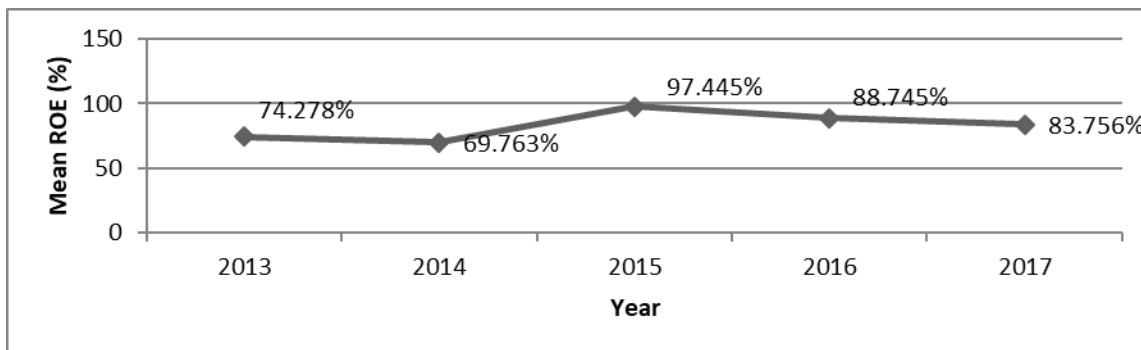


Figure 2 Trend Analysis of Returns in Equity

4.4 Inferential Statistics

4.4.1 Correlation Results

The study sought to establish the association between the independent variables and dependent variable using a Pearson correlation. The results are presented in table 8. The correlation results indicate that knowledge management capability has a positive and significant effect on the

competitive advantage of commercial banks in Kenya as shown by a Pearson correlation value of 0.231 with a corresponding p value of 0.002, < 0.05. These findings imply that an increase in knowledge management capability would result to an increase in competitive advantage of the banks. The correlation results also indicated that information technology capability has a positive and significant effect on the competitive advantage of commercial banks in Kenya as shown by a Pearson correlation value of 0.531 with a corresponding p value of 0.000, < 0.05. The result implies that increase in information technology capability would result to an increase in competitive advantage of the banks. The findings also indicated that market capitalizing agility has a positive and significant effect on the competitive advantage of commercial banks in Kenya as shown by a Pearson correlation value of 0.324 with a corresponding p value of 0.000, < 0.05. The result implies that an increase in market capitalizing agility would result to an increase in competitive advantage of the firm. The findings also indicated that operational agility has a positive and significant effect on the competitive advantage of commercial banks in Kenya as shown by a Pearson correlation value of 0.129 with a corresponding p value of 0.004, < 0.05. The result implies that an increase in operational agility would result to a positive effect on competitive advantage of the commercial banks. The findings also indicated that Central Bank of Kenya has a negative and not significant effect on the competitive advantage of commercial banks in Kenya as shown by a Pearson correlation value of – 0.003 with a corresponding p value of 0.972, > 0.05. The result implies that an increase in strict CBK regulations would result to a decrease in competitive advantage of the banks.

Table 8: Relationship between Strategic Capabilities and Competitive Advantage

		Knowledge Management	IT capability	Market capitalizing	Operational agility	CBK Regulations	Competitive advantage
Knowledge Management	r	1					
ICT capability	r	.004	1				
Market capitalizing	r	-.142	-.002	1			
Operational agility	r	-.176*	-.054	-.246**	1		
CBK Regulations	r	.042	.011	.212**	-.314**	1	
Competitive advantage	r	.231**	.531**	.324**	.129	-.003	1
		.002	.000	.000	.004	.972	
	N	172	172	172	172	172	172

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

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

4.4.2 Hypothesis Testing

The study tested the study hypothesis by using a multiple regression analysis at 5% level of significance. For the hypothesis to be accepted or rejected, a P value less than 0.05 was used. The study findings for the model summary presented in Table 9 indicated that strategic capabilities (Knowledge Management, ICT 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 strategic capabilities leads to a significant improvement in competitive advantage of commercial banks in Kenya. The findings also established that strategic capabilities (Knowledge Management, ICT capability, Market Capitalizing agility and Operational Adjustment Agility) accounts for up to 56.3% of the variation in competitive advantage of commercial banks in Kenya (R Square = 0.563). This therefore implies that strategic capabilities are important in enabling commercial banks to have competitive advantage. Other factors other than strategic capabilities account for the remaining 43.7% of the variation in competitive advantage of commercial banks in Kenya. Further studies can be conducted to establish these factors.

Table 9: Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.751	0.563	0.553	0.1761

Predictors: (Constant), Knowledge Management, ICT capability, Market Capitalizing agility, Operational Adjustment Agility

The fitness of the regression model linking strategic capabilities to competitive advantage of commercial banks in Kenya was also established and presented in Table 10. It was established that the F statistic value of 53.872 was significant ($Sig = 0.000, < 0.05$). This implies that the regression model was significant and can be used to predict competitive advantage of commercial banks significantly.

Table 10: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.686	4	1.671	53.872	.000
Residual	5.182	167	0.031		
Total	11.867	171			

Dependent Variable: Competitive Advantage

Predictors: (Constant), Knowledge Management, ICT capability, Market Capitalizing agility, Operational Adjustment Agility

The regression coefficients were used to test the research hypothesis. The significance of the beta coefficients was compared against 0.05 level of significance.

Hypothesis One: Knowledge Management capability has no significant effect on competitive advantage of the banking sector in Kenya

The study findings presented in Table 11 indicated that knowledge management has a positive and significant effect on competitive advantage of commercial banks in Kenya (Beta = 0.138, Sig = 0.000, < 0.05). These findings imply that a one unit increase in knowledge management would lead to 0.138 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 knowledge management has significant effect on competitive advantage of commercial banks in Kenya. The findings are consistent with Cai, Huang, Liu, Davison and Liang (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: Information Technology capability has no significant effect on competitive advantage of the banking sector in Kenya

The findings indicated in Table 11 similarly showed that information technology capability has a positive and significant effect on competitive advantage of commercial banks in Kenya (Beta = 0.353, Sig = 0.000, < 0.05). These findings imply that a one unit increase in information technology capability would lead to 0.353 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 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, Maedche and Gass (2014) who argued that Business Intelligence and Analytics (BI&A) enable organizational agility which improves competitive advantage of an organization.

Hypothesis Three: Market Capitalizing agility has no significant effect on competitive advantage of the banking sector in Kenya

The findings indicated in Table 11 further showed that market capitalizing agility has a positive and significant effect on competitive advantage of commercial banks in Kenya (Beta = 0.131, Sig = 0.000, < 0.05). These findings imply that a one unit increase in market capitalizing agility would lead to 0.131 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 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 Croteau *et al.* (2011) 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: Operational Adjustment agility has no significant effect on competitive advantage of the banking sector in Kenya

The findings indicated in Table 11 indicated that operational adjustment agility has a positive and significant effect on competitive advantage of commercial banks in Kenya (Beta = 0.111, Sig = 0.000, < 0.05). These findings imply that a one unit increase in operational adjustment agility would lead to 0.111 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, Awwad and McAdams (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.

Table 11: Regression Coefficients

Predictor Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.623	0.207		7.857	0.000
Operational adjustment Agility	0.110	0.018	0.333	6.155	0.000
Market Capitalizing agility	0.131	0.015	0.457	8.497	0.000
ICT capability	0.353	0.033	0.548	10.698	0.000
Knowledge Management	0.138	0.021	0.352	6.656	0.000

Dependent Variable: Competitive Advantage

Optimal Regression Model

Competitive Advantage = 1.623 + 0.353 (ICT Capability) + 0.131 (Market Capitalizing Agility) + 0.138 (Knowledge Management) + 0.110 (Operational Adjustment Agility)

Hypothesis Five: Central Bank Regulations has no significant moderating role on the relationship between strategic capabilities and competitive advantage of the banking sector in Kenya

In order to establish whether central bank regulations have a significant moderating effect on the relationship between strategic capabilities and competitive advantage, the study established whether the interaction term was significant. The findings are presented in Table 12 indicated

that the interaction term had a positive and significant effect (Beta = 0.002, Sig = 0.037, <0.05) which implies that central bank regulations have a positive and significant moderating effect on the relationship between strategic capabilities and competitive advantage of commercial banks.

Table 12: Moderating Regressions Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
$Y = \beta_0 + \beta_1X + \varepsilon$	(Constant)	4.111	0.051		80.536	0.000
	Strategic Capabilities	0.002	0.001	0.592	9.567	0.000
$Y = \beta_0 + \beta_2X + \beta_3Z + \varepsilon$	(Constant)	4.032	0.155		26.013	0.000
	Strategic capabilities	0.002	0.001	0.594	9.562	0.000
	CBK Regulations	0.029	0.054	0.034	0.546	0.586
$Y = \beta_0 + \beta_4X + \beta_5Z + \beta_6 X.Z + \varepsilon$	(Constant)	4.931	0.454		10.857	0.000
	Strategic Capabilities	0.002	0.002	0.611	1.062	0.290
	CBK Regulations	-0.32	0.175	0.369	-1.835	0.068
	Interaction Variable	0.002	0.001	1.253	2.104	0.037

Dependent Variable: Competitive Advantage

5.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

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 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 would lead to a significant improvement in the competitive advantage of commercial banks in Kenya. The study also concluded that harsh 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.

Recommendations

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 CBK regulations significantly moderates the relationship between 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.

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