ELECTRONIC BANKING AND COMPETITIVE ADVANTAGE IN COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

This research project is my original work that hasn't be handed offer to any degree from any other university

Signature…… Date 13th July 2021…….

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D61/79531/2015

This research project has been submitted for examination with my approval as the university supervisor

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DEDICATION

I dedicate this to my loving wife Christine Njango, my two children Justin John and Joaquin James and my parents for their regular encouragement and enabling me to undertake this project.

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I am grateful to God whose empowerment and guidance has been tremendous. This course would not have been successful had it not been for the valuable support, assistance and guidance from my friends, colleagues and classmates. My classmates met for the great discussion and insights during my MBA program. Am grateful to all of them for their support.

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ABBREVIATIONS AND ACRONYMS

ATM Automated Teller Machine

B2C Business-to-consumer

B2B Business to business

BI Business intelligence

C2B Consumer-to-business

CBK Central Bank of Kenya

CRM Customer relationship management

DOI Diffusion of Innovation

EFT Electronic Fund Transfer

E-BANKING Electronic Banking

ICT Information and Communication Technology

IMT International money transfer

IT Information technology

TAM Technology Acceptance Model

EDI Electronic Data Interphase

ESD Electronic service delivery

H2H Host to host

KEPSS Kenya Electronic Payments and Settlement System

RTGS Real Time Gross Settlement

SMEs Small and Medium Enterprises

SWIFT Society for Worldwide Interbank Financial Telecommunications

ABSTRACT

Electronic Banking is a broad description for the method and technique in which a consumer executes banking activities electronically. It refers to the application of programmed resources to convey banking services and products. This research study targeted at establishing and determining the relationship and correlation between electronic banking and competitive advantage in commercial banks in Kenya. The objective of the research study was to institute if electronic banking has steered to competitive advantage in the Kenyan commercial banks with the actual specific and deliverable of the study being to establish and determine the relationship between electronic banking and competitive advantage. The study explored and reviewed the information from other researchers and authors related to the concept of electronic banking and competitive advantage with an aim of determining and establishing the correlation and relationship between application of electronic banking and competitive advantage. This study used the cross-sectional survey research design. The research study focused on the licensed and operating commercial banks in Kenya offering and providing banking services and products to their customers. The population of this study was all the forty-two commercial banks currently licensed and operating in Kenya. Data collection was performed by the use of articulated questionnaires disseminated and circulated to designated bank leaders. The research study established and instituted that there is an extensive variety of electronic banking products offered by commercial banks in Kenya. The study also established that in an attempt to remain relevant and competitive in the market and also in order to tap on the benefits of this competitive advantage, majority of the commercial banks in Kenya are currently offering a variety of electronic banking services. From the research study, it can be comprehended that in order for commercial banks in Kenya to remain relevant in the market, it is imperative for them to adopt, implement and warrant that they offer unique and variety of electronic banking services. The study recommended that commercial banks in Kenya should instrument a continuous improvement strategy on the services and products offered in order to triumph and retain customers.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

A company can gain fundamental competitive advantage when right principles of innovation driven by resource depletion are applied (Zhexembayeva, 2014). The global business environment is volatile and ever changing with changing technology (Lagat, 2016). Consumers' tastes and preferences are continuously evolving hence the need to adapt accordingly and fast. There is increasing competition among business entities as each try to get a share in the market and increase profitability. Teece, (1997) pioneered research on dynamic capabilities and resource-based strategic management. He defined this as the aptitude to reconfigure, construct and integrate external and internal capabilities and experiences in order to tackle the swiftly fluctuating operating environments.

Stiff competition and market saturation are forcing Kenyan banks to be innovative in their products and services focusing on customer satisfaction. Use of emerging technology has increased delivery channels and created efficiency with products such as mobile and internet banking enabling quick payment of bills and cash transfers. In order to stay ahead of competition and attain sustainable competitive advantage, banks must continually innovate in electronic banking (Lagat, 2016).

Information technology (IT) is progressively driving development, promoting innovation, supporting growth and improving competitiveness (Kamel, 2005). IT advancements, stiff competition, globalization, and shifting social inclinations such as customer emphasis, ease of use and inclinations toward accessibility have triggered extreme reorganization of the commercial banking industry (Loonam & O'Loughlin, 2008). The banking industry has delivered new channels and systems that exploit application of modern and current technology in cognizant of the widespread use and application of information technologies. Banking is anticipated to experience radical change because of the E-commerce mutiny (Chou & Chou, 2000).

Banks have started shifting from frontal service and adapting their delivery channels to direct marketing and sales via electronic transactions, email or phone. This creates and enhances value for both the business and its customers (Jayawardhena & Foley, 2000). There has been continuous growth in the application and utilization of

electronic banking technologies such as online banking, ATM, mobile banking, credit card and electronic funds transfer (EFT).

1.1.1 Competitive Advantage

Competitive advantage can be regarded as the differential in organization's attributes that allows it to offer its customers superior services or goods than its competitors, therefore creating enhanced customer value proposition, and achieving quality and greater performance (Ma, 1999). Wiggins and Ruefli (2002) defined sustainable competitive advantage as those types of competitive advantage that are very hard to copy and can consequently yield firm greater economic achievement.

Porter (1980) indicates that the process of instituting competitive advantage demand ascertaining unfulfilled essential in the market, shaping the definite success requisite of the market in satisfying the unfulfilled essentials, defining the firm's primary and core fundamental competencies and establishing how sound they align with the success and realization necessities of the market and then eventually coming up with distinguishing competencies which denote to elements that the organization can perform superior than its competitors. It is the influence that a business entity has over and above its competitors. This can be achieved by offering customers better value, higher quality services or products with lower prices and product differentiation (Kiboori, 2017).

Effective value proposition can enhance customer opportunities, expectations and varieties. Porter established the two methods that can result in an entity gaining competitive advantage above its competitors: differentiation and cost benefit. Cost superiority or advantage denotes the case whereby a business conveys the same services and products as its rivals, although at a reduced cost. Differentiation denotes when an organization provides improved products and services than its rivals. Strategic management is mainly directed toward creating, satisfying and sustaining competitive advantage (Porter, 1980).

According to Gumbo (2010), in order to increase efficiency, enhance their operations and reduce costs, banks in Kenya are introducing electronic banking systems that are internet based. Business practices are being modelled by electronic banking resulting in improved performance (Malhotra & Singh, 2007). In order for the banks to be

competitive in the industry, they need to develop services and products that have better plea to the ever-fluctuating customer base (Brewer, 2001; Simpson, 2002).

1.1.2 Electronic Banking

Electronic Banking is a broad description for the method and technique in which a consumer executes banking activities electronically (Kiboori, 2017). It regards to the use of programmed resources to convey banking services, predominantly through the internet. It also refers to mobile banking, ATM, electronic funds transfers and use of plastic money (FinCen, 2000). The term "Online banking", also interchangeably used with electronic banking, refers to the convenient channel through which customers access banking services and interact with the bank (Chou & Chou, 2000).

Electronic banking has undergone rapid development and has changed the traditional practices in banking. One of the greatest advantageous element of electronic banking is convenience (Anusiga, Kajenthiran, Umanakenan & Achchuthan, 2017). Electronic banking delivers an advanced mark of accessibility and opportuneness that empowers consumers to utilize banking services (Lichtenstein & Williamson, 2006). E-banking has brought banking services closer to customers making it easier for them to transact. This has enhanced banking industry performance (Aduda & Kingoo, 2012). It has evolved into "all in one" in terms of banking services and information which benefits both the banks and consumers.

According to Lindgreen and Wynstra (2005) banks need to understand customer values and preferences as they strive to achieve the satisfaction of customers on how to make decisions on the use of electronic banking. Banks have started to set in place electronic banking, which is a cost-effective way as an alternative service delivery system in order to cope with rapid changes in amplified awareness, technological innovation, and increased demands from consumers to access banking services conveniently (Shih & Fang, 2004).

Banks gain from cost reduction and increased market share as a result of using electronic banking. Banks that benefit the most are those whose customers and end users are able to utilize electronic banking successfully (Ongkasuwan & Tantichattanon, 2002). Factors that determine the ability of clients to utilize the services include perception of the customers towards the product, familiarity with

using the internet, nature of the interface, and type of electronic banking services demanded. Organization and banks must ensure technology innovations that improve business processes are accepted by the intended users to ensure utilization (Venkatesh, 2000).

1.1.3 Overview of Commercial Banks in Kenya

The Banking Act, the Central Bank of Kenya Act, the provident rules and recommendations provided by CBK and the Companies Act governs the commercial banking industry in Kenya (CBK, 2013). Banking and other financial organizations in the country are assimilated in the Companies Act (Chapter 486) of the Kenya laws. Commercial banks self-regulate through the Kenya Bankers Association (KBA), which is also the main lobbying body for Kenyan banks. The banking sector currently comprises of 42 commercial banks 3 of which are public financial institutions, 10 banks listed on the Nairobi stock Exchange (NSE), 12 Microfinance institutions, 14 money remittances providers, 80 foreign exchange bureaus, 7 representative offices of foreign banks, 3 Credit Reference Bureaus and 1 Bank in Receivership (Imperial Bank) (CBK, 2016).

The banking industry has encountered great competition compelling banks to redefine and re-organize their offering in terms of services and products in an effort to satisfy and fulfill the varying requirements of the consumers and sustain their market segment. Institutions are progressively providing e-banking services (Central Bank of Kenya, 2017). As competition continues to intensify on the backdrop of diminishing profits following the interest rate capping that became operational on 14th September 2016, the institutions are going out with more intent and resolve to capture the corporate customer and retail merchants and depositors. Mobile money services offered by mobile network operators such as Airtel money and Mpesa have provided stiff competition to the banks. Micro finance organisations are also providing banking services and this is escalating competition (Njuki, 2015).

Challenges that are currently greatly affecting the banking sector in Kenya include decline of lending interest rates as a result of rate capping, liberalization, preference to the non-banking services such as shylocks, emerging participants that give monetary product services and emerging trend to give huge preference to the consumer needs. Most of the institutions are reformulating their strategies while at the same time

leveraging and riding on innovative and low cost products to seizure new market fragments. The banking sector in Kenya has embraced and incorporated changes in technology with various banks adopting online banking services to customers (CBK Annual Report, 2003).

1.2 Research Problem

Besanko and Kanatas (1996) described competitive advantage as an entity outclassing its industry. Hyper-competition is a competitive condition in which the key success element is the aptitude to continuously develop new processes, products, or services that offer consumers with improved functionality, capability and performance (D'Aveni, 1994). Constant business innovation continuously promotes enhancements in capabilities, providing the firm a sustained competitive advantage. According to Kiboori (2017), one of the main objectives of e-banking use is the saving in huge costs of operation incurred by the legacy branch networks and increased self-service.

Kansal (2014) did an assessment involving customer orientation and use of online banking services in the urban cities of Punjab, India and it was discovered that the banking services that were offered by private banks were unutilized by majority of the urban consumers. It was further unraveled that delivery channels failed to meet customer demands since they did not educate them about the existence of these services (e-banking). Kauffman and Goh (2013) in a study on internet and strong strategy in banking in United States of America purported that as technology and internet continue to be more available, maintaining competitive advantage from technology increasingly becomes more difficult. They also further observed that information technology could be strategically significant mainly because not adhering to it can result to strategic detriment and failure.

Banking sector in Kenya has been considerably shaped and affected by the rapid change and advancement in technology especially the internet. Introduction of electronic money in Kenya has led to technological developments as well as new ways of handling customers in efforts to promote efficiency (Wambari, 2009). For decades, Kenya has relied on the traditional system of banking. A study conducted by Githiga (2017) concluded that three technological factors (awareness of online banking, knowledge to use online banking and reliability and convenience) contributed to the use of online banking services. According to Njuki (2017), security,

rapid technological changes and inadequate infrastructure poses the biggest challenge to the banks offering electronic banking services. Karugu (2013) explored the barriers of low internet banking adoption. The results showed that security, privacy, access and financial capacity are the key hindrances to the utilization of electronic banking.

The motivation for this study is that most researchers dwelt on either electronic banking challenges, adoption or utilization without majorly focusing on its competitive advantage. This research study will contribute to the knowledge base by seeking an answer to the research question: what is the relationship between electronic banking and competitive advantage.

1.3 Research Objective

The objective of this study was to determine the effect of electronic banking on achieving competitive advantage in the commercial banks in Kenya.

1.4 Value of the Study

The outcome of this study would be of huge significance to leadership of commercial banks in Kenya. It should determine and establish the degree of use of electronic banking channels as a strategy tool towards attaining sustainable competitive advantage in the banking industry.

Other scholars and researchers can get value from this research study by deriving concepts on prototypes for implementation in commercial banking dispensation points to accomplish cost saving, efficiencies, effectiveness and improved controls. For scholars, the study may provide information on how banks have used electronic channels to win the market and maintain their position in the same market. It may contribute to the study of electronic banking and its link to the concept of competitive advantage.

Policy makers and the regulator (CBK) would obtain knowledge that may assist in regulating the industry and ensuring the business is conducted in the most professional, fair and ethical manner. The government would be able to realize how to effectively use various banking channels when rolling out various initiatives for example the recent use of Pesa link services in M-Akiba bond after the government found that there was limitation in mobile money transfer due to low amount capping.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter explores and reviews the data and findings from other examiners and authors related to the concept of electronic banking and competitive advantage with an aim of establishing the correlation between applications of electronic banking, comparative advantage and competitive advantage. The particular areas covered in this chapter are the sustainable competitive advantage, electronic banking and electronic banking as a competitive advantage tool. The chapter investigates and reviews previous literature and empirical studies in relation to adoption and utilization of electronic banking in an attempt to have a baseline and a valid reason to carry out the research study and models and representations to be employed in the study. It evaluates and examines the theoretical foundation that directs and guides the research study.

2.2 Theoretical Foundation

Technology acceptance model (TAM), Innovation diffusion theory and the porter's generic strategies guide the theoretical framework of this study. The theories help to identify the correlation of electronic banking and competitive advantage

2.2.1 Technology Acceptance Model (TAM)

Technology Acceptance Model aids to understand the reasons why users adopt technologies and their probability of continued use of the products and services (Davis, 1989). Based on the TAM model, consumer behavior in adoption of technology depends greatly on their intentions. Attitude developed by the consumer towards particular technology influences their intentions to use the service. The model holds the assumption that perceived value and perceived simplicity of use are the key variables that determine whether consumers utilize technology.

TAM incorporated a customer behavior model to estimate and determine contentment and intent of repurchase. Two key elements impact user contentment: Post-adoption or post-use expectations in regard to the information system and variances between expectations before the adoption of the service and actual information system deliverables. Contentment with the previous information system ascertained whether consumers intend to continue with the use of information system. The theory

postulates that contentment was determined by expectation of the information system and justification of expectation after actual usage. According to Bhattacherjee (2001), expectation made the reference point against which validation was assessed by consumers to determine their reaction. Contentment is a function of expectations and validation.

2.2.2 Innovation Diffusion Theory

Innovation diffuses at different rate, which is determined by characteristics of the innovation (Rogers, 1983). Individuals have varying speed of adopting innovations. Based on the usage behavior and adoption speed, consumers can be categorized into five distinct groups. The categories comprise innovators, early adopters, early majority, late majority and laggards. The extent to which behaviors change due to innovations vary. A major challenge that companies face concerning innovations is resistance.

Established by Everett Rogers, the theory has greatly added to a better comprehending of behavioral change and the difference in degrees of adoption and implementation of innovations. Rogers (1995) identified the factors that influence adoption which include the alignment of the innovation with client values and expectations, the comparative advantage of the innovation beyond current services and products, complexity and convolution of the innovation itself and the perceived risk related with the innovation.

2.2.3 Porter's generic strategies

Porter's generic strategies define how an organization implements competitive advantage throughout its preferred market choice (Porter, 1980). Lower cost, differentiation and focus are three generic strategies. Porter indicated that an organization must only choose one of the three or else risk wasting valuable resources. A company however, may be able to pursue cost leadership and differentiation concurrently in a condition where a firm pioneers and implements a major successful technological innovation. In addition, a firm can pursue both differentiation and cost leadership strategy in a state where the competition is inefficient and in a situation where cost is heavily affected by structural and organizational interrelationships or the probability of allocation between industries

exists. Porter's generic strategies also feature and address the relationship among cost reduction, differentiation of products and market focus strategies.

Porter labeled an operating industry as incorporating several sectors, which can be pursued by a company or an organization. An organization's extensiveness of its pursuing and targeting defines the competitive scope of the entity. The two given types of competitive advantage defined by Porter are differentiation and lower cost relative to the company's competitors. Lower cost and differentiation pooled with the choice of undertakings for which an organization seeks to accomplish lead to the three generic strategies for attaining more than the normal industry performance, which are differentiation, focus and cost leadership. The two alternates for the focus strategy are differential and cost focus.

Porter (2001) five forces are, bargaining power of buyers, bargaining power of suppliers, rivalry in the industry, threat posed by new market entrants, and availability of substitute products. The five forces provide an easy view for analyzing and assessing the competitive position of an entity. According to Porter (2001), competition for market growth and share is very huge within the online and electronic banking industry. Entry costs are plummeting due to the use of the Internet (Smith, 2006). Attaining competitive advantage is determined by an organization's capability to deal with the given five forces more effectively than its competitors.

2.3 Competitive Advantage in Organizations

Competitive advantage is the control that a firm or an organization has above its rivals (Porter, 1980). Competitive advantages are conditions that enable a firm or an organization to produce a service or product of equal value at a cheaper cost and in a more desired fashion. These conditions allow a firm to create more sales and superior revenue margins in comparison to its market and industry competitors. Competitive advantages are ascribed to an extensive range of factors and elements. These elements include quality of products, cost arrangement, branding, intellectual property, the organization's coverage network, and orientation of customer service.

Rivals and competitors would find it difficult to suppress a more sustainable competitive advantage. Differential advantage and comparative advantage are the two main and distinctive types of competitive advantages. Comparative advantage refers

to an establishment’s aptitude to provide and deliver a good or service with more efficiency than its rivals, which results to greater profit margins. A differential advantage refers to the case when an establishment’s services or products vary from its rivals' offerings and are seen and deemed to be superior.

Competitive advantage can be extended by providing clients superior and bigger value. Value proposition can produce competitive advantage in service or product if it provides customers and clients enhanced and better experience. The value proposition can enhance customer expectations, anticipations and choices. Competitive advantage requires in depth understanding of a company's enactment in competitive segments of markets. Superior offering in an extended period can only be achieved by creating a sustainable competitive advantage.

Porter (1980) ideas and concepts about competitive advantage can be utilized to study how technology implementations influence the performance of an organization or a firm by altering the links within the five industry forces that determine its competitive operating environment. Each strategy puts forth different needs and requirements on the internal resources and people who are to implement them and these usually require different organizational culture and structure. A company may find that its structure is not optimal for its specific strategy because it could be trying to implement two incompatible organizational strategies. Implementing differentiation, cost leadership, operational effectiveness, innovative, technology based competitive strategy, information advantage and adaptability competitive advantage strategies are various ways and strategies that firms and companies can create an edge and in turn yield competitive advantage. It is very critical that firms work toward keeping their competitive edge.

2.4 Electronic Banking in Commercial Banks

Electronic banking refers to all forms of transactions and banking services and client facing activities executed through electronic channels and systems (FinCen, 2000). Systems that allow financial institution clients to gain access to their accounts, perform businesses, gather data and information on business services and products over a public or private network comprise electronic banking. Electronic banking has various names and descriptions that include e-banking, online banking, virtual banking and internet banking. It is basically the employment of telecommunications

and electronic network to convey various banking services and products. According to Bahmanziari, Odom and Ugrin (2009), technological advancement has made access to online banking more convenient and faster as customers across the globe can utilize it despite their location. This means that any business that targets the final consumer can hardly ignore technological innovation (Githiga, 2017).

As customers continue interacting with the technology they experience positive and negative reactions about the use of technology, this attitude impacts use of online banking services (Parasuraman, 1997). Customers get exposure from various service delivery channels, which result, into sustained continuous use of online banking (Al-Sukkar & Hasan, 2005). Factors influencing utilization of electronic banking mainly include technology, channel, social economic and value for money (Githiga, 2017). Privacy, lack of knowledge, trust and security are deemed critical elements that prevent consumers from use of electronic banking (Gikandi & Bloor, 2010). Issues such as awareness, the know-how of staff and the readiness of customer to accept and utilize online banking slow down the progress (Rotchanakitumnuai, 2003).

Major factors that inhibit adoption of electronic banking are bank's resistance to change, bank's perception that the technology and more so the internet does not provide greater capability to deal with consumers, lack of required resources to implement technology, security concerns and existing legacy systems (Steward & Bradley, 2003). Others include legal and regulatory needs, lack of requisite resources, inadequate commitment from the senior management team, inadequate infrastructure, specialized skills, appropriate resources and fear of utilizing the electronic system by customers and employees.

Trust and service availability may affect channel utilization hence organization must ensure online banking security and availability since these are major considerations for customers in deciding whether to use the channel. The main perquisites, extras or gratuities to ensure secure online banking transactions include confidentiality, authentication and integrity (Shon & Swatman, 2000). Social factors affect a person capability in making a decision on whether to adopt and use technology or not (Venkatesh, 2000). Value for money factors greatly affect utilization of electronic banking (Githiga, 2017). Burnham (2003) indicates that cost of online transaction has an unswerving influence on customer continued use of the banking service.

Customers refrain from using online banking to make payments because of premium pricing (Fenech, 2002).

Ease of Use can be illustrated as how natural it can be to operate something (Kiboori, 2017). According to Davis (2009), the two main autonomous elements that feed to the customer adoption and utilization of the electronic banking service are supposed usefulness and seeming simplicity of use. According to Pikkarainen et al. (2004) and Wang et al. (2010), simplicity of execution is the competitive attribute that adds to the reception of the electronic banking services amongst consumers. Other factors include security, privacy and convenience.

2.5 Challenges in application of e-Banking in Commercial Banks

The ever evolving commercial banking setting brings forth with it different experiments and challenges for supervisory and governing authorities and bank management. Electronic banking upturns banks' reliance on information technology that in turn increases the technical convolution of numerous security and operational instruments that again furthers an inclination towards more alliances, outsourcing and partnership arrangements with third party solution providers, bulk of whom are not optimally regulated. This has resulted to commercial banks coming up with new business models and prototypes involving coming together of banks and non-bank organizations including telecommunication companies, Internet service providers (ISPs) and other services offering technology organisations. The Internet considerably amplifies the importance of data protection, customer privacy, authentication, security controls and audit trail procedures

Elements that mainly work against utilization and adoption of electronic banking are bank's resistance to change, the belief that banks are not able to engage customers effectively through the internet, existing legacy systems and processes, inadequate required resources to implement electronic banking and security worries (Bradley & Stewart, 2003). Sharp escalation in electronic banking frauds challenge its attainment (Vadlamani, 2008). Ramakrishna (2007) asserts that the safety of data on the e-channels is the key element that defines the utilization and acceptance of electronic banking. According to Gikandi and Bloor (2010), considerations must always be put on infrastructure and social limitations when assessing the growth of electronic

banking. The constraints include low Internet penetration in the region and telecommunications infrastructure deficiency.

Privacy and security concerns results to customers faltering to use electronic banking services (Lee & Turban, 2001). Trust of the e-channels is also a major challenge for banks especially in internet banking. This is according to Aladwani (2001). Electronic banking channels require huge investments by banks and this necessitates control and management of risks and costs linked with them (Okiro & Ndung'u, 2013). Human resource development and training is also another major problem that considerably affect the growth of e-commerce in the country.

Difficulties that come with electronic banking are inadequate security, non-tailor made functionality, deficiency of personalized service, shortage of proper legislation governing digital and online transactions, dynamic consumer wants and innovation as outlined by Nyaiyo et al. (2015). It has been denoted that computer illiteracy in a huge chunk of population is still very rampant (Waterfield, 2004). Inadequate power supply, inadequate technological infrastructure and inefficient government statute regulating electronic banking transactions and population inclination to paper money instead of electronic cash are other challenges affecting electronic banking.

Another major concern is the shrinkage of cross-selling opportunities for e-banking (Talmor, 2005). In regard to e-banking services and products, consumers are able to switch service providers easily if for instance a certain entity does not meet their requirements more so given the fact that cost of substituting is plummeting due to electronic banking offering. In view of this, customer acquisition and retention is now a challenge.

Electronic banking challenges can be categorized as managerial, business and technological related according to Magutu et al. (2011). Purchase, implementation and maintenance of the software and hardware are noted as among the major technological challenges. Managerial challenges include organizational and people issues. Human resources may not be comfortable and may resist adoption and implementation of a new technology due to concern of losing job. Electronic banking may also need reconstitution of the firm and introduction of various units for instance cash management and this requires extra planning and cost (Feeny, 2000). In regards to the business challenges, the entity may lose the customized and personalized

service that it presented to its consumers. This may reduce the customer loyalty or loose it completely (Lee, 2001). The new technology may also be underutilized as a result of customers sticking to the old processes that they are comfortable with (Shwartz, 1999).

2.6 Empirical Studies and Research Gaps

An organization's framework and technical direction for its infrastructure and application systems is determined by its technology strategy (Weil & Rosen, 1997). This strategy is very fundamental in supporting the objectives of the company that involves implementation and growth of new and enhanced services and products capabilities focused toward establishing and achieving a competitive superiority over and above the competitive elements in industry of play (Venkatesh, 2000). According to Aladwani (2001), an organization will always seek to adopt progressive technology innovations in order for it to respond to internal and external push. Aladwani (2001) cites instances of external pressures including creation of new prospects through reengineering an organization's consumer banking deliverables in an attempt to meet the customer demands. Reduction of costs of operation and enhancement of administrative forces form a core part of the internal demand forces. According to Chou and Chou (2000), the internet creates a direct link to consumers. It allows organizations to bypass their competitors and it provides new innovative services and products for existing, new and prospect customers. Electronic banking underlines the creation and manipulation of different business ideas and opportunities in the banking sector. Generally, this usually results in more efficient and effective performance, and more prompt interchange among financial entities (Njuki, 2015).

The organization utilizing electronic banking can provide services and products at a lower cost compared to its competitors and rivals. Transactional volume and load from physical branches are absorbed by online and internet banking which in turn reduces the bank's overhead expenditures. Internet banking is a compliment for costlier face-to-face collaborations with customer service personnel in the banks. It is a possible cost-moderating tool due to the fact that organizations can route high volume transactions to the internet to curb expenses. Traditional banking habits, technical issues, security, inadequate resources and transaction difficulties continue to be impediments for electronic banking adoption and growth. However, consumer

demand for electronic banking continues to be very robust and hence it is more likely that online entities and banks will become more advanced and prosperous as they endeavor to resolve their competitive challenges.

McKechnie, Winklhofer and Ennew (2006) reported that commercial banks in Kenya could use TAM to gain superior understanding of acceptance and continued use of electronic banking by the customers. Applying TAM, Pikkarainen and Pikkarainen (2004), indicated that consumers were likely to adopt online banking due to perceived usefulness and ability to use online banking system with ease. Research conducted by Ma and Liu's (2004) indicated that acceptance of technology, supposed usefulness, and simplicity of use had strong correlation. The findings were based from analyzing TAM. Curiosity, concentration, and enjoyment were the major factors that defined perceived playfulness (Moon & Kim, 2001). Other variables that determine the willingness of consumers to adopt technology include convenience, usefulness, and quality of the features.

Desirability of features is the factor that determines perceived quality (Quintane, Casselman, Reiche & Nylund, 2011). However, the findings by researchers concerning TAM may be inaccurate due to inherent limitations of the model. One of the primary limitations of the model is the fact that it is inapplicable to large populations. The other weakness of the model is that it does not consider external factors that influence attitudes of customers such a culture (Galletta, King & McCoy, 2007; Hasan & Al-Sukkar, 2005).

Mahajan, Muller and Bass (2009) argue that innovation diffusion model holds an erroneous assumption that technology diffuses in a homogenous manner. The authors explain that diffusion of technology is affected by factors such as economic constraints, business context, and economic constrains. This study will evaluate electronic banking strategies and competitive advantage using innovation diffusion theory. The diffusion of innovations shows consecutive groups of users adopting the new technology. According to innovation diffusion theory, resistance is a key difficulty that companies face in regard to innovations. However, resistance can be suppressed by ensuring little uncertainty, growth in perceived value, adaptability and legitimacy (Scarborough, 2013).

Today, consumers are more well informed and they are consistently demanding and requesting more offering from their institutional banks in both products and services.

The strategic achievement and attainment of banks and financial entities will be subject to how sound the institutions comprehend the industry dependencies and the absolute need to position and align themselves finest in order to adjust to the prevailing electronic age (Njuki, 2015). In Kenya, banks are facing stiff competition from other money services providers e.g. Mpesa and Airtel money. However, several banks have coined this to their advantage by integrating their services with the money service providers and extending these services to their customers at a fee and hence increasing their non-funded income.

Ngumi and Gakure (2013) in the study on whether bank's electronic innovations sway the commercial banks in Kenya found that there was little consensus in regard to the affirmation that technology has a constructive effect on the banks' profitability and competitive position. They also noted that Kenyan banks and financial institutions do not implement online banking with a solitary purpose of generating huge revenue from the service. Instead, the technology is used to compliment other bank's customer facing channels with a view of building convenience and accessibility. Wafula and Kombe (2015) found that, effect of electronic banking on the achievement and success of the industry mostly denotes the quality improvement and timesaving instead of cost. They also noted that, experience curve yield cost reductions as consumer adoption increase.

The impacts of electronic banking on increase and advancement of client portfolio in the commercial banks in Kenya was examined by Wario and Okibo (2014). The key determinants were the automated teller machine, card systems and EFT. They noted that, electronic service has improved the upturn of client base. Mwangi and Magutu (2011) observed that customer facing technology channels give firms competitive advantage during their research on electronic commerce services and products usage and adoption in bank entities in Kenya. From the studies and literature performed in the previous period, it is notable that financial organizations and banks are in the course of substantial revolution and particularly in adoption of technology and its utilization. There is however shortage of confirmation regarding the influence of electronic banking on competitive advantage in the commercial banking industry.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research strategy that was employed by the researcher. It presents the research study model, data collection methods, target population, intended data analysis and eventual reporting.

3.2 Research Design

Nachmias and Frakfort (2008) details that a research design is a model that directs the person carrying the study in the process of gathering, examining, and construing observations and findings. The study utilized cross-sectional survey research design method. In a cross-sectional study, investigators observe, tally, demarcate, and classify (Polit & Beck, 2003). Cross-sectional studies have as their core element, the precise representation features of individuals, circumstances, or groups, and/or the regularity with which various occurrences happen. The design designates the state of activities as they prevail currently. It articulates the focus area of study for more accurate analysis. The researcher studied, analyzed and found out issues that relate to the problem under investigation and demonstrated relationships between the variables. Data collected from various banks was compared and output discussed in detail by the researcher. The main objective and purpose of this research study was to give and deliver a whole picture and meaningful information regarding how the study variables relate Electronic banking and competitive advantage.

3.3 Population of the Study

Population is defined as the collective or the sum of those following an agreed set of conditions (Polit & Beck, 2003). The study focused on the licensed and operating commercial banks in Kenya subscribing and providing banking services and products to their subscribers. As at the time of the study, there were forty-three licensed commercial banks in Kenya. The population of this research work was all the forty-three commercial banks currently licensed and operating in Kenya.

3.4 Data Collection

Data gathering is a procedural process of collecting data and information that is appropriate to the research questions or purpose (Onwuegbuzie & Leech, 2005). Questionnaire was the primary method of data collection. Primary data was gathered

for the research by means of questionnaire. The researcher helped in the clarification to ensure uniformity and consistency of questions.

The questionnaire was grouped into 5 parts: Part A concentrated on demographics data regarding respondents such as gender, age, and academic qualification, Part B focused on utilization of electronic banking, Part C concentrated on challenges of electronic banking in Kenyan commercial banks, Part D focused on per channel competitive advantage, Part E concentrated on electronic banking use and competitive advantage. The questionnaire was wisely premeditated and verified with a handful of participants of the population for more progresses to ensure validity and accuracy of data to be collected for the research.

In this study, one senior manager staff from each and every of the 43 banks in Kenya was given a printout of the questionnaire. The 43 banks are a moderately small population and hence considered appropriate to collect data from each. This study employed census survey in the data collection process. This was because the commercial banks in Kenya were too few to sample and data was only to be representative if it was to be gathered from all the Commercial Banks in the country.

3.5 Data Analysis

The study utilized descriptive statistics in data analysis. Data was collected and analyzed for any omissions, errors or inconsistencies. This was done in order to warrant wholeness and accuracy of material filled in the questionnaires. Demographic data was examined using percentages and frequencies. The challenges and utilization of electronic banking services and its relationship with competitive advantage was analyzed using standard deviations, means and statistical tools including tables, pie charts, bar graphs, percentages and frequencies. Statistical methods were also utilized to analyze the association between electronic banking utilization and competitive advantage. Finally, the representations were interpreted for meaning and relationships on the elements of electronic banking as a competitive advantage tool.

CHAPTER FOUR: DATA ANALYSIS RESULTS AND FINDINGS

4.1 Introduction

This chapter details data examination and results of the study. Data was condensed and offered in the method of means, charts, tables, proportions, and graphs. Data was gathered from 43 commercial banks in Nairobi that employ and utilize electronic banking to ascertain their competitive advantage.

4.2 Response Rate

Responses were given by Relationship managers, senior relationship managers, Information Technology and Cash Management leads in charge of electronic banking. 36 institutions gave feedback out of the forty three organizations of which the research questionnaires were directed. This provides a feedback level of 84% percent. This feedback level was determined acceptable and exceptional for examination and reporting as endorsed by Mugenda and Mugenda (2003) who indicated that a feedback degree of 50% is satisfactory; 60% is good and that of 70% and above is exceptional for examination and reporting.

4.3 Demographic Information

The data gathered comprised the respondent's age, education level, gender, experience and title of the job. The company's data comprised of the number of branches, category and tier of the bank, employees population, customer deposits and asset base.

4.3.1 Age of Respondents

The respondents' age was classified in different sets that stretched from 20 to more than 50 years. As shown in table 4.1, majority 14 (32%) of respondents were in the age group of 31 to 40 years, 12 (28%) of the respondents were in group of between 41 to 50 years, and this was followed by age bracket of 50 years and above with 11 (26%) and 6 (14.0%) were in the age group of 20 to 30 years. The persons who contributed in this research study were middle-aged and also bulk of the labor force in commercial banks in Kenya comprises of mixed, and various age groups as designated by the outcomes.

Table 4.1 Age of the Respondents

Age Group	Frequency	Percent
20-30	6	14
31-40	14	32
41-50	12	28
Above 50	11	26
Total	**43**	**100.0**

4.3.2 Gender of the respondents

The research study pursued to establish the respondent's gender for those who contributed in this study and the outcomes are as shown below. As shown in table 4.2, majority 22 (51.2%) of the participants were found to be Male and 21 (48.8%) were established to be female. Table 4.2 show that gender balance is largely observed by the commercial banks in Kenya considering the fact that there is a sound gender dispersal.

Table 4.2 Gender of the respondents

Gender	Frequency	Percent
Male	22	51.2
Female	21	48.8
Total	**43**	**100.0**

4.3.3 Level of Education

The study found that 17 (37%) of participants had obtained university degrees, while 12 (23%) of the participants had attained master's degree, 7 (16%) of the respondents had higher diplomas, 5 (14%) of the respondents had attained postgraduate diplomas and 4 (10%) of the respondents had attained diplomas as presented in table 4.3. The findings show that most of the staff members employed in the Kenyan commercial banks have optimum education required to empower them to execute their duties accordingly. This show the participants were well aware of the area of the study and this led to the study getting suitable feedback information.

Table 4.3 Level of Education

Level of Education	Frequency	Percentage
Diploma	4	10
Higher Diploma	7	16
Degree	17	37
Masters	12	23
Post graduate Diploma	5	14
Total	**45**	**100**

4.3.4 Job Title

The study mainly targeted relationship managers, senior relationship managers, and Information technology and cash management staff. As shown in table 4.4, out of 45, 20 (44.4%) were relationship managers, 10 (22.2%) senior relationship Managers, 5 (11.1%) were Information technology applications staff members and 10 (22.2%) were a team from cash management. This implies that the researcher targeted respondents with vast knowledge and experience in electronic banking space.

Table 4.4 Job Title of the respondents

Job Title	Frequency	Percentage
Relationship managers	20	44.4
Senior Relationship Managers	10	22.2
IT applications	5	11.1
Cash Management	10	22.2
Total	**45**	**100**

4.3.5 Duration worked with the Bank

The research study pursued to establish the time duration that the participants have worked in their corresponding banks and the outcomes are as demonstrated in the table 4.5 below. The outcomes show that 27 (58%) of the participants had worked in the banks for a period 6 – 10 years, 10 (23%) of the participants had been employed in

the banks for 11 – 15 year period as shown in table 4.5. As indicated in table 4.5, the staff members who had been employed in the banks for 16 to 20 years and above were 2 (5%) and 6 (14%) of the participants had worked between 1 – 5 years. The outcomes indicate that most of the participants had worked for an appropriate duration of time in their corresponding banks and therefore they were well informed concerning the operations of the banks. This indicates that the participants had acquired adequate working experience and this was quite an asset for this study.

Table 4.5 Duration worked with the bank

Duration worked with the bank in years	Frequency	Percentage
1-5	6	14
6-10	27	58
11-15	10	23
16-20	2	5
Total	**45**	**100**

4.4 Utilization of Electronic Banking

The study pursued to find out the magnitude to which consumers utilize each of the electronic banking services. The results are as shown in the figure and the table below. The Likert scale rating of 1 – 5 where 5 = very large extent, 4 = large extent, 3 = moderate extent, 2 = little extent, and 1 = no extent; was applied to approximate the extent of usage. As presented in table 4.6 below, the outcome shows that bulk of clients largely utilize electronic banking services as indicted by a mean response of 4. On the aspect of the usage of ATM and card services, the results show that over 81.4% of participants directed that to a large degree customer's use ATM as presented in table 4.6. The calculation gave a mean of 4.1860 ± 1.07473 and this indicated that the vast majority of the participants believed that ATMs are widely used in commercial banks in Kenya as shown in table 4.6. Regarding internet banking services, as shown in table 4.6 below, the study results show that 83.70% of customers use internet banking. A mean of 4.1860 ± 1.00607 was gotten indicating a high number of respondents use internet banking. The findings showed that 93.00% of

the participants use mobile banking services. A mean of 4.4651± 0.76684 was obtained indicating that to a large extent customer use mobile banking channels.

The results indicated that 76.80% of the response largely use loop/Mshwari/KCB Mpesa/bank specific online applications. A mean of 4.0465±1.13292 was obtained to confirm that customers use Mpesa/bank specific online applications. The results further indicated that 86.10% customer use Host-host services and a mean of 4.3023±0.93948 was obtained. The results on utilization of (C2B), showed that 95.30% of customer's use Paybill (C2B) services and a mean of 4.4186±0.66306 was obtained. The results on utilization of Mpesa/Airtel (B2C) indicated that 95.40% of the customers use Mpesa/Airtel (B2C) and a mean of 4.3953±0.58308 confirms the same. This is shown in table 4.6.

As shown in table 4.6, the study finding indicated that 76.80% of customers use bank to bank (B2B) and the mean of 3.9302 ±1.26105 confirms the use of B2B. It was further revealed that 86.00% of customers use International SWIFT payments. This was confirmed by a mean of 4.4186±0.95699, which indicated that customers to a great extent use international swift. On the use of Real Time Gross Settlement (RTGS), the research finding shows that 90.70% of the customers greatly use RTGS services in the bank. It was noted that 88.30% of customers are using EFT and a mean of 4.1860±0.90648 was obtained. The findings revealed that 79.00% of the customers in the bank use Pesa Link services. This was confirmed by a mean of 4.0000±1.15470. 86.00% of the customers use International Money Transfers (IMT) services in the bank and a mean of 4.3256±0.94418 was obtained. On the study outcomes on the use of CRM, 81.40% of the customers adopted Customer relationship management (CRM) services in the bank and a mean of 4.1628±1.02191 was obtained to support the same. 45.30% customers use business intelligence reporting (BI) services in the bank.

The study finding indicates that majority of the customer's utilize electronic banking on a daily basis as indicted by 35 (81.4%) response and 6 (14%) use on a weekly basis as shown in the table 4.7. This implies that customer are adopting the rapid changing technologies in the baking industry.

Table 4.6 Utilization of Electronic Banking Services.

Electronic Banking Service usage extent	No Extent %	Little Extent %	Moderate Extent %	Large Extent %	Very large Extent %	Mean	Std. Dev
ATM and card	2.3%	9.3%	7.0%	30.2%	51.2%	4.1860	1.07473
Internet banking	2.3%	7.0%	7.0%	37.2%	46.5%	4.1860	1.00607
Mobile banking	2.1%	4.7%	2.3%	34.9%	58.1%	4.4651	.76684
loop/Mshwari/KCB Mpesa/Bank specific online app	4.7%	7.0%	11.6%	32.6%	44.2%	4.0465	1.13292
Host-host	0%	9.3%	4.7%	32.6%	53.5%	4.3023	0.93948
Paybill (C2B)	0%	2.3%	2.3%	46.5%	48.8%	4.4186	.66306
Bank to Mpesa/Airtel (B2C)	0%	0%	4.7%	51.2%	44.2	4.3953	.58308
B2B services	7.0%	11.6%	4.7%	34.9%	41.9%	3.9302	1.26105
SWIFT services	0%	9.3%	4.7%	20.9%	65.1%	4.4186	0.95699
RTGS services	0%	2.3%	7.0%	37.2%	53.5%	4.3256	0.96907
EFT	2.3%	4.7%	4.7%	48.8%	39.5%	4.1860	0.90648
Pesa Link services	7.0%	4.7%	9.3%	39.5%	39.5%	4.0000	1.15470
IMT	0%	9.3%	4.7%	30.2%	55.8%	4.3256	.94418
CRM	2.3%	7.0%	9.3%	34.9%	46.5%	4.1628	1.02191
BI	0%	0%	4.7%	48.8%	46.5.0%	4.4186	.58686

Table 4.7 Usage of Electronic Banking Services

Usage of Electronic Banking Services	Frequency	Percentage
Daily	35	81.4
Weekly	6	14.0
Monthly	1	2.3
Quarterly	1	2.3
Yearly	0	0
Total	**43**	**100**

4.5 Challenges in application of electronic banking

The research study pursued to institute if the outlined challenges are a menace to commercial banks in application and utilization of electronic banking. The Likert scale rating of 1 – 5 was applied to approximate the degree of the challenges. The results are presented in table 4.8. The outcomes showed that security issues were shown to bear major challenges affecting the bank on the application of electronic banking as indicted by over 90.70% responses and a mean 4.279±0.8542. Over 79.10% of the respondents noted that banks experience system downtime as a result of electronic banking, besides a mean of 4.139±0.9149. The study showed that bank face rapid technological advancements and changes as specified by 88.40% responses. A mean of 4.348±0.8696 was obtained on the same. 90.70% of respondents noted that bank face legislation and legal issues as they implement electronic banking. A mean of 4.348±0.8696 was obtained to confirm that largely banks face legislation and legal issues. The study further discovered that banks face low internet and technology penetration as indicated by 83.70% of respondents who indicated that banks are greatly affected by low internet, technology penetration and top management support. A mean of 4.209±0.9400 was obtained to support the view. System incompatibility issues because of implementation of electronic banking as noted by 88.40% respondents. A mean of 4.232±0.8405 was obtained to confirm the response concerning this challenge. 93% of respondents indicated that bank face inadequate infrastructure (software/hardware/human resource). A mean of 4.441±0.765 was obtained indicating that to greater extent bank face infrastructure challenges. Banks

face educed customer loyalty, loss of personalized service resistance from staff, resistance from customers and high costs of hardware and software as indicated by 88.40% response, in addition, a mean 4.279±0.7965 was calculated as shown in table 4.8.

Table 4.8 Challenges in application of Electronic Banking.

Extent of E-Banking Service Challenge	No Extent %	Little Ext %	Moderate Extent %	Large Ext %	Very large Ext %	Mean	Std. Dev.
Security concerns	2.3%	2.3%	4.7%	46.5%	44.2%	4.279	.8542
Rapid Technical changes	0%	7.0%	4.7%	34.9%	53.5%	4.348	.8696
Legislation and Legal	2.3%	2.3%	4.7%	39.5%	51.2%	4.348	.8696
System Downtime	0%	7.0%	14.0%	37.2%	41.9%	4.139	.9149
Low Internet and technology penetration	0%	9.3%	7.0%	37.2%	46.5%	4.209	.9400
Inadequate top management support	0%	4.7%	2.3%	41.9%	51.2%	4.395	.7603
Inadequate Infrastructure	0%	4.7%	2.3%	37.2%	55.8%	4.441	0.765
Customer Loyalty	0%	4.7%	9.3%	44.2%	41.9%	4.232	0.817
Personalized Service	0%	4.5%	2.3%	44.2%	53.5%	4.511	.5508
Resistance from staff	0%	9.3%	9.3%	34.9%	46.5%	4.186	0.957
Customers Resistance	0%	4.7%	2.3%	41.9%	51.2%	4.395	0.760
High Costs of Hardware	0%	4.7%	7.0%	44.2%	44.2%	4.279	.7965

4.6 Per Channel Competitive Advantage

The study pursued to find competitive advantage per channel and the outcomes are as shown in the table below. The Likert scale rating of 1 – 5 where 5 = very large extent, 4 = large extent, 3 = moderate extent, 2 = little extent, and 1 = no extent; was used to estimate the extent the results. The outcomes are presented in table 4.9. The findings show that Mobile banking and Loop/Mshwari/KCB Mpesa/Bank specific online app are the competitive channels that customers use in the bank, as noted by 97.60% of respondents and a mean of 4.07±0.183. This was due to rapid growth of mobile phones that are well equipped with internet. Innovations in mobile banking applications like Loop/Mshwari/KCB Mpesa/Bank specific online application also make it easier for the populations using smart phones to utilize the channels. This was followed by internet banking as competitive channel for the banking sector in Kenya as noted by 90.70% response and a mean of 4.44±0.853. Internet banking offers various services such as statement information, online account enquiries, bill payments, account-to-account transfer and scheduling automatic periodic fund transfers. The study further reveled that ATM and card services were also among the mostly used services as indicated by 86.00%, responses and a mean of 4.42±0.698.

The finding further indicted that Host-host, real-time RTGS, EFT and Bank to Bank, were rated highly as a tool of competitive advantage as indicated by 83.80% responses with a mean of 4.33±0.778. The findings also revealed that competitiveness of B2C and Pesa Link channels as indicted by 88.40% response and a mean of 4.44±0.881. The results on the competitive advantage of channels indicated that International Money Transfers (IMT), and International SWIFT also contribute to competitive advantage as indicated by 81.40% response with a mean of 4.23±1.06. CRM and Paybill (C2B) were the least used services as indicated by a mean response of 0.63. As detailed in table 4.9, these results show that, electronic banking is the emerging technology that has increased delivery channels and created efficiency with products such as mobile and internet banking enabling quick payment of bills and cash transfers to customers.

Table 4.9 Competitive Advantage per Channel

Competitive Advantage per Channel	No Extent %	Little Ext %	Moderate Extent %	Large Ext %	Very large Extent %	Mean	Std. Dev.
Mobile Banking	0%	0%	2.30%	39.50%	58.10%	4.07	0.183
Bank specific online	2.30%	2.30%	0%	46.50%	48.80%	4.37	0.817
Internet Banking	0%	7.00%	2.30%	30.20%	60.50%	4.44	0.853
B2C	0%	2.30%	7.00%	46.50%	44.20%	4.33	0.714
Pesa Link	0%	7.00%	4.70%	25.60%	62.80%	4.44	0.881
ATM and card	0%	0%	11.60%	34.90%	53.50%	4.42	0.698
Host-host	0%	7.00%	7.00%	27.90%	58.10%	4.37	0.9
RTGS	0%	2.30%	11.60%	37.20%	48.80%	4.33	0.778
B2B	0%	7.00%	9.30%	23.30%	60.50%	4.37	0.926
EFT	0%	7.00%	9.30%	30.20%	53.50%	4.3	0.913
IMT	0%	14.00%	4.70%	25.60%	55.80%	4.23	1.06
International SWIFT	0%	14.00%	7.00%	32.60%	46.50%	4.12	1.051
CRM	0%	18.60%	9.30%	18.60%	53.50%	4.53	0.63

4.7 Electronic Banking Application and Competitive Advantage

The study sought to establish electronic banking application and competitive advantage and the results are as shown in the table below. The Likert scale rating of 1 – 5 where 5 = very large extent, 4 = large extent, 3 = moderate extent, 2 = little extent, and 1 = no extent; was used to estimate the extent of the relationship. Table 4.10

represents the results. The outcomes showed that over 80% of respondents with a mean of 4.348±0.8966 indicated that electronic banking application have to a large extent made banks to achieve the competitive advantage in terms of low prices of products and services. About the cost of operation, the results showed that banks have achieved low cost of operation as noted by 86.10% of respondents, and a mean of 4.302±0.939. It was found that with the application of electronic banking, banks have come up with unique products and services, as indicted by 100% of respondents, and a mean of 4.558±0.502 implying that banks have become innovative. The study outcome show that application of electronic banking largely enhances customer support as noted by 79.10% respondents and a mean of 4.139±1.125. The results illustrate that the application of electronic banking has enabled banks to target a market niche, as noted by 81.40% respondents and a mean of 4.209±1.059 as presented in table 4.10.

The findings indicate that banks expand their customer base as a result of application of electronic banking as noted by 95.30% responses and a mean of 4.372±0.8171. Banks expand their geographical reach as a result of application of electronic banking as indicted by 88.40% of respondents and a mean of 4.325±0.8923. The study also showed that banks reduce marketing and advertising costs as a result of application of electronic banking as indicated by 95.3% respondents with a mean of 4.534±0.8266. It was also revealed that banks increase productivity of human resource staff as a result of application of electronic banking. This affirmed by 76.70% respondents with a mean of 4.139±1.226. Banks increased turnover and profitability a result of application of electronic banking as indicated by 86.00%. Additionally, a mean of 3.67 ± .986 was gotten indicating that majority of the participants supposed that electronic banking enhances cost reduction in business execution as shown in table 4.10.

Table 4.10 Electronic Banking Application and Competitive Advantage

Extent of Competitive Advantage achievement	No Ext %	Little Ext %	Moderate Ext %	Large Ext %	Very large Ext %	Mean	Std. Dev.
Low prices of products and services	0%	7.0%	7.0%	30.2%	55.8%	4.34	.8966
Low cost of operation	0%	9.3%	4.7%	32.6%	53.5%	4.30	0.939
Unique products and Services	0%	0%	0%	44.2%	55.8%	4.55	0.502
Enhanced customer support	2.3%	11.6%	7.0%	27.9%	51.2%	4.13	1.125
Able to target market niche	0%	14.0%	4.7%	27.9%	53.5%	4.20	1.059
Expanded customer base	2.3%	2.3%	0%	46.5%	48.8%	4.37	.8171
Expanded geographical reach	2.3%	2.3%	7.0%	37.2%	51.2%	4.32	.8923
Reduced marketing and advertising costs	2.3%	2.3%	0%	0%	65.1%	4.53	.8266
Extent has the bank achieved Increased productivity of staff	2.3%	16.3%	4.7%	18.6%	58.1%	4.13	1.226
Extent has the bank achieved Ease of customer data collection	2.3%	2.3%	0%	44.2%	51.2%	4.39	.8205
Extent has the bank achieved Increased bank turn-over and profitability.	0%	4.7%	9.3%	37.2%	48.8%	4.30	.8319

Low prices of product and services was noted for cases whereby customers doing cash withdrawals through the ATMs were charged less withdrawal fees than

customers doing over the counter withdrawals. The same case was noted for customers doing funds transfers whereby customers that send manual instructions to banks were charged more than those utilizing internet banking, mobile banking and other channels. Banks that have implemented electronic banking were found to enjoy low cost of operation for instance concerning customer service personnel in the branches and also on the number of tellers that need to physically serve the customers. Banks were able to provide a variety and unique services and products for customers utilizing the channels. Customer profiles in the channels were configured to suite the customer product offering for instance profiles for corporates being differentiated from the retail banking, institutional banking and SMEs. Banks were also able to target a particular market niche with differentiated products. This led to reduced marketing and advertising costs because the electronic profiles were tailor-made to suite customer needs with media displays and pop-ups in place incorporated in the channels that acted as advertisement tools.

Enhanced customer support was noted on banks that have adopted CRM systems. Customer issues could be tracked from the time the issue is logged up to the time a resolution is offered through CRM. Tailor made support was also noted since the support personnel were able to view the customer product suite at a glance. This resulted to increased productivity of staff since customer concerns and needs were tracked electronically.

The researcher noted that banks employing electronic banking are able to expand customer base and handle bulk transactions with ease. This allowed banks to serve more customers and expand their customer base resulting to more non-funded income. Customers situated in remote areas where banks do not have physical branch network were able to access banks' services through electronic banking. This led to expanded geographical reach. Utilization of electronic banking also enabled banks to do targeted customer data collection regarding transactions and menus accessed. This allowed the banks to deduce the customer needs and tailor make the products according to customer preferences resulting to greater utilization of e-banking services that in turn lead to increased bank turnover and profitability. Through electronic banking, customers were able to utilize mobile banking, internet banking, B2C, pesa link, ATM and card, host-host, RTGS, B2B, EFT, IMT, international SWIFT and bank specific online applications e.g. LOOP, Mshwari, KCB mpesa resulting to growth in profit before tax for the banks and increase in market share.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter compromises of the summary of the research findings, discussions, conclusions, limitations and recommendations. The chapter is directed by the study objectives and also the research study outcomes and results.

5.2 Summary

This research study was channeled toward assessing the relationship between electronic banking application and competitive advantage in Commercial Banks in Kenya. The explicit objective was to determine the influence of electronic banking on achieving competitive advantage in the commercial banks in Kenya. The research study used cross-sectional research design. The research study population was all the 43 commercial banks in Kenya.

The study shows that electronic banking is now a complete conveyance channel at commercial banks in Kenya. Convenience, reduction of the bank's queues and geographical limitations are some of the benefits that the banks have accrued from electronic banking. Cash management, cash withdrawals and interactivity that enables customers to utilize electronic channels are some of the models that are offered by E-banking at commercial banks in Kenya. Trust is a major concern for customers when utilizing electronic banking. Customers have worries on various capabilities of electronic banking but they usually also understand the functionality and meaning of the security elements. Commercial banks provide information about the security of their platforms and also employ encrypted data packets in an attempt to assure their customers of the security of their processes. As knowledge, computer usage and confidence increases, changes and growth in the use of electronic banking conveyance channels would follow (Thornton & White, 2001).

The research study showed that customer balance request was the greatest used electronic banking offering by consumers. This was consistent with Njuki (2001) finding. B2C, statement generation, EFT, RTGS and internal transfers comprise other electronic banking service regularly used by customers. Active utilization and subscription rate of below 15% was found in majority of the banks.

Security concerns and legislation issues are the biggest challenges faced in implementation and utilization of electronic banking services. Inadequate computer literacy, system instabilities, low internet coverage, high infrastructure costs that usually leads to lack of adequate infrastructure, prompt technological advancements, system incompatibilities and resistance from customers were also acknowledged as challenges to implementation of electronic banking services by commercial banks in Kenya.

As far as electronic banking and the internet are concerned, Kenyan consumers tend to have low sureness. Any method or type of bank transaction that does not utilize manual signing is usually resisted by many people in Kenya due to worry of being defrauded. This was consistent with Trappey and Trappey's (2001) finding. Banks have employed various responses in order to curb some of the challenges identified in the study. The most popular remedy is training of the bank staff on the adoption and utilization of electronic banking. This conclusion from the study is in agreement with (Hansson et al., 2003) findings. The study showed that senior management are commonly involved in the approval process of any development and need to be involved in the execution of the electronic banking strategy. This was in correlation with Chattopadhyay (2001).

The study found that bulk of the commercial banks in Kenya have incorporated electronic banking in an attempt to enrich the competiveness of their services and products. The study found out that through lowering cost of operation, lowering prices of their services and products, expansion of the customer base and increase in productivity of staff, most Kenyan commercial banks have attained competitive advantage. Enhancing customer support, targeting market niche and coming up with unique services and products also contribute toward achieving competitive advantage. The research study ascertained that there was a substantial influence of electronic banking services regarding banks attaining competitive advantage.

5.3 Conclusion

The study shows customers utilize electronic banking services that are conversant to them and stress-free to execute. These include balance inquiry, B2C, C2B, EFT, RTGS Pesa link and internal transfers. Subscription and utilization of electronic

banking is miniature and thus the need for commercial banks in Kenya to increase these figures in an attempt for them to enhance their growth/share matrix.

The major challenge that commercial banks in Kenya face in application and maintenance of electronic banking is security. Over 84% responses with a mean of over 4 noted this difficulty. This is in line with Claessens et al. (2012), who indicated that security encompasses safety of benefits and expectations. Banks protects their exposure while consumers drive is to protect their own money. Over 80% responses also noted that implementation of electronic banking is also hindered by huge costs compared with little asset base, lack of adequate infrastructure and swift technological developments. Smith and Rupp (2013) mentioned that if a bank had appropriate resources, it would warrant that the electronic banking systems are of great value and dynamic concerning accommodating technological changes.

Bill payment, customer care, balance inquiry and funds transfer were established to contain a substantial influence on competitive advantage of a bank. It is generally cost effective to provide services and products through the internet instead of contracting a bank staff directly. Banks earn non-funded income by charging a fee for online funds transfer transactions. As the bank registers more customers to its electronic banking platforms and as customers continue to utilize the online services, the bank earns more income. The study concludes that in order to enhance their competitive position in the market, banks have embraced electronic services. Commercial banks have benefited from electronic banking in terms of their capability to serve and reach more customers. According to Kaleem and Ahmad (2016), electronic banking has been adopted as a way of appealing new clients and retaining existing customers. Banks offer various banking services as a way of trying to remain relevant.

5.4 Recommendation

The research study indicates that there is great need for commercial banks in Kenya to develop and enhance provision of electronic banking services. Continuous improvement is also a key element that must be adopted by commercial banks in order to enhance and stabilize their electronic banking business. The study has also shown that many customers are not fully aware on how to use and benefit from the electronic banking channels and hence banks need to aggressively educate and inform

them. Once the customers perceive the electronic channels to be beneficial they will subscribe and continue using them.

Considering the fact that a large population of consumers do not own electronic gadgets and the fact that internet access in remote areas is not optimal, banks can utilize mobile banking to reach such populations. This would leverage on the fact that adoption of mobile phones is very prominent in Kenya.

Commercial banks in Kenya should continue improving and evaluating their electronic banking establishments in an attempt to effectively offer electronic services to the vast customer base. Security is also a very key concern and there is a fundamental need to learn the technology being presented in the market.

5.5 Limitations of the Study

The study was restricted to its scope and hence the target population involved the customers of commercial banks only. This suggests that the outcomes of this study cannot be utilized for direct application in another industry or context outside commercial banks. A wider scope could have provided basis of comparison and generalization of the findings.

The other limitation was cost and time. Collection of primary data consumes a lot of time and resources and thus the researcher had to make relevant preparations to effectively handle different demands of the various processes as well as manage time effectively.

5.6 Suggestion for Further Studies

Future studies on banks in the region ought to be done in order to define the magnitude of the development, implementation and utilisation of electronic banking. More research on consumers should be executed in an attempt to understand the degree of reception, challenges and utilization of electronic banking. Studies can be performed to define the limitations, approaches and techniques that must be taken by commercial banks for effective adoption of electronic banking. More studies should be done on specific electronic banking platforms e.g. RTGS, EFT, mobile banking, internet banking, POS, ATM and pesalink subscription and usage in Kenya.

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APPENDICES

Appendix I: Questionnaire

Kindly tick in the space provided the correct answer or supply the required information. Where required, please specify and elaborate.

Part A: Demographic Data

1. Name……. (Optional)

2. Age of the respondent

Below 20 years () 20 to 30 years ( ) 31 to 40 years ( ) 41 to 50 years ( ) above 50 years ( )

3. Gender of the respondent

Male ( ) Female ( )

4. What is your highest level of education pursuing?

O level ( ) Certificate ( ) Diploma ( ) Higher Diploma ( ) Degree ( ) Masters ( ) Post graduate Diploma ( ) Master's Degree ( ) PHD ( )

Others (please specify) _____

5. Which bank do you work for? Please Specify_____

6. Job Title_____

7. How long have you worked with the bank_____

8. Which Electronic banking channes are you aware of in the bank?

Please Specify (use comma separated)

9. How did you learn about the channels listed above?

Bank leaflets/advertisements ( ) Television/Radio ( ) Newspaper/Magazines ( )

Referred by a friend ( ) Bank Brochure ( ) Words-of-mouth ( )

Other, please specify:_____

10. How often do you use electronic banking?

Daily ( ) Weekly ( ) Monthly ( ) Quarterly ( ) Yearly ( )

For parts B, C, D and E, Please indicate using the scale below.

1= No Extent

2= Little Extent

3= Moderate Extent

4= Large Extent

5= Very large extent

PART B: Utilization of e-Banking

11. To what extent do customers use each of these electronic banking services in the bank?

Electronic Banking Service	**1**	**2**	**3**	**4**	**5**
ATM and card services					
Internet banking					
Mobile banking					
Loop/Mshwari/KCB Mpesa/Bank specific online app					
Host-host					
Paybill (C2B)					
Bank to Mpesa/Airtel (B2C)					
B2B					
International SWIFT					
RTGS					
EFT					
Pesa Link					
International Money Transfers (IMT)					
Customer relationship management (CRM)					
Business intelligence reporting (BI)					

12. What other e-banking systems are you aware of in the bank and what is the utilisation?

……

PART C: Challenges of Electronic Banking

13. In application of electronic banking, to what degree does the bank experience each of the below outlined challenges?

Electronic Banking Challenges	**1**	**2**	**3**	**4**	**5**
Security Concerns					
Rapid Technological advancements/change					
Legislation and Legal Issues					
System Downtime					
Low Internet and technology penetration					
Lack of top management support					
Computer Illiteracy					
Incompatibility of the system with the existing ones					
Lack of infrastructure(software/hardware/human resource)					
Reduced Customer Loyalty					
Loss of Personalised Service					
Resistance from staff					
Resistance from customers					
High Costs of Hardware and Software					

14. What other challenges does the bank face in the application of electronic banking?

……

PART D: Competitive Advantage per Channel

15. To what level has provision of each of the below electronic banking services added in accomplishing competitive advantage in the bank?

Electronic Banking System	**1**	**2**	**3**	**4**	**5**
ATM and card services					
Internet banking					
Mobile banking					
Loop/Mshwari/KCB Mpesa/Bank specific online APP					
Host-host					
Paybill (C2B)					
Bank to Mpesa/Airtel (B2C)					
B2B					
International SWIFT					
RTGS					
EFT					
Pesa Link					
International Money Transfers (IMT)					
Customer relationship management (CRM)					
Business intelligence reporting (BI)					

16. What other electronic system has contributed to competitive advantage?

……

……

PART E: Electronic Banking Application and Competitive Advantage

17. To what extent has the bank accomplished each of these competitive advantages as an outcome of electronic banking?

Competitive Advantage	**1**	**2**	**3**	**4**	**5**
Low prices of products and Services					
Low cost of operation					
Unique products and Services					
Enhanced customer support					
Targeting market niche					
Expanded customer base					
Expanded geographical reach					
Reduced marketing and advertising costs					
Increased productivity of staff					
Ease of customer data collection					
Increased bank turn-over and profitability					

18. What other competitive advantages has the bank achieved as a result of application of electronic banking?

……

……

……

Thank you