

**THE EFFECT OF INFORMATION AND COMMUNICATION  
TECHNOLOGIES ON THE COMPETITIVE ADVANTAGE OF  
MULTINATIONAL BANKS IN KENYA**

**BY**

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**DECLARATION**

This research project is my original work and has not been presented for the award of a degree in this University or any other Institution of higher learning for examination.

Signature.....

Date.....

**JOSEPH GICHURA KAMAU**

**D61/68049/2011**

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

Signature .....

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## **ACKNOWLEDGEMENT**

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## **DEDICATION**

This project is dedicated to my amazing family, whose optimism, support, understanding, and love made this journey possible.

## **ABSTRACT**

Banks adopt information and communication technology to improve the efficiency and effectiveness of services offered to customers, improve business processes, as well as to enhance managerial decision making and workgroup collaborations. This helps strengthen their competitive positions in rapidly changing economies. The objective of this study was to determine the effect of Information and Communication technologies (ICTs) on competitive advantage of multinational banks in Kenya by establishing; the effects of information and communication technologies as marketing tools, operation tools and customer service tools on the competitive advantage of Multinational banks in Kenya. This study adopted a descriptive design because the study needed to establish the effect of ICT as a competitive advantage of multinational in Kenya. The target population of this study was 18 multinational banks as indicated in the list under the Central Bank of Kenya website because it is the population that the study considers to have adequate knowledge and accurate information about the effect of ICT as a competitive advantage of multinational banks in Kenya making the study a census survey. This study utilised primary sources of information which were gathered by use of questionnaires. This study used qualitative content analysis methodology to analyze the data collected from the questionnaires. The study concluded that the underlying argument behind the bundling of ICT and organizational performance is that it enables firms to introduce organizational changes in the areas of re-engineering, decentralization, flexible work arrangements, outsourcing, lean production, team-work and customer relations. It also allows firms to produce with greater flexibility and shortened product cycles to satisfy shifting consumer preferences. In turn, these organizational changes are essential for realizing the full benefits of ICT in every entity. The study recommended that more attention has to be directed towards the use of Information and communication Technology in banking operations since the industry serve as a lubricant to the cog of the wheel of the nations' economy while appropriate policies must be put in place to ensure proper monitoring and the determination of the optimum size required to attain organizational efficiency.

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## **ABBREVIATIONS AND ACRONYMS**

ICT: Information and Communication Technology

MKIS: Marketing Information Systems

MNCs: Multinational Corporations

RBV: Resource Based View

CBK: Central bank of Kenya

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

One of the modern yardsticks used for rating a modern business enterprise is its ICT infrastructural layout. This is an indication of the importance of ICT for business establishments. Banks in particular adopt information and communication technology to improve the efficiency and effectiveness of services offered to customers, improve business processes, as well as to enhance managerial decision making and workgroup collaborations. This helps strengthen their competitive positions in rapidly changing economies. Environmental, organizational, and technological factors are creating a highly competitive business environment in which customers are the focal point (Turbman, Leidner, 2008). Furthermore, these factors can change quickly, sometimes unpredictably. Thus, the growth of any enterprise is tied to retaining loyal customers, improving productivity, cutting costs, increasing market share, and providing timely organizational response. ICT is a major enabler for dealing with these issues. Because the pace of change and the degree of uncertainty in today's competitive environment are accelerating geometrically; organizations are operating under increasing pressures to produce more, using fewer resources. in order to succeed (or even merely to survive) in this dynamic world, companies must not only take traditional actions such as lowering costs, but also undertake innovative activities such as changing structure or processes and continuously revising competitive strategies.

ICT affects all processes associated with modern day banking. From the daily routines of preparing payroll and order entry, to strategic activities such as the customer acquisition and retention, ICT surfaces as a key element. ICT help banks improve the efficiency and effectiveness of services offered to customers, effective risk management, wider products portfolio and enhances business processes, managerial decision making, and workgroup collaborations, which strengthens their competitive positions in rapidly changing and emerging economies. This research aims to evaluate the effects of ICTs on the competitive advantage of multinational banks in Kenya.

### **1.1.1 International Business**

International business is a term used to collectively describe all commercial transactions that take place between two or more regions, countries and nations beyond their political boundary (Daniels Radebaugh & Sullivan 2007). Such transactions may be either private or governmental, sales, investments, logistics, and transportation. Usually, private companies undertake such transactions for profit; whereas governments undertake them for profit as well as for political reasons. Transaction of economic resources include capital, skills, people etc. for international production of physical goods and services such as finance, banking, insurance, construction amongst others.

A multinational corporation (MNC) is a company that has a worldwide approach to markets and production or one with operations in more than a country. Most of the MNCs operate in multinational markets. To undertake these operations they require banks for various purposes such as funds transfer, currency exchange, capital funding, guarantees issuing among others. This necessitates the presence of multinational banks which offer the mentioned services.

### **1.1.2 Information and Communication Technologies (ICT)**

The term Information and Communication Technology (ICT) refers to forms of technology that are used to transmit, store, create, share or exchange information. This broad definition of ICT includes such technologies as: radio, television, video, telephone (both fixed line and mobile phones), satellite systems, computer and network hardware and software; as well as the equipment and services associated with these technologies, such as videoconferencing and electronic mail (Wikipedia,2009).

New ICT are changing the economy and the way business is conducted in various forms. ICT force firms to find new ways to expand the markets in which they compete, to attract and retain customers by customizing products and services, and to restructure their business strategy to obtain competitive advantage (Gratzner and Winiwarter, 2003). A strategy specifies how a business intends to compete in the markets it chooses to serve. Today's business strategy model should be integrated, consisting of a market and a policy component (Baron, 1996). The market strategy is a concerted pattern of actions taken in the market environment, in order to add value for the firm, through the improvement of its economic performance, as is the case when firms compete with its rivals, through the launching of a new or innovated good, or by implementing adequate pricing strategies. A policy strategy is a concerned pattern of actions taken in the policy environment to create value for the firm by improving its overall economic position (Porter, 2002).

### **1.1.3 Competitive Advantage**

The definition of competitive advantage was adopted from Porter (2001) who defines competitive advantage as any activity that creates superior value above its rivals". The

explicit assertion by Porter (2001) was that competitive advantage comes from the value the firms create for their customers that exceeds the cost of producing that value. Thus, the key concern for a business is to capture that value, which is greater than its cost.

The most explicit attempt to define competitive advantage and sustainable competitive advantage has come from Barney (1991). He states, “a firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors, and when these other firms are unable to duplicate the benefits of this strategy,”. He additionally asserts that, “a competitive advantage is sustained only if it continues to exist after efforts to duplicate that advantage have ceased”.

In spite of the vast conceptual and empirical study conducted on the notion of competitive advantage, Flint and Van Fleet (2005) have nonetheless argued that there is no clear definition of competitive advantage (CA) that is applicable in general term i.e. applicable in any dimension or criteria. Following Ma (2000), as far as the research on (sustainable) competitive advantage is concerned, researchers must first validate the research question and research design, and decide on the dependent and independent variables to be applied: are competitive advantage and firm (financial) performance equitable, which means other independent variables (or indeed moderating and/or mediating variables such as organizational structures, top management team composition and style, human resource management, etc) influencing its outcome; or indeed both are different concepts and constructs, which implies that firm (financial) performance indeed depends upon its competitive advantage position. Also, clear and specific definition and

direction of the concept of (sustainable) competitive advantage will also further enhance the validity of the academic research in this specific strategic management area.

#### **1.1.4 Multinational Banks in Kenya**

Multinational corporations (MNCs) operate in a global environment unfamiliar in political, economic, social, cultural, technological and legal aspects. According to CBK website, Kenya currently has a total of 48 banks where 43 banks are fully fringed whereas 5 are representative offices of foreign banks. Out of these 43 banks, 18 are multinational of which only 8 are listed in the Nairobi securities exchange. The banking industry in Kenya is governed by Companies Act, Banking Act, the Central Bank of Kenya Act, and various prudential guidelines issued by CBK. The banks have come together under the Kenya Bankers Association (KBA) which serves as lobby for the sectors' interests.

Over the last few years the banking sector has continued to grow in assets, deposits, profitability and products offering. Players in this sector have experienced increased competition over the last few years resulting from innovations among the players, new entrants into the market, (CBK 2012), as well as macro and micro economic factors. Increased competition among multinational banks and the entry of other players in the Kenyan market necessitate the design of competitive strategies that guarantee performance. Creating strategies for coping with competition is the heart of strategic management which is critical for the long term survival of any organization. Multinational banks in Kenya have adopted a number of strategies including: better quality, excellent customer service, innovation, differentiation, diversification, cost



cutting measures, strategic alliances, joint venture, mergers/acquisitions and not forgetting lower prices, to weather competitive challenges.

## **1.2 Research Problem**

ICT is a great contributor to economic growth and development. It has enhanced the economy through: (1) increasing productivity across all sectors; (2) facilitating market expansion beyond borders to harvest economies of scale; (3) lowering costs of and facilitating access to services, notably in administration, education, health and banking; (4) providing access to research; (5) development of ICT products and services; (6) contributing to better governance, a prerequisite to growth, through increased participation, accountability and transparency. The use of ICT provides positive externalities, enhancing creativity, learning and problem-solving skills. Its effect on employment, new types of exports, and FDI requires the interplay of a number of factors: It is the interaction among connectivity, access, network security, capability/skills, market structures and firm governance, as well as the regulatory and facilitation environment, which determine whether firms from developing countries can participate effectively and efficiently in the information economy and compete in global e-marketplaces.

The adoption and utilization of Information and Communication Technology (ICT) is fundamental to the growth and sustainability of banking system. It is a requirement for local and global competitiveness. As a result of globalization, the deployment of ICT in the banking sector has increasingly become an essential factor for business development and a platform for gaining competitive advantage, especially in a highly competitive

industry like banking especially in international environment. This therefore, has made it imperative for banks to invest in ICT to meet certain requirements for modern payments system designed to handle large scale processing of transactions (Karimi, 2001). Over the years, the Kenyan banking industry has undergone remarkable operational changes; from the use of tallies and registers to cutting-edge technologies such as computers, automated teller machine (ATM), point of sales (POS) among others. In the past, much time was required to consummate business transactions successfully like cheque clearing, local and international money transfers among others. This inefficiency was due to the manual approach to initiating and completing business transactions in the banking system. Also, the internal banking operations such as the inter-branch reconciliation, payroll system which deal with the remuneration, leave application, and other staff requests in the bank were less efficient. Given the challenges associated with the use of manual approach to banking and the dynamic nature of the environment that the industry operates in the country necessitated the adoption of modern technologies, especially ICT, by the Kenyan banking sector. Kenya bankers association has been in front line in initiation of projects that lead to adoption of ICT infrastructures and new business models such as cheque truncation, Real Time Gross Settlement, Swift transfers, among others.

Assessing the effect of ICT on service delivery and business value is an important subject for researchers, business managers and other stakeholders (Prasad, 2007). Service constitutes a considerable element of any business ventures and the application of improved ICT in delivering services to customers can enhance both internal and external business operations. Furthermore, the utilization of ICT solutions by business organization can transform significantly the service delivery to its customers.

Today, marketing platforms have really changed towards social media within the internet environment as well as mobile phones. This has sufficiently effected the way multinational banks are approaching and implementing their sales and marketing strategies.

### **1.3 Research Objectives**

The objective of this study was to determine the effect of Information and Communication technologies (ICTs) on competitive advantage of multinational banks in Kenya.

This objective included but not limit to the following:

- i) To establish the effects of information and communication technologies as marketing tools on the competitive advantage of Multinational banks in Kenya.
- ii) To establish the effects of Information & Communication technologies as operational tools on the competitive advantage of Multinational banks in Kenya.
- iii) To establish the effects of Information and Communication technologies as customer service tools on the competitive advantage of Multinational banks in Kenya.

### **1.4 Value of the study**

This study established the effects of information and communication technologies as a business tool in competitive advantage of multinational banks in Kenya. The study will be beneficial to various parties; for instance banks operating in Kenyan environment will

benefit because it will highlight the things that are to be achieved when the banks use ICT for various purposes such as marketing, operations and customer service delivery.

The study will be of use to ICT firms that wish to provide IT services to the multinational banks. This study will document the opportunities that ICT service providers can exploit.

The regulators of commercial banks such as National treasury, Central bank of Kenya and Investments Authority may use this finding to draft recommendations on best use of ICT.

In terms of academicians and research institutes, the study will provide information and reference material to scholars and researchers on banking and information technology. It will also contribute to the theories of competitive advantage derived from use of ICT.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews both theoretical and empirical literature related to the study. The theories reviewed are resource based theory, the theory of competitive advantage. The chapter concludes by highlighting the research gaps of the study.

#### **2.2 Theoretical Foundation**

A theory is a set of interrelated concepts, definitions and propositions that present a methodological view of a phenomenon by specifying relations among variables with the purpose of explaining and predicting the phenomenon.

##### **2.2.1 The Theory of Competitive Advantage**

According to Porter (1980) every firm competing in an industry has a competitive strategy whether explicit or implicit. This strategy may have been developed explicitly through a planning process or it may have evolved implicitly through the activities of the various functional departments of the firm. Competitiveness is a multidimensional concept. It can be looked at from three different levels, global, industry and firm level. Competitiveness originated from the latin word ‘competer’ which means involvement in a business rivalry for markets. It has become common to describe economic strength of an entity with respect to its competitors in the global market economy in which goods, services, people, skills and ideas move freely across geographical borders (murths, 1998).

### **2.2.2 ICT in Banking Sector**

ICT in banking industry started with an attempt to automate the process of banking services. Simple electro-mechanical devices such as note counters and accounting calculators were then introduced to effect speed on basic transactions such as computation and money counting. However, in the 1950s and 1960s, information storage and retrieval technology which involve business data processing through punched card equipment and massive mainframe computers with lower capabilities than today's microcomputers. The 1970s saw the advent of the primitive user networks as terminals got connected to the massive mainframes due to the challenges posed by large volumes of business data. This was the foundation of the era of Management Information System (MIS) and Decision Support System (DSS). The 1980s witnessed the fusion of telecommunications and networking technologies for business deployment. This was furthered by the emergence of data processing, office information system (OIS) and personal computers (PC). The 1990s till date advanced technology which has transformed the banking operations business and how the emerging global information infrastructure has sharpened and support potential networking technology to enhance corporate performance and competitiveness (Krishnan 2002). Computerization in the banking sector is perceived to increase profitability of the bank as a result of the improvement in the services of the computers which reduces the cost of business operations. In today's business environment, many accountants and bankers utilize computer in accounting, system auditing, and internal business control. The computerized system eliminates or reduces data duplication. The computer is very useful in all aspects of managerial decision and increases the efficiency of services offered to the customers.

### **2.2.3 Forms of ICT Innovations in the Banking Sector**

Technological innovations have been identified to contribute to the distribution channels of banks (Ogutu 2010). The various ICT innovations to enhance the banking operations are as follows:

**Automated Teller Machine (ATM):** The ATM combines a computer terminal record-keeping system and cash in vault in one unit, permitting customers to enter the banks (Rose, 1999). It is a book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank's computerized record 24 hours a day. Once an access is gained, ATM offers several banking services to customers and mostly located outside the banks, airport, shopping malls, and places far away from the home bank of the customers. ATM was introduced first to function as cash dispensing machines. However, due to advancement in technology, ATM has been able to provide a wide range of services, such as making deposits, funds transfer between two or more accounts and bill payments e.g. digital satellite television (DSTV). Banks tend to utilize this electronic banking device, as all other for competitive advantage. ATM also saves the customers' time as saved time could be invested in other productive activities.

Telephone banking is a form of remote banking, which is essentially the delivery of branch financial services through telecommunication devices (Ogutu, 2012). E-banking has numerous advantages for both customers and banks. For the customers, E-banking provides increased convenience; expanded access and significant time saving. For the

bank, the costs of service delivery telephone-based services are substantially reduced than those of branch-based services. It has almost all the effect on productivity of ATM, except that it lacks the productivity of cash dispensing by the ATM. As a delivery conduct that provides retail banking services even after banking hours (24 hours a day), it accesses continual productivity for the bank. It offers retail banking services to customers at their homes and offices. This saves customers' time, and leads to higher productivity.

**Personal Computer Banking (PC-Banking)** PC-Banking is a service which allows the bank's customers to access information about their accounts through a proprietary network, usually with the help of preparatory software installed on their personal computer. Once access is gained, the customer can perform many retail banking functions. This encourages the growth of PC-banking which virtually establishes a branch in the customer's home or office, and offers 24-hour service throughout the week. It also has the benefits of telephone banking and ATM.

**Internet Banking** Internet banking gives customers access to their bank accounts through a website (Ogutu, 2012). Internet banking also enables the customers to carry out certain transactions on their accounts with stringent security checks. Internet banking is described as the provision of traditional banking service over the internet (Ogutu, 2012). Internet banking offers more convenience and flexibility to customers with absolute control over their banking activities. As an alternative delivery medium of retail banking, internet banking has all the effect on productivity of E-banking and PC-Banking. In addition, it is the most cost-efficient technological means of yielding higher productivity.



Branch Networking of branches is a computerization and interconnection of geographically scattered bank branches into one unified system in the form of a Wide Area Network (WAN) for creating and sharing of merged customers' information and records(Ogutu, 2012). It offers quicker rate of inter-branch transaction as distance barriers are eliminated. Hence, there is more productivity per time period. Also, with the several networked branches serving the customers as one system, there is simulated division of labour among bank branches with its associated positive effect on productivity among branches. It curtails customer travel distance to bank's branches while it offers more time for customer's activities.

Point of Sale (POS) POS is an online system that allows customers to transfer funds instantaneously from their bank accounts to merchant accounts when making purchases using debit card. Increased banking productivity results from the use of POS to service customers shopping payment requirements instead of handling cheques and cash withdrawals for shopping the operation which still continues after banking hours.

Regis coping Machine or Image Machine- This machine is a photographic and signatures verification system that permits a bank to automatically store the signatures and photograph of account holders. The benefit of this machine is to help prevent payment of proceeds of cheques to fraudsters.

### **2.3 Effects of ICT Innovation in Banking Competitive Advantage**

Over the years, banks have adopted electronic channels to communicate and transact business with both domestic and international customers. However, the range of products and services provided by banks over the electronic channel varies widely in content,

capability and complexity (Ogutu, 2012). The challenge to expand and maintain banking market share has influenced many banks to invest more in the use of internet (Ogutu, 2012) According to Ogutu (2012), majority of multinational banks had exploited internet technology to establish web sites but few offered e-banking services.

### **Challenges of ICT in Banking**

ICT fosters online exchange of information dialogue. This enables faster resolution of conflict and quicker determination of a customer need. However, Kenyan banks face a lot of challenges. The most identified challenge is Kenya's poor infrastructure. Electricity supply is sporadic and inefficient. Kenya also has very low internet penetration with less than one internet service provider per thousand people. Ogutu, (2012) highlighted the following as the identifiable challenges facing Kenyan banks in the effective implementation of ICT.

Low internet connectivity- Though there is a growing dependence on internet technology, there has been low supply in terms of connection speed. However, the introduction of wireless system has improved the efficiency rate.

Inadequate Telecommunication infrastructure- Although telecommunication infrastructure such as fiber optic cable and satellite equipment is growing rapidly in Kenya, Its supply remains inadequate. It is however practically impossible to grow and expand the Kenyan financial market without adequate telecommunication infrastructure.

Manpower supply- Inadequate knowledge of best practices in IT utilization as well as IT-related skill deficiencies also constitutes a constraint to the optimal utilization of ICT in the banking sector.

Security- Access to bank servers by unauthorized individuals' may pose a great threat to the utilization of ICT in the Kenya's banking industry. Fraud and counterfeit money are challenge confronting ICT-enhanced banking. It is not enough to acquire sophisticated ICT equipment but exposure to information-technology related failure should be minimal.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methodology that has been used to carry out the study. This includes the study design, target population, data collection tools, data collection technique, data analysis method and presentation. This research methodology has enabled the researcher to obtain the data, process the data and interpret the results.

#### **3.2 Research Design**

A research design is the structure of research. It is the glue that holds all the elements in a research process project together. A design is used to structure the research, to show how all of the major parts of the research project work together to try to address the central research questions. Otieno (2010) defines it as the scheme outline or plan that is used to generate answers to research problems. It is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance with research purpose. It constitutes the blueprint for the collection, measurement and analysis of data (Kothari, 2004).

This study has adopted a descriptive design. This descriptive research design was preferred because the study needed to establish the effect of ICT as a competitive advantage of multinational in Kenya.

### **3.3 Target Population**

Population is defined as the total collections of element about which inferences are made and refers to all possible cases which are of interest for a study Sekaran, (2010). A population therefore entails all the cases or individuals that fit specifically for being sources of the data required addressing the research problem. The target population is defined as that population to which a researcher wants to generalize the results of the study.

The target population of this study is 18 multinational banks as indicated in the list under the Central Bank of Kenya website. The choice of this target population is because it is the population that the study considers to have adequate knowledge and accurate information about the effect of ICT as a competitive advantage of multinational banks in Kenya. Thus this study was a census survey.

### **3.5 Data Collection**

This study has utilised primary sources of information which was gathered by use of questionnaires. A questionnaire is simply a tool for collecting and recording information about a particular issue of interest. The questionnaires had a definite purpose that is related to the objectives of the research, and were clear from the outset on how the findings will be used. Respondents also needed to be made aware of the purpose of the research wherever possible, and were told how and when they will receive feedback on the findings. The questionnaire comprised of close ended questions only. The use of structured questionnaire ensured consistency of questions and answers from the respondents. This approach was chosen because of questions flexibility, easiness with

which the interviewer could go in more depth, enabling to test the limit of the correspondent knowledge and allowing the researcher to make a more reliable assessment of what respondent really believes. The questionnaires were issued to the respondents through self-introduction. The individual respondents were identified via simple random sampling using internal informants.

Pilot study has been described by various authors as an exercise that ensures that errors are restricted at a very little cost. Kothari (2004) describes a pilot survey as a replica and a rehearsal of the main survey. Newing (2011) states that the importance of field pilot cannot be over emphasized; you will always find that there are questions that people fail to understand or interpret in different ways, places in the questionnaire where they are not sure where to go next, and questions that turn out simply not to elicit useful information. The subjects participating in the pilot study shall not be included in the final study to avoid survey fatigue. A pilot study was conducted in order to establish the validity and reliability of data collection instruments.

According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. In other words validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. Validity exists if the data measure what they are supposed to measure. In order to test and enhance the validity of the questionnaire, the researcher selected two managers randomly and discussed the contents of the questionnaire. This aimed to assess the content validity of the questionnaire. The comments from the two managers were reviewed and incorporated to enhance the validity of the questionnaire.

A pilot test was conducted in order to test for reliability and validity of the data collection instrument (questionnaire). The aim of pre-testing was to remove and amend vague questions, use respondent comments to improve the questionnaire, removed deficiencies and analyzed a few questionnaires to see if the methods of analysis will be appropriate.

### **3.6 Data Analysis**

Qualitative data analysis ideally occurs concurrently with data collection so that investigators can generate an emerging understanding about research questions. This study will use qualitative content analysis methodology to analyze the data. Content analysis may be defined as a systematic analysis of the content rather than the structure of a communication, such as a written work, speech, or film, including the study of thematic and symbolic elements to determine the objective or meaning of the communication.

There are two general categories of content analysis: conceptual analysis and relational analysis. There are many techniques of relational analysis available and this flexibility makes it popular. Researchers can devise their own procedures according to the nature of their project and based on this, this research will adopt qualitative relational content analysis to analyze the data collected from the questionnaires.

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

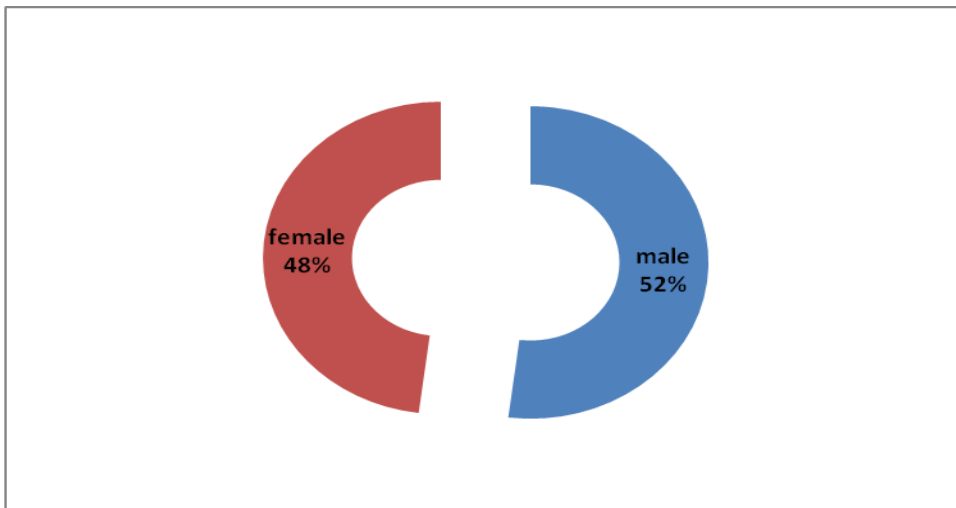
#### 4.1 Introduction

This chapter presents the analysis and interpretations of the data collected. The research was conducted on a sample of 18 multinational banks as indicated in the list under the Central Bank of Kenya website. However, out of the issued questionnaires, 16 were returned duly filled in making a response rate of 88.9%, which was sufficient for statistical reporting.

#### 4.2 Demographic characteristics of the respondents

The respondents were asked to respond to a series of questions about themselves and the organization.

**Figure 4.1: Gender of the Respondents**



Source : Field Data 2013



From the findings, 52 % of the respondents were male and 48% were female. This implied the banks have more males than females in the various departments and consequently, most of the responses emanated from the males.

#### **4.2.1 Age of the respondents**

The respondents were requested to indicate their age brackets; the results are illustrated in table 4.1 below.

**Table 4.1: Age of the respondents**

	<b>Frequency</b>
Under 26 years	3
26-35	6
36-45	4
46-55	2
Over 55 Years	1
<b>Total</b>	<b>16</b>

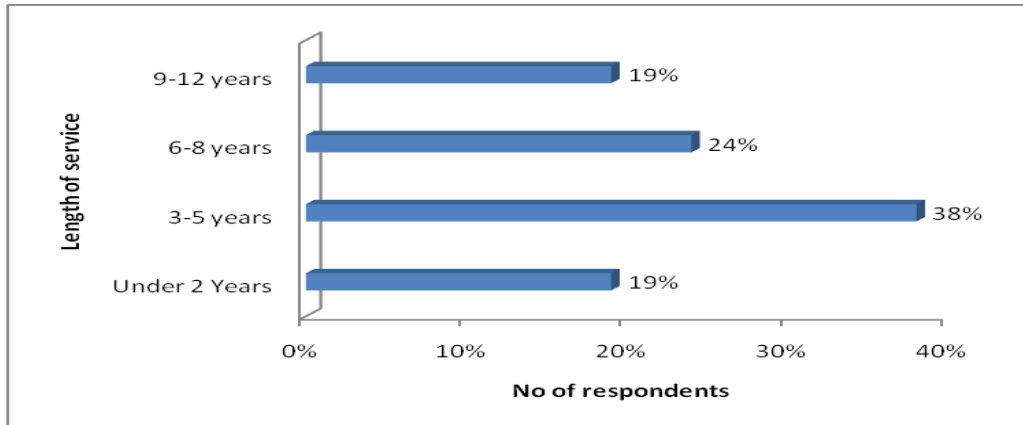
Source: Field Data 2013

According to the findings, majority of the respondents are below 35 years, 26-35 (6) and under 26 years (3), while 36-45 years were 4, 46-55 years were 2 and 1 respondent was over 55 years. This could mean that the respondents are in the age brackets considered to be ICT oriented enhancing its use in the banking industry.

#### **4.2.2 Length of service**

The study sought to determine the length of time the respondents had worked for their banks by having the respondents indicate their length of service. The summary of the results is demonstrated in Figure 4.2.

**Figure 4.2: Length of service**



Source: Field Data 2013

As per the findings, 38% of the respondents said they had worked for their banks for 3-5 and above years, 24% said they had worked for 6-8 years while 19% said they had worked for 9-12 years and under 2 years. This depicts that most of the respondents have been working with the company long enough hence giving them a better understanding of the company's procedures regarding ICT use.

#### **4.2.3 Level of duty/ position of the respondents**

The respondents were asked to indicate their level of duty in the surveyed banks and the results summarized below.

**Table 4.2: Designation of the respondents**

	<b>Frequency</b>
Supervisor	2
Manager	5
Senior manager	4
Head of department	3
Director	2
<b>Total</b>	<b>16</b>

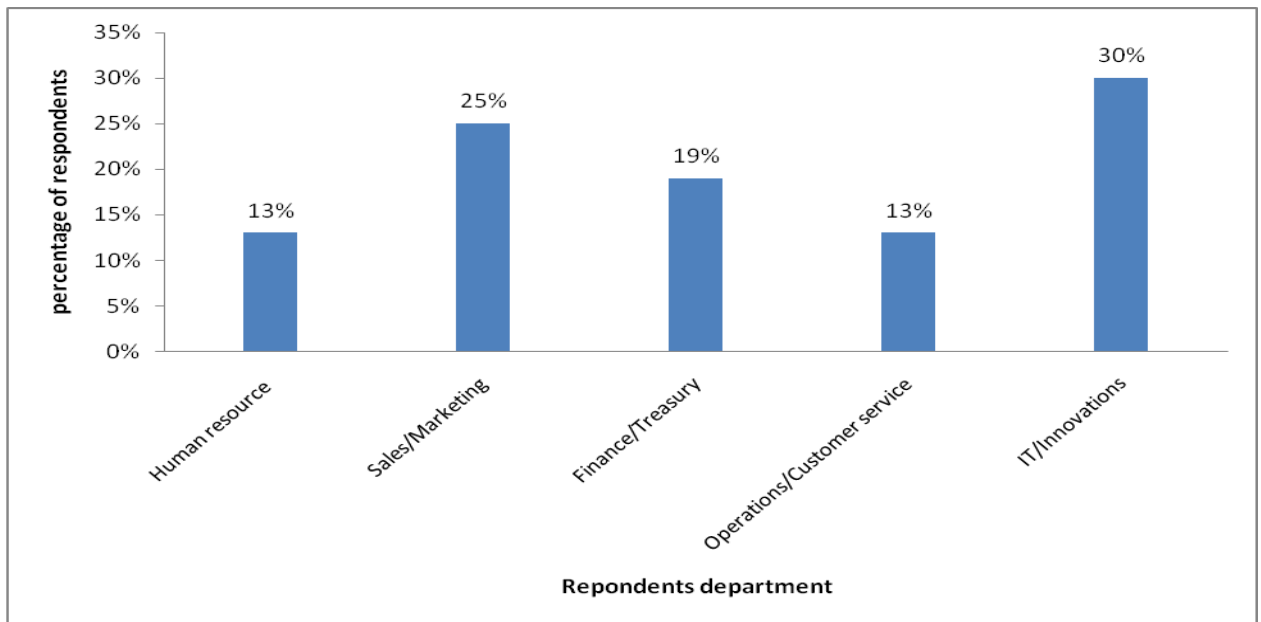
Source : Field Data 2013

From the findings 5 of the respondents were managers, 4 were senior managers, 3 were heads of department, whereas 2 were supervisors and directors each. The findings indicate that the respondents are in the implementing level capacities of ICT and can be depended upon to give reliable information the research subject.

#### 4.2.4 Respondents department

The respondents were requested to state the departments they work under. A summary of the findings is shown in the figure below.

**Figure 4.3: Respondents' department**



Source : Field Data 2013

As illustrated in figure 4.3, 30% of the respondents are from the IT/Innovations department, 25% from the sales/marketing department, 19% from the finance/treasury department and 13% from the human resource and operations/customer service

departments each. This indicates that all departments have been involved in the application of ICT in their work.

#### **4.2.5 Respondents Highest level of Education**

The respondents were asked to indicate their highest level of academic qualification held.

Table 4.3 presents the findings.

**Table 4.3: Respondents Highest level of Education**

	<b>Frequency</b>	<b>Percentage</b>
Diploma	1	6%
Graduate	7	44%
Post graduate	8	50%
<b>Total</b>	<b>16</b>	<b>100%</b>

Source : Field Data 2013

Table 4.3 illustrates the findings of the result, majorities (8) of the respondents were post graduates, 7 were graduates and only 1 was a diploma holder. This implies that the staffs working at the banks are literate hence they are capable of adopting and implementing ICT operations.

### **4.3 Effect of Information and Communication technologies (ICTs) on competitive advantage of multinational banks.**

#### **4.3.1 Effects of Information and Communication Technology (ICT) on the competitive advantage**

The respondents were asked to rate a series of statements on effects of Information and Communication Technology (ICT) on the competitive advantage of multinational banks in Kenya in relation to their bank. The results are illustrated in table 4.4 below.

**Table 4.4: Effects of Information and Communication Technology (ICT) on the competitive advantage**

Statements	Mean	Std Dev
Our use of ICT is beyond the industry basics	2.96	.187
Is the level of ICT use in your bank ahead of your competitors	4.18	.156
Do you think use of ICT has impacted on profitability of your bank	4.21	.213
ICT use enables us create competitive edge over other competitors	4.25	.139
We consider ICT one of our strongest pillars in the business	4.28	.238
ICT is considered as an enabler in our competitive strategy	4.34	.356
We are always open to new ideas on how to improve on ICT	4.37	.196
Our customers view our application of ICT on service delivery as a great yard stick to their satisfaction	4.39	.178
ICT use has led to more efficiency in controls in our bank	4.48	.345
ICT contributes to our cost management effectiveness	4.56	.452
ICT is used in our bank in delivery of customer satisfaction	4.62	.148

Source : Field Data 2013

According to the findings it was noted that most of the respondents agreed that, ICT is used in their bank in delivery of customer satisfaction (mean 4.62), ICT contributes to their cost management effectiveness, (a mean score of 4.56). They also agreed that ICT use has led to more efficiency in controls in their bank (mean score of 4.48), they agreed that their customers view application of ICT on service delivery as a great yard stick to their satisfaction (mean score of 4.39). The respondents further agreed that they are always open to new ideas on how to improve on ICT (mean score of 4.37), ICT is considered as an enabler in their competitive strategy (4.34), they consider ICT one of their strongest pillars in the business (4.28), ICT use enables them create competitive edge over other competitors (mean score of 4.25), they thought use of ICT has impacted

on profitability of their bank( mean score of 4.21), and the level of ICT use in their bank ahead of their competitors (mean score of 4.18). However the respondents indicated that their use of ICT was not beyond the industry basics (mean score of 2.96). This implies that adoption of ICT has influenced the content and quality of banking operations.

### **4.3.2 Effects of Information and Communication Technology (ICT) on the organizations**

The respondents were asked to rate a series of statements in relation to effects of Information and Communication Technology (ICT) on the respondents organization. The results are illustrated in table 4.5 below.

**Table 4.5: Effects of Information and Communication Technology**

	<b>Mean</b>	<b>Std Dev</b>
Monitoring of customers' feedback and complaints on a regular basis would ensure better management of banking services.	<b>3.86</b>	<b>.356</b>
Banks that make innovative use of IT gain a favorable image and hence increase their value	<b>3.96</b>	<b>.213</b>
Technology market potential is significant because banks have the opportunity to target most segments in the industry both locally and internationally.	<b>3.97</b>	<b>.458</b>
ICT enhances cost-efficiency of yielding higher productivity as technology achieve higher productivity per period of time than human	<b>4.16</b>	<b>.174</b>
ICT has brought positive change in the organization	<b>4.25</b>	<b>.457</b>
The bank gain advantage by providing customers with the convenience of being able to perform banking transactions electronically (or online) at any time without having to leave home or office	<b>4.26</b>	<b>.191</b>
ICT Innovativeness lead to more productivity for the bank	<b>4.36</b>	<b>.327</b>
ICT gives customers greater control over the management of their finances	<b>4.45</b>	<b>.149</b>

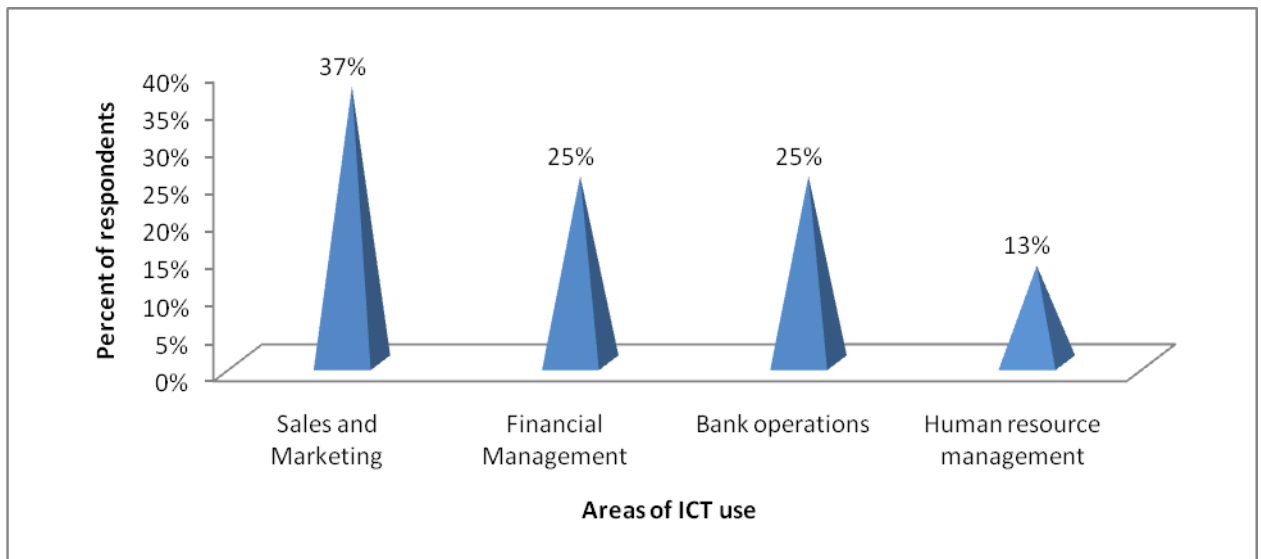
Source : Field Data 2013

As per the findings it was noted that most of the respondents agreed that, ICT gives customers greater control over the management of their finances (mean 4.45), ICT Innovativeness lead to more productivity for the bank, (a mean score of 4.36). They also agreed that the bank gains advantage by providing customers with the convenience of being able to perform banking transactions electronically (or online) at any time without having to leave home or office (mean score of 4.26), they agreed that ICT has brought positive change in the organization (mean score of 4.25). The respondents further agreed that ICT enhances cost-efficiency of yielding higher productivity as technology achieve higher productivity per period of time than human (mean score of 4.16), Technology market potential is significant because banks have the opportunity to target most segments in the industry both locally and internationally (3.97), Banks that make innovative use of IT gain a favorable image and hence increase their value (mean score of 3.96), and that Monitoring of customers' feedback and complaints on a regular basis would ensure better management of banking services (mean score of 3.86). This indicates that adoption enhanced convenient business hour, facilitates prompt and fair attention, enhances faster services, and makes Home and Office Banking available to customers.

#### **4.3.4 Areas of the bank that use ICT**

The study sought to determine the areas of the bank that use ICT. The results are elaborated below.

**Figure 4.4: Areas of the bank that use ICT**



Source : Field Data 2013

As demonstrated in figure 4.4 above, most (37%) of the respondents cited sales & marketing, 25% cited financial management and bank operations and 13% cited human resource management. This depicts that ICT is used in all areas of banking to establish core capabilities and help the banking industry reorganize their product and customer service delivery, so as to sustain competitive advantages and to achieve congruence whilst shifting from the conventional banking to electronic banking.

#### **4.3.5 Factors that influence to adoption of ICT**

With the above in mind, the respondents were requested to state the factors that influence to adoption of ICT. The table below summarizes the results of the findings.



**Table 4.6: Factors that influence adoption of ICT**

	Frequency
Technological innovations	10
Industry drive	10
Competition	16
Cost Management	9
Customer	10
Service efficiency	12
Market demand	7

Source: Field Data 2013

In relation to factors that influence to adoption of ICT, Competition was the highest with a frequency level of 16, followed by service efficiency with 12, industry drive, technological innovations and customer with frequency levels of 10 each, cost management followed with 9 and then market demand with 7. This shows that Rate of adoption is because of the crucial roles it plays in the operations of banks.

#### **4.4 Discussion of findings**

The study found out that the respondents are in the age brackets considered to be ICT oriented enhancing its use in the banking industry in addition to having been working

with the company long enough hence giving them a better understanding of the company's procedures regarding ICT use. All departments have been involved in the application of ICT in their work according to the study findings. The study also found out that the staffs working at the banks are literate hence they are capable of adopting and implementing ICT operations. According to Milgrom and Roberts (1990) they argued that to be successful, firms typically need to adopt ICT as part of a "system" or "cluster" of mutually reinforcing organizational approaches.

The study ascertained that adoption of ICT has influenced the content and quality of banking operations. This coincides with DeYoung (2005) and Delgado et al (2006), who stated that the Internet delivery channel may generate scale economies in excess of those available to traditional distribution channels. Additionally Brücher, Scherngell et al. (2003) opined that ICT adoption will improve three critical domains which are efficiency, quality, and transparency in any organization.

The study established that ICT adoption enhanced convenient business hour, facilitates prompt and fair attention, enhances faster services, and makes Home and Office Banking available to customers. This is concurrent with Birch and Young (1997) who showed that consumers seek convenience, transactional efficiency, a choice of core banking products and non-core products, and access to competitive returns and prices.

The study found out that the factors that influence to adoption of ICT, were majorly Competition and service efficiency, industry drive, technological innovations, customer as well as market demand highlighting the crucial roles it plays in the operations of banks. This agrees with Laudon, and Laudon, (1991) who contend that managers cannot

ignore Information System because they play a critical role in contemporary organisation. Adetayo, et al, (1999) and Boyett (1995) also maintain that in order to succeed (or even to survive) in this dynamic world, companies must take not only traditional actions such as lowering cost, but keep pace with ever changing capabilities of IT. Harold et al (1995) contend that it has become axiomatic that to remain viable in the 1990s and the decades that follow, financial service providers must modify their traditional operating practices. Woherem (2000) claimed that only banks that overhaul the whole of their payment and delivery systems and operations and apply IT devices are likely to survive and prosper in the new millennium.

The study further established that ICT is used in all areas of banking to establish core capabilities and help the banking industry reorganize their product and customer service delivery, so as to sustain competitive advantages and to achieve congruence whilst shifting from the conventional banking to electronic banking. This is of the same mind with Akinuli, 1999; Ovia,2005) a broad opening has been experienced around the world for banks and they are currently taking due advantage of these innovations to provide improved customer services in the face of competition and faster services that enhance productivity.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the data findings on the effect of Information and Communication technologies (ICTs) on competitive advantage of multinational banks in Kenya, the conclusions and recommendations drawn. The chapter is therefore structured into summary of findings, conclusions, recommendations and area for further research.

#### **5.2 Summary of findings**

The study found out that the respondents are in the age brackets considered to be ICT oriented enhancing its use in the banking industry in addition to having been working with the company long enough hence giving them a better understanding of the company's procedures regarding ICT use. All departments have been involved in the application of ICT in their work according to the study findings. The study also found out that the staffs working at the banks are literate hence they are capable of adopting and implementing ICT operations.

The study also found out that adoption of ICT has influenced the content and quality of banking operations. In addition to enhancing convenient business hour, facilitating prompt and fair attention, enhancing faster services, and making Home and Office Banking available to customers.

The study found out that the factors that influence to adoption of ICT was majorly Competition however service efficiency, industry drive, technological innovations, and

customer as well as market demand played a significant role, highlighting the crucial roles it plays in the operations of banks.

### **5.3 Conclusion**

The underlying argument behind the bundling of ICT and organizational performance is that it enables firms to introduce organisational changes in the areas of re-engineering, decentralization, flexible work arrangements, outsourcing, lean production, team-work and customer relations. It also allows firms to produce with greater flexibility and shortened product cycles to satisfy shifting consumer preferences. In turn, these organizational changes are essential for realizing the full benefits of ICT in every entity.

The study concluded that banks are aware of customer's need for new services and plan to make them available. IT has increased the level of competition and forced them to integrate the new technologies in order to satisfy their customers. They have already developed and implemented a certain number of solutions among them: enabling the customer to make inquiries regarding his accounts, on-line, without having to move from his office, Installation of ATMs which offers non-stop cash withdrawal, remittances and inquiry facilities. Networking of computerized branches inter-city and intra-city which permits customers of these branches, when interconnected, to transact from any of these branches, 24-hour service through which inquiries regarding balances and transactions in the account can be made over the phone, As information is centralized and updates are available simultaneously at all places, single-window service becomes possible, leading to effective reduction in waiting time.

The study also concluded that, banks apply IT to a wide range of back and front office tasks in addition to a great number of new products. The major advantages for the bank to implement IT are: Availability of a wide range of inquiry facilities, assisting the bank in business development and follow-up. Immediate replies to customer queries without reference to ledger-keeper as terminals are provided to Managers and Chief Managers. Fast and up-to-date information transfer enabling speedier decisions, by interconnecting computerized branches and controlling offices.

In relation to employee productivity, the study concluded that IT has increased their productivity through the following: Accurate computing of cumbersome and time-consuming jobs such as balancing and interest calculations on due dates. Automatic printing of covering schedules, deposit receipts, pass book / pass sheet, freeing the staff from performing these time-consuming jobs, and enabling them to give more attention to the needs of the customer.

#### **5.4 Implication of Results**

The study finding implies that information and communication technologies are a business tool in competitive advantage of multinational banks in Kenya. The study is valuable to banks operating in Kenyan environment as it highlight the factors determines achievement of effective utilization of ICT for various purposes such as marketing, operations and customer service delivery.

The regulators of commercial banks such as National treasury, Central bank of Kenya and Investments Authority may use this finding to draft recommendations on best use of ICT. Lastly the study provide information and reference material to scholars and

researchers on banking and information technology as well as contributing to the theories of competitive advantage derived from use of ICT.

## **5.5 Recommendations**

Concerns about ICT role in attaining effectiveness, efficiency and productivity were raised in the late 1980s. Since then a large number of studies have emerged both at the industry and firm level that have substantially improved our understanding of the relationship between ICT and firm performance. In particular, the firm-level studies have argued that an explanation for the so-called “productivity paradox” can be attributed to an insufficient response of organizational changes to adapt to changing business environment, to make better use of knowledge, technology and human resources, to respond to new demands from suppliers and customers, and to use ICT effectively (OECD, 2002; Sharpe, 1999). Presently, Information and communication technology has received great thoughtfulness across various industries and substantial positive effect on bank’s profitability, cashiers work, banking transaction, patronage, services delivery, customer’s services among other. Hence, it is recommended that more attention has to be directed towards the use of Information and communication Technology in banking operations since the industry serve as a lubricant to the cog of the wheel of the nation’s economy while appropriate policies must be put in place to ensure proper monitoring and the determination of the optimum size required to attain organizational efficiency. It is quite evident from our study that enhancing ICT in the banking industry is a must in a rapidly changing market place, as the ICT revolution has set the stage for exceptional increase in financial activity across the globe.

Banks face a serious challenge as the basic structure of the bank is increasingly in conflict with the changing product, delivery, and service needs of the customers. The future belongs to financial service provider's not traditional banks. The vast majority of large banks will create value networks and doing so presents tremendous challenges. Banks will have to first develop a comprehensive distribution system that will enable customers to touch them at multiple points. The study recommends that banks must create performance measurement systems to assure the mix products and services they offer are beneficial to both the customer and the bank. They must determine whether to deploy new technologies themselves or with other service providers. Nevertheless, technology alone will not solve issues or create advantages. This technology needs to be integrated in an organization, with the change management issues linked to people resisting new concepts and ideas. It also needs to support a clearly defined and well communicated business strategy.



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**APPENDIX B**  
**QUESTIONNAIRE**

Introduction,

Dear Respondent,

This questionnaire is aimed at providing information on the effects of Information and Communication Technology on competitive advantage of multinational banks in Kenya.

You're kindly requested to fill in the questions depending on the instructions given. The information you provide will be used to accomplish an academic goal only and will be treated with at most confidentiality.

Please note that you don't have to include your name in the questionnaire.

There is no right or wrong answer whatsoever.

Please TICK (✓) the appropriate answer

What is your gender      Male       Female

What is your age bracket?

Under 26 years       26-35Years       36-45 Years       46-55 Years

Over 55 Years

For how long have you worked in this bank?

Under 2 Years  3-5years  6-8 years  9-12 years  over 12 years

What is your level of duty/ position in the bank?

Supervisor  Manager  Senior Manager  Head of Department    
Director

Which department do you work in?

Human resource  Sales/Marketing  Finance/Treasury   
Operations/Customer service  IT/Innovations  Other

What is your highest level of education?

Certificate  Diploma  Graduate  Post graduate  Other

Please state your degree of agreement with the following statements on effects of Information and Communication Technology (ICT) on the competitive advantage of multinational banks in Kenya in relation to your bank

**Use: 1. Strongly agree 2. Agree 3. Undecided 4. Disagree 5. Strongly disagree**

<b>STATEMENTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Do you think use of ICT has impacted on profitability of your bank					
Is the level of ICT use in your bank ahead of your competitors					
Our use of ICT is beyond the industry basics					
ICT is considered as an enabler in our competitive strategy					
ICT contributes to our cost management effectiveness					
ICT use has led to more efficiency in controls in our bank					
ICT is used in our bank in delivery of customer satisfaction					
ICT use enables us create competitive edge over other competitors					
Our customers view our application of ICT on service delivery as a great yard stick to their satisfaction					
We are always open to new ideas on how to improve on ICT					
We consider ICT one of our strongest pillars in the business					

8. What is your level of agreement with the following statements given below as they are reflected in your organization? Use a scale of 1-5 where 1= strongly disagree, 2-disagree, 3-moderately agree, 4-agree and 5= strongly agree

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The bank gain advantage by providing customers with the convenience of being able to perform banking transactions electronically (or online) at any time without having to leave home or office					
Banks that make innovative use of IT gain a favorable image and hence increase their value					
ICT Innovativeness lead to more productivity for the bank					

ICT gives customers greater control over the management of their finances					
Monitoring of customers' feedback and complaints on a regular basis would ensure better management of banking services.					
ICT enhances cost-efficiency of yielding higher productivity as technology achieve higher productivity per period of time than human					
Technology market potential is significant because banks have the opportunity to target most segments in the industry both locally and internationally.					
ICT has brought positive change in the organization					

**Please tick all that applies in the following section**

In which areas amongst the following does your bank use ICT in?

Sales and Marketing       Financial Management       Bank operations   
Human resource management       Other (Please state) \_\_\_\_\_

What are the factors that influence to adoption of ICT in your bank?

Technological innovations       Industry drive       Competition   
Cost Management      Customer      service efficiency      Market  
demand                     
Other (Please state) \_\_\_\_\_

Thank you for your time

## APPENDIX C

### MULTINATIONAL LISTED BANKS IN KENYA

CFC Stanbic Bank
Bank of Africa (K) Ltd.
Bank of Baroda (K) Ltd.
Bank of India
Barclays Bank of Kenya Ltd.
Citibank N.A. Kenya
Cooperative Bank of Kenya
Diamond Trust Bank
Diamond Trust Bank Kenya Ltd.
Ecobank Ltd
Equity Bank
First Community Bank
Habib Bank A.G. Zurich
Habib Bank Ltd.
Kenya Commercial Bank
K-Rep Bank Ltd.
NIC Bank
Standard Chartered Bank (K) Ltd.