INFORMATION AND COMMUNICATION TECHNOLOGY SUPPORT
PRACTICES AND SERVICE DELIVERY IN KENYAN BANKS

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DECLARATION

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

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D61/64745/2013

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

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DEDICATION

This research project is dedicated to my Dad, WOII Nyachieo Charles Siro who went to be with the Lord before the completion of this project. Eternal rest grant unto him Oh Lord and let your perpetual light shine upon him, May he rest in peace. Amen
ACKNOWLEDGEMENT

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<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>ATM</td>
<td>Automated Teller Machine</td>
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<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>I.B.V.M.</td>
<td>Institute of the Blessed Virgin Mary</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>MBA</td>
<td>Master of Business Administration</td>
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<td>NSE</td>
<td>Nairobi Stock Exchange</td>
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<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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ABSTRACT

Banks are financial institutions that are authorized by the government to accept deposits, pay interests and loans as well as providing other financial services to customer. The use of effective ICT support practices had been applied differently in the market. Some customers find the worth of using these services while others are still reluctant to use these services. This study was guided by three objectives; to determine the ICT support practices adopted by the Kenyan banks, to establish the challenges faced in ICT support service provision and to establish the relationship between ICT support practices and service delivery in the Kenyan banks. To accomplish this goal, the study applied a census survey to determine the relationship between the ICT support practices and service delivery in the Kenyan banks. The target population was 47 Commercial banks. Data was collected with the help of questionnaires that were administered through a drop and pick later method. The data was analyzed using descriptive statistics and it was interpreted using frequency, percentage, mean and the standard deviation. From the findings; it can be affirmed that ICT support practices has a great influence on of service delivery. A lot of information has also been availed to the customers hence enabling them to make more conversant decisions. Commercial banks are using information technology to create value-based services to their customers in order to remain competitive globally. The study recommends that commercial banks keep adopting ICT support practices since it has brought a total paradigm shift in the performance and customer service delivery in the banking industry. In order to match up with global growth, improve the quality of customer service delivery and improve efficiency, banks require to extensively invest heavily in ICT support practices. The study also recommends that commercial banks should invest more resources in modern technologies. This is critical in enhancing increased customer access to banking services and products and eventually effective service delivery. This will enhance flexibility and convenience resulting into increased customer satisfaction.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

ICT has become an essential factor in the daily life of every individual. In organizations, it is an essential parameter that helps in the running of the day to day operations (Alter, 2012). The application of ICT becomes an imperative element enhancing the quality of services in organizations both in private and public sectors with the aim of offering better and enhanced services to customers due to a stiff competition (Athanassopoulos, 2013). According to Burnes (2014), information and communication technology (ICT) plays a crucial part in the continuous development of these organizations.

In the financial sector, ICT has often offered solutions to the financial institutions to effectively manage their accounting and back office requirements and needs (Choge, 2012). The deployment of ICT has led to extensive use of services targeted at improving the customers’ experiences (Chavira, 2013). ICT has also facilitated the introduction of new service delivery channels in the form of Automated Teller Machines and mobile banking (Cooper, 2010). Furthermore, ICT use has assumed high levels that it is no longer possible for financial institutions to manage their ICT executions on a standalone basis.

However, the equipment used degrade over time hence, the need for ICT support to optimize service delivery to the end users (Choge, 2012). Chavira (2013) notes that ICT support has led to massive advantages that include better performance of the equipment, maintenance of the existing infrastructure, diagnosis of technical issues, and their resolutions as well as development of support procedures for the networks and the
operating systems. Banking service providers utilize information technology to reduce the costs and more importantly enhance value-based services for their customers in order to remain competitive in the financial sector (Ekwonwune, 2016).

Effective service delivery for both the customers and the banks however gets hampered when there are down times caused by technical problems hence, the need for the systems to be supported. The need for effective ICT support practices is no doubt a core element in order to enhance better performance and effective service delivery (Choge, 2012).

1.1.1 Information and Communication Technology Support

ICT Information and Communication Technology refers to an amalgamation of telecommunications (wireless signals, telephone, computers as well as, enterprise storage, software, and audio-visual structures and systems that make it possible for the end users to transmit, process, influence, and store information (Jeucken & Klinkers, 2017). ICT support helps people to develop systems, put the systems into use and integrate them. It further goes to the extent of resolving technical problems that arise while using the systems and training the users on how to use them. It also helps in training the users of the systems to make safe usage of the ICT equipment.

According to Jeucken and Klinkers (2017), ICT support also involves setting up of work stations with computers and other peripherals devices such as printers, scanners and routers, checking the functionality of the computer hardware such as the hard disks, installing and configuring the various software packages according to their specifications, maintaining the local area network to ensure their stability, ensuring the security and privacy of the network and offering of guidance to new users on how to use the installed
systems. It also involves organizing and scheduling for software upgrades, checking on the worn-out equipment and ordering for new ones and keeping logs of repairs and scheduling for those that require repairs (Jeucken & Klinkers, 2017).

A study conducted in Ethiopia by Tirkaso and Cerna (2016) found out that ICT support has led to great changes and transformation of banks leading to better service delivery to the customers. However, he notes that lack of assistance of employees and customers on the ICT enabled services, and its resistance hampers its slow adoption. The study also found out that lack of skilled professionals, the high cost of internet, power disruptions, security risks, system quality risks and power internet connections are factors that hinder the ICT support. The study recommended that the commercial banks of Ethiopia should give additional emphasis to ensuring reliability, and responsiveness to raise the levels of awareness of customers and employees regarding the use ICT support.

1.1.2 Challenges facing Information and Communication Technology Support

The rapid development of Information and communication technology (ICT) has led to a complete paradigm shift in the functions of many organizations and in their customer service delivery. ICT support however faces many challenges that include the pace of change of technology and lack of sufficient expertise to adopt to the ever-changing ICT trends. Also, costly initiatives adopted by organizations as they invest a lot in ICT and its related technologies is another challenge that ICT support faces (Jeucken & Klinkers, 2017).
Lack of technology know how by the staff has been a major blow that sometimes hinders efficient service delivery due to the ever emerging newer and more improved ICT solutions. Concerns on the security of funds by the customers has also been a great challenge, since there has been a massive increase in cyber-attacks posing a threat to the security of funds. Another challenge facing ICT support include increased costs of training the necessary workforce. Most organizations are finding it difficult to allocate more funds to train staff regularly and retain them.

Digital divide poses a great challenge between businesses as other organizations may have access to better ICT services that include better equipment, ease of access to the internet and up to date information. The other businesses on the hand become disadvantaged as they can’t access the huge knowledge base that can be found on the online platforms.

1.1.3 Service Delivery

Service delivery refers to processes and practices that are adopted by an organization to ensure high quality services to the business users (Glushko, 2008). In order to provide superior and unmatched services, there is need to integrate both telecommunication and information technology capabilities. Customer care on the other hand, involves the employment of systems to maximize customers' satisfaction and should be among the top priorities in every business (Fritsche, 2010).

Effective and efficient service refers to those resources and systems which help in offering satisfaction to the needs of a customer consistently over a period of time. According to Mwai (2013), the investment in ICT support has positively influenced service delivery. Effective service delivery can be measured by the use of service delivery indicators. These
service delivery indicators include customer satisfaction, customer retention, customer defections, increased accountability as well as improved profit margins.

Customer satisfaction refers to the extent to which a customer is contented with a service, product or experience. Once a service has been provided to a client, as a result, value can be gained or lost depending on whether the customer is satisfied or not. Customer retention refers to the actions or activities that a number of organizations take in order to decrease the number customer defections. While customer retention refers to the systems put in place by organizations to retain as many customers as possible through loyalty initiatives (Njoka, 2013).

These indicators in turn, help the service providers to track their performance and identify the existing gaps which, if improved, can improve service delivery further and customer satisfaction. The ultimate goal is to improve the quality of services offered, increase accountability, and subsequently improve human development outcomes.

The banking sector is a customer-oriented service industry. Effectiveness and efficiency are critical in providing services to customers for the industry to be successful. Njoka (2013), notes that banking service providers are utilizing information technology to scale down costs and more importantly design value-based services aimed at improving their customers’ experience in order to remain competitive. ICT enabled services therefore helps to promote quality services, improve overall productivity and enhance customer satisfaction. Some of the ICT enabled service delivery channels employed in the financial industry include automated teller machines (ATMs), internet banking and now mobile banking which has taken the industry by storm (Hanafizadeh, 2014). The blending of
current technology and sound service design in today’s banks is a big dream which when realized will greatly improve service delivery and customer satisfaction (Glushko, 2008).

A study by Mulwa (2015), aimed at establishing factors that influence the adoption of ICT in service delivery found out that there is a positive link between the human resource availability and the adoption of ICT technology in the provision of services by the Kitui county government. Financial resource availability and the approval of the ICT technology led to greater output and more significant competitive edge.

Technological innovation enhances effective service delivery, a factor that separates banks from their competitors. However, when these factors are neglected, they can lead to dissatisfaction, therefore, the need to ensure availability of ICT support practices to ensure effective service delivery to the customers (Glushko, 2008).

1.1.4 Kenyan Banks

Banks are financial institutions that are authorized by the government to accept deposits, pay interests and loans as well as providing other financial services to customers (Jonathan, 2015). The services that banks offer include retail services both locally and internationally, investment and insurance services. The banking sector in Kenya has embraced changes in technology with most banks adopting online banking services to customers.

The banks in Kenya are regulated by the Banking Act, the Central Bank of Kenya, and other operational guidelines issued by the CBK (Choge, 2012). The board of Directors provide oversight through the formulation of policies and reviewing performance Currently the banking sector comprises of 42 licensed commercial banks 3 of which are public
financial institutions, 10 are listed on the Nairobi stock Exchange (NSE), 12 deposit Microfinance institutions, and 76 licensed foreign exchange bureaus (Choge, 2012).

The banking sector has contributed to the GDP through many ways which include facilitation of financial transactions, circulation of money, facilitation of structures of economies such as stock exchanges or commodity exchanges, and facilitation of foreign exchange. It is very vital in the economy because it possesses the ability to raise money. Due to this, employment is created either directly or indirectly.

The banking industry over time has had to adopt to technological changes so as to remain competitive. However, this adoption poses challenges that include fraud and malpractices the banks are exposed to that may lead to loss of revenue. Competition from mobile money transfer services has led to many individuals opting out of banks because these platforms provide easier avenues of transferring and receiving money. Another big challenge that can be best managed by ICT support is the increased number of theft cases (Jonathan, 2015). Many banks have lost huge sums of money due to theft by mostly their employees, external individuals, and some of their security providers. Other challenges include managing long queues and customer complaints through the ticketing systems.

1.2 Research Problem

The technology advancement plays a big role, that of providing efficient channels to serve customers (Malit & Muendo, 2017). However, when there is system downtime, the customer satisfaction is adversely affected because services may become completely inaccessible. Research has shown that most organizations encounter challenges through the use of ICT hence, they are not able to offer competitiveness in the industry (Lewis & Gagel,
2012). Despite the importance of customer service derived from information systems, implementation of these systems has placed more emphasis on the processes’ efficiency (Matambalya, 2011).

This efficiency requires ICT heads to emphasize on defining ICT support practices required to serve the business needs to enhance service delivery. The way to differentiate an organization with a good information system and one with a poor information system is in the way they deliver their services. A good information system enables the organization to offer quality and efficient services to its customers (“Measuring the Impact of ICT for Development”, 2010). Additionally, it combines the best technology and individuals who monitor the performance of the system throughout. Locally, many banks have implemented information systems as tools in operations and customer service in an endeavor to improve on efficiency and competitive advantage.

The fragility in the banking sector in Kenya has been mainly attributed to the worsening economic conditions, poor management and governance. Most Kenyan commercial banks have tried to incorporate ICT support practices into their system however, Matambalya (2011), points out that lack of proper ICT support practices may pose serious implications in the performance of the systems in use. These implications include the breach to customer confidentiality, non-compliance to the expected customer standards and wastage of resources.

A study by Matambalya (2011), that investigated the impact of ICT strategies of the Commercial banks in Kenya, found out that there existed a correlation between ICT support strategies and the growth of the commercial banks. The banks that embraced best
ICT support practices found to have realized growth in the market share. Musyoka (2004) investigated the relationship between growth of commercial banks in Kenya and the adoption of ICT support services in these banks and he concluded that there existed a number of challenges between the two.

ICT support practices in the banking sector have assumed significant importance and have become an issue of global concern because they lead to enhanced services and deepening of financial intermediation on the part of the financial institutions enabling proper management of their operations. In order for the customers to realize value, ICT support practices are necessary in two main aspects. The first one is to deliver value to the business through strategic realignment of these practices with the business. The second one is to inject accountability into the organization. However commercial banks face different challenges related to ICT support practices. Different banks have different approaches of addressing these challenges. This study seeks to address the correlation between ICT support practices and service delivery and the challenges the banks face while implementing these ICT support practices.

1.3 Research Objectives

The general objective of the project was to determine the Information and Communication Technology support practices and service delivery in Kenyan banks.

The specific objectives of the study will be:

i. To determine the ICT support practices adopted by Kenyan banks

ii. To establish the challenges faced in ICT support service provision in Kenyan banks

iii. To determine the relationship between ICT support practices and service delivery among the banks in Kenya.
1.4 Value of the Study

The study will be of great significance to the Kenyan banks as it will enlighten them on the challenges faced in ICT support service provision. The banks’ management will further gain more insights on how their institutions can efficiently roll out best ICT support practices to ensure service delivery is improved and the ease with which the banks operate is improved. The study will be of significance further as it will offer possible solutions to the challenges that face ICT support practices in the Kenyan banks.

The recommendations from the study will guide policy makers in designing policies that will assist in determining the relationship between ICT support and service delivery in the banking sector. This study will be of significance to future scholars as will form a basis for future research.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter presents the literature reviewed and the studies in relation to ICT support practices and service delivery so as to gain validation to carry out the study. The study reviews the theoretical foundation as well as the ICT support practices adopted by the Kenyan banks.

2.2 Theoretical Framework
The theoretical framework describes the theories that explain why a given research problem of a study is being carried out.

2.2.1 Technology Acceptance Model
This theory will guide the theoretical framework of the study. This theory shows how customers perceive the introduction of a new technology or a system (Davis, 1989). A number of factors can influence the decision to adopt the system leading to its acceptance or rejection. These factors include the perceived use of the system and the ease of use of the system (Davis, 1989). Perceived usefulness refers to how the new technology adopted will enhance one’s job whereas ease of use of the system allows a customer to use the new technology free of strain (Davis, 1989).

2.2.2 Customer Support Models for Shared Services
This model helps to understand why companies have now developed the support models for the external customers as well as internal customers to enhance efficient service delivery. Based on this model, the banks have now developed digital banking models that
can allow their customers to contact the bank and customer care support team to report a problem via mails or by making phone calls (Juneseuk & Hakyeon, 2017). This model meant for both the internal customers as well as their external customers can assist in reducing redundancies and save costs, improve the customer satisfaction, enhance opportunities as well as enhance usage of centralized services.

Use of centralized services has massive benefits that include, enhancing flexibility as multiple delivery mediums can be adopted in various geographical locations (Kavonga, 2017).

### 2.2.3 Information Systems Success Theory

Piccoli (2014) views the success of Information systems by identifying the six most critical variables that lead to the success of any organization. These variables include the system quality, the information quality, system use, service quality, usage intentions, net systems benefits and user satisfaction (Piccoli, 2014).

A study conducted by Nicholas and Steyn (2017), concluded that acceptance of a given technology, ease of use, and its usefulness had a strong relationship. The quality of the information affects both the user’s intentions with the system and the user’s satisfaction to use that particular system (DeLone & McLean, 1992). According to this model, the quality of the system in use determines the quality of the output expected.

User Satisfaction refers to what comes after the customers are well pleased with the kind of services they get from their service provider (DeLone & McLean, 1992). On the other hand, net system benefits allow most organizations to have programs and tools meant to assess customer satisfaction, service quality, and relationship quality. Such initiatives
allow the management of these organizations to build relationship initiatives and manage service delivery (Thatchenkery & Stough, 2005).

The data collected from these programs offer guidance in an effort to reduce variability in service provision and provide consumers with quality services that ensure their continued loyalty (DeLone & McLean, 1992). This affects the overall performance of a system and its value to the organization.

2.3 Information and Communication Technology Support Practices

Most banks depend on information gathering, processing and provision of information in order to meet the needs of its customers. As the banks try to remain competitive in the financial industry, they ought to have their client in mind by ensuring that best ICT support practices are adopted in the day to day running of their businesses (Kotler & Keller, 2006). Kenyan banks need to adopt cost effective ICT support practices both internally and externally to ensure that effective service delivery is provided to the end users with the rapid technological advancements.

ICT support service provision has assisted the banking industry to counter the obstacles facing the economy (Wangwe, 2017). However, ICT support service provision faces other challenges which include lack of adequate knowledge as many banks are not well equipped internally with sufficient expertise (Shield, 2013). Other challenges faced in ICT support service provision include the pace of change of technology, and with the changes in technology, the competence skills by the experts need to be enhanced as well as the organizational structures (Tirkaso & Cerna, 2016). Best ICT support practices ought to be
adopted by the Kenyan banks to ensure convenience in the provision of effective services to the customers (Otieno, 2008).

According to Otieno (2008), for the banks to provide adequate services to its users, they need to come up with stringent policies that will deter cyber criminals from accessing the banks’ databases which may lead to distortion of important information. He further explains that both the customer and the bank have to be protected from any illegal access. A study done by Pucel (2008) in Finland realized that most banking customers were youthful and well educated with an understanding of the importance of the internet. The findings showed that it is necessary to train and retrain the employees so as to secure the customer data (Pucel, 2008).

According to a study carried out by Ekwonwume (2016) on the security of data in organizations, the study found out that most attackers target the VPN as there are many entry points. The network is always be susceptible to attackers, and these attacks happen due to the fact that most customers have now embraced online banking and will always try to seek access to the business information on their tablets and mobile phones (Ekwonwume, 2016). A focus on new technology does not help as data moves beyond them. Avoiding any breaches and ensuring security of data by enforcing various security circles from the weakest points as well as keeping in line with regulatory policies can help secure the customers’ information from hackers (Ekwonwume, 2016).

These ICT support practices include data cleaning and maintenance. This involves the detection and removal of any corrupt data from a record set (Pucel, 2008). It identifies incomplete and inaccurate information from a data set, and then deletes any irrelevant
information by using data wrangling tools (Pucel, 2008). From the bank perspective, this exercise benefits the customers and gives the bank a better way to manage multiple accounts by ensuring the consistency of the data. Czikszentmuhaly (2014) notes that to ensure secure banking data confidentiality, integrity and authentication have to be core to any organization.

Inclusion of strong passwords can deter unauthorized access to office computers, laptops, mobile phones, websites and databases and computers (Pucel, 2008). This serves to protect data from being accessed from individuals with ill intentions. Pucel (2008) points out that data security forms a crucial part of ICT in major financial organizations. Other technologies involved in data protection include data erasure, and data backups.

Another vital element of ICT support practice includes encryption of confidential data whereby software and hardware, digital data and hard drives deny a would-be interceptor from accessing information making the message unreadable to unauthorized individuals (Pucel, 2008). Regular update of computer software minimizes security risks and enhances convenience. The older versions of the software has got the same holes and exploitable holes making them to be susceptible to online attacks (Pucel, 2008). As providers seek to provide solutions to the already existing holes, the cyber criminals never relent as they are always coming up with new ways of posing threats. It is vital therefore for the banks to update the software regularly to avoid huge risks that of passing malware to colleagues and friends as well as ensuring the safety of banking documents.
2.4 Conceptual Framework

A Conceptual Framework is a scheme of concept (variables) which the researcher operationalizes in order to achieve the set objectives (Parasuraman, Zeithaml & Berry, 1985). The independent variables include system maintenance, Trouble shooting and data security while the dependent variable is service delivery as shown in Figure 2.1.

![Conceptual Framework Diagram]

**Figure 2.1: Conceptual Framework**
2.5 Summary of Literature Review

This chapter focused on how various empirical studies, theoretical framework and theories of various variables influence ICT support practices and service delivery in Kenyan Banks. It clearly brings out the relationship between these variables and the role they play so as to enhance service delivery. It explains the customers’ concern in technology used in the delivery of services in the banking sector to ensure banking is adaptable, accessible, fast and affordable.

According to a study carried out by Ekwonwume (2016) on the security of data in organizations, the study found out that most attackers target the VPN as there are many entry points. The results of the study conform to the suggestions by Jeucken and Klinkers (2017), who argued that ICT support practices such as regular data backups, data maintenance and cleaning, data encryption, authentication of data are core if the success of any organization is to be achieved. From the above findings, data encryption, regular maintenance of ICT equipment, securing of laptops and computers with strong passwords to deter unauthorized access, troubleshooting, securing of laptops were found to be always used meaning that ICT Support Practices greatly enhance Service Delivery in the banks.

A study conducted by Nicholas and Steyn (2017), concluded that acceptance of a given technology, ease of use, and its usefulness had a strong relationship. The quality of the information affects both the user’s intentions with the system and the user’s satisfaction to use that particular system (DeLone & McLean, 1992). According to this model, the quality of the system in use determines the quality of the output expected this was confirmed by the study as it was realized that ease of use of any system had a significance in service delivery.
CHAPTER THREE
RESEARCH METHODOLOGY

The Chapter presents the research design, the target population, sampling procedures, the data collection methods, data analysis and presentation.

3.1 Research Design
A research design guides a researcher in the process of collecting, analyzing and interpreting the observations of the study (Nardi, 2018). The study was descriptive in nature. A descriptive research study explains situations as they are without giving further predictions. The study carried out was a census survey where the researcher sought to establish ICT support practices and service delivery in the Kenyan banks.

3.2 Population of the Study
A population is a set of people, services or a group of things that are well defined being investigated by a researcher to which the findings obtained from that study will be reviewed and analyzed (Koski, 2013). The study was a census survey and the target population for this study comprised the IT managers and the assistant managers of various Commercial banks in Kenya. There are 47 commercial banks in Kenya.

3.3 Data Collection
The primary data that was used by the researcher was collected by the use of structured questionnaires. Koski (2013) notes that the use of questionnaires is common in the collection of valuable data for the identified specific objectives of a study. Questionnaires offer a valuable advantage in that a large group of people can be reached relatively easily and economically. The questionnaire was divided into four sections, Section A sought
demographic information; Section B was to establish the ICT support practices in the Kenyan banks, Section C was to determine the challenges in ICT support provision while Section D sought information regarding the relationship between ICT support practices and service delivery. The researcher employed a “Drop and Pick” method whereby the questionnaires were dropped to the specific banks to the ICT managers and the assistant managers and then collected later. This provided for sufficient time for the respondents to have the questionnaires filled.

3.4 Data Analysis

The questionnaire that were filled by the respondents were checked for accuracy and completeness. They were then coded, labelled and entered into the computer for analysis by the use of SPSS package. The SPSS package is a statistical tool that is used for complex analysis of data. Data on Demographics was analyzed by the use of frequencies and percentages. Data on objective one and two was also analyzed by the use of the mean and standard deviation whereas the data on objective three was analyzed using regression analysis.  

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \]

Y = Service delivery  
\( \beta_0 \) = Constant of the model  
\( \beta_1 - \beta_4 \) =Regression Coefficients  
\( X_1 - X_4 \) = Independent Variables  
\( X_1 \) =Regular system updates  
\( X_2 \) =Routine system maintenance  
\( X_3 \) =Repair of ICT equipment  
\( X_4 \) =Data cleaning and maintenance and \( \epsilon \) = Error term
CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction
This chapter presents the findings, data presentations and analysis of the findings on ICT Support Practices and Service Delivery in Kenyan banks. The data presented and analyzed is based on the questionnaires that were answered by the respondents. Data on Demographics was analyzed by the use of frequencies and percentages. Data on objective one that is determining the ICT support practices in Kenyan banks was analyzed by the use of mean and standard deviation, data on objective two that is establishing the challenges faced in ICT support provision was also analyzed by use of the mean and standard deviation, whereas data on objective three that is to determine the relationship between ICT support practices and service delivery was analyzed by use of the regression analysis.

4.2 Response Rate
Out of 47 banks that were targeted, 42 questionnaires distributed, were successfully filled and returned. This represents a response rate of 89.36%. This response rate was satisfactory to make conclusions for the study. A response rate of 50% is adequate for analysis and reporting. A rate of 60% is good and a response rate of 70% and over is excellent Musyoka (2004). Based on the assertion, the response rate was considered excellent.

4.3 Demographic Characteristics
The study sought to establish the information on the respondents employed in the study with regard to the gender, age, education level, duration of service, title or position occupied in the bank, no of employees in the bank as well as the customers in the bank. These bio-data points at the respondents’ appropriateness in answering the study questions.
4.3.1 Age Brackets

The researcher required the participants to indicate their age. The output is captured in the Table 4.1.

Table 4.1: Age Brackets of the Respondents

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 years and below</td>
<td>3</td>
<td>7.14</td>
</tr>
<tr>
<td>26-35</td>
<td>19</td>
<td>45.24</td>
</tr>
<tr>
<td>36-45</td>
<td>13</td>
<td>30.95</td>
</tr>
<tr>
<td>45-55</td>
<td>4</td>
<td>9.52</td>
</tr>
<tr>
<td>Above 55</td>
<td>3</td>
<td>7.14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Author (2018)

In Table 4.1, most of the respondents (45.4%) were aged between 26 to 35 years, 30.95% of the respondents were between 36-45 years, 9.52% were aged between 45-55 years and only, 7.14% of the respondents were aged below 25 and above 55 years.

4.3.2 Education Level Attained by the Respondents

All the respondents had a certificate as the least education qualification. Table 4.2 Distribution of Respondents by Highest Education Attained.

Table 4.2: Distribution of Respondents by level of Education Attained

<table>
<thead>
<tr>
<th>Highest education level</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>3</td>
<td>7.14</td>
</tr>
<tr>
<td>Degree</td>
<td>24</td>
<td>57.14</td>
</tr>
<tr>
<td>Post graduate degree</td>
<td>15</td>
<td>35.71</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Author (2018)
Table 4.2 shows that a large percentage of the respondents were degree holders (57.14%) while 35.71% had post graduate degree. Those with a diploma comprised 7.14% as their highest qualification. This implies that the respondents understood the study questions and were in a position to provide the information sought by the researcher.

4.3.3 Work Experience

Majority of the respondents had been working in the banking industry for more than one year as shown in Table 4.3.

Table 4.3: Distribution of Respondents by Work Experience in Kenyan Banks

<table>
<thead>
<tr>
<th>Years of service</th>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year or less</td>
<td>3</td>
<td>7.14</td>
</tr>
<tr>
<td>1-5 years</td>
<td>20</td>
<td>47.62</td>
</tr>
<tr>
<td>6-10 years</td>
<td>14</td>
<td>33.33</td>
</tr>
<tr>
<td>over 10 years</td>
<td>5</td>
<td>11.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Author (2018)

From Table 4.3 shows that majority of respondents who had served in the banking industry for 1-5 years accounting for 47.62 percent of the total respondents 33.33% of the respondents had been working in the banking industry for a period of between 6 and 10 years. Those who had worked over 10 years were 11.90% and less one year were 7.14%. This shows majority of the employees are seasoned and well conversant with the operations in serving the customers.
4.3.4 Respondent’s Position in the Bank

The respondents were asked to indicate their current position in the bank. Table 4.4 below show the results of the respondents.

Table 4.4: Respondent’s Position in the Bank

<table>
<thead>
<tr>
<th>Position in Bank</th>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant ICT manager</td>
<td>15</td>
<td>35.71</td>
</tr>
<tr>
<td>ICT Manager</td>
<td>6</td>
<td>14.29</td>
</tr>
<tr>
<td>ICT officer</td>
<td>18</td>
<td>42.86</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>7.14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Author (2018)

Table 4.4 shows that majority of the workers were ICT officers representing 42.86%, 35.71% were assistant ICT managers while 14.29% were ICT managers and 7.14% were in others position.

4.3.5. Bank Ownership

The respondents were asked to state the bank ownership affiliation. Table 4.5 shows the results. The banks were asked to indicate the current bank ownership. Table 4.5 below shows the results of the bank.

Table 4.5: Bank Ownership

<table>
<thead>
<tr>
<th>Bank Ownership</th>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both Domestic and Foreign</td>
<td>2</td>
<td>4.76</td>
</tr>
<tr>
<td>Domestic</td>
<td>29</td>
<td>69.05</td>
</tr>
<tr>
<td>Foreign</td>
<td>11</td>
<td>26.19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Author (2018)
The results in Table 4.5 show that Majority of the banks were owned domestically representing 69.05 %. 11 were owned by the foreign representing 26.19% while two were jointly owned by the domestic and foreign.

**4.3.6 Bank Employee Statistics**

The respondents were asked to state number of employees. Table 4.6 shows the results.

**Table 4.6: Bank Employee Statistics**

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-99</td>
<td>3</td>
<td>7.14</td>
</tr>
<tr>
<td>100-200</td>
<td>3</td>
<td>7.14</td>
</tr>
<tr>
<td>201-300</td>
<td>7</td>
<td>16.67</td>
</tr>
<tr>
<td>Above 300</td>
<td>29</td>
<td>69.05</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Author (2018)*

The results indicate that majority of the banks employ more than 300 staffs representing 69.05, followed by 7 banks those who employ between 201 and 300. Those who employee between 0-99 was three banks and 100-200 were also 3 banks both representing 7.14% each.

**4.3.7 Customers in the Kenyan Banks**

The respondents were asked to state the number of customers in the Commercial Banks. Table 4.7 shows the results.
Table 4.7: Customers

<table>
<thead>
<tr>
<th>Number of Customers</th>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000-5000</td>
<td>2</td>
<td>4.76</td>
</tr>
<tr>
<td>5000-10000</td>
<td>4</td>
<td>9.52</td>
</tr>
<tr>
<td>Above 10000</td>
<td>36</td>
<td>85.71</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Author (2018)

The results by the respondents indicated that 85.71% have more than 10000 customers, while those between 5000-10000 were 9.52%, further 1000-5000 were 4.76%.

4.3.8 Years of Operation

The respondents were asked to state the number of years of operation. Table 4.8 shows the results.

Table 4.8: Years of Operation

<table>
<thead>
<tr>
<th>Years of Operation</th>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 5</td>
<td>4</td>
<td>9.52</td>
</tr>
<tr>
<td>5-10</td>
<td>4</td>
<td>9.52</td>
</tr>
<tr>
<td>11-15</td>
<td>8</td>
<td>19.05</td>
</tr>
<tr>
<td>16-20</td>
<td>9</td>
<td>21.43</td>
</tr>
<tr>
<td>21-25</td>
<td>8</td>
<td>19.05</td>
</tr>
<tr>
<td>Above 25</td>
<td>9</td>
<td>21.43</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Author (2018)

The results indicate that those banks who have worked more than 25 years represented 21.43%, those between 21-25 years represented 19.05%, those with operation period
between 16-20 years represented 21.43%, whilst 11-15 years were 19.05%, 5-10 years of operation were 9.52% and below 5 years represented 9.52%.

4.4 ICT Support Practices in the Kenyan Banks

The study in this part was aimed at identifying the ICT support practices in the Kenyan banks and the information obtained from the respondents was analyzed by using the mean and standard deviation as shown in Table 4.9.

Table 4.9: ICT Support Practices in Service Delivery

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data encryption</td>
<td>42</td>
<td>4.88</td>
<td>.33</td>
</tr>
<tr>
<td>Data cleaning and maintenance</td>
<td>42</td>
<td>4.19</td>
<td>.39</td>
</tr>
<tr>
<td>Awareness of scams/unsolicited files</td>
<td>42</td>
<td>3.69</td>
<td>.81</td>
</tr>
<tr>
<td>Installations of antivirus to computers</td>
<td>42</td>
<td>3.67</td>
<td>.48</td>
</tr>
<tr>
<td>Routine system maintenance</td>
<td>42</td>
<td>4.19</td>
<td>.74</td>
</tr>
<tr>
<td>Regular backups of data</td>
<td>42</td>
<td>4.60</td>
<td>.49</td>
</tr>
<tr>
<td>Regular maintenance of ICT equipment</td>
<td>42</td>
<td>4.86</td>
<td>.35</td>
</tr>
<tr>
<td>Denial of network accessible resources</td>
<td>42</td>
<td>4.31</td>
<td>.48</td>
</tr>
<tr>
<td>Authentication of data</td>
<td>42</td>
<td>3.71</td>
<td>.83</td>
</tr>
<tr>
<td>Keeping logs/repairs and scheduling for troubleshooting</td>
<td>42</td>
<td>4.79</td>
<td>.42</td>
</tr>
<tr>
<td>Securing of laptops and computers with strong passwords to deter unauthorized access</td>
<td>42</td>
<td>4.81</td>
<td>.39</td>
</tr>
</tbody>
</table>

Source: Author (2018)
4.5 Challenges faced in ICT Support Service Provision

This part of the study aimed at identifying potential challenges faced in ICT support service provision in the Kenyan banks. Data was collected using Linkert scale of 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree. Their responses are shown in Table 4.10.

Table 4.10: Challenges faced in ICT Support Service Provision

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High cost related to the acquisition of ICT equipment</td>
<td>1.67</td>
<td>.75</td>
</tr>
<tr>
<td>has been a hindrance to ICT support service provision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Divide has been a challenge to ICT support provision</td>
<td>2.71</td>
<td>.51</td>
</tr>
<tr>
<td>Emergence of newer and more improved versions of ICT</td>
<td>4.29</td>
<td>.46</td>
</tr>
<tr>
<td>solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerns on the security of funds by the customers</td>
<td>4.71</td>
<td>.46</td>
</tr>
<tr>
<td>has been a challenge in ICT support provision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inadequate technology know how by staff has hindered service provision</td>
<td>4.62</td>
<td>.49</td>
</tr>
<tr>
<td>Increased costs of training the necessary workforce</td>
<td>4.17</td>
<td>.58</td>
</tr>
<tr>
<td>Lack of technology know how by the staff has been a major blow to ICT support service provision</td>
<td>3.93</td>
<td>1.07</td>
</tr>
<tr>
<td>Low competence of use of ICT tools and equipment</td>
<td>3.56</td>
<td>1.04</td>
</tr>
<tr>
<td>Network issues limit availability of services which hinder the ICT service provision</td>
<td>3.88</td>
<td>.89</td>
</tr>
</tbody>
</table>

Source: Author (2018)
Respondents were asked to provide answers on each item that was measured by a scale of 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree. From the table, respondents in the study agreed that the emergence of newer and more improved versions of ICT solutions, concerns on the security of funds by the customers has been a challenge in ICT support provision, Inadequate technology know how by staff has hindered service provision, Increased costs of training the necessary workforce, Lack of technology know how by the staff has been a major blow to ICT support service provision and Low competence of use of ICT tools and equipment were the major challenges as they had a mean of 3.0 and above whilst Digital Divide has been a challenge to ICT support service provision and High cost related to the acquisition of ICT equipment has been a hindrance to ICT support service provision were not major challenges as they had a mean of less than 3. The findings concurred with (Njoka, 2013) who found out that there is need of managers to find a way to minimize and reduce the possibility of such challenges occurring to ensure a successful implementation and use of ICT.

4.6 Relationship between ICT Support Practices and Service Delivery

On the relationship between ICT support practices and service delivery, respondents of the study were asked to indicate their views on the performance of the commercial banks with regards to performances on the time taken to serve customers, average waiting time, referrals in a month, average number of customer complaints.
4.7 Regression Analysis

Regression analysis is a set of statistical processes for estimating the relationships among various variables, it is used to understand the relationship between the independent and the dependent variable, and to explore the forms of those relationships (Jeucken & Klinkers, 2017).

To determine the relationship between ICT support practices and service delivery, regression analysis was used to determine whether there existed a relationship between ICT support practices and service delivery in the Kenyan Banks. 

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \]

\( Y = \) Dependent Variable

\( Y = \) Service Delivery

\( \beta_0 = \) Constant of the model

\( \beta_1 \text{ to } \beta_4 = \) Regression coefficients

\( X_1 \text{ to } X_4 = \) Independent variables

\( X_1 = \) Regular system updates

\( X_2 = \) Routine system maintenance

\( X_3 = \) Repair of ICT equipment

\( X_4 = \) Data cleaning and maintenance

\( \epsilon = \) Error term

4.7.1 Model Summary

A Model Summary report shows the strength of the relationship between the model and the dependent variable (Fritsche, 2010). R, the correlation coefficient, is the linear
correlation between the observed and the predicted values of the dependent variable. Its large value shows a strong relationship as shown in Table 4.11.

**Table 4.11: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.571*</td>
<td>.326</td>
<td>.323</td>
<td>.39493</td>
</tr>
</tbody>
</table>

- a. Predictors: (Constant), Regular system updates, Repair of ICT equipment, Routine system maintenance and Data cleaning and maintenance.
- b. Dependent variable: Service delivery

The study sought to determine the relationship between ICT support practices and service delivery in Kenyan banks. From the Table 4.11, R is the square root of R-Squared and is the correlation between the observed and predicted values of dependent variable implying that there was association of 0.571 between service delivery and ICT support practices in the Kenyan banks. Adjusted R2 in Table 4.11 is called the coefficient of determination which indicates how service delivery varied with variation in ICT support practices in the banks which includes Regular system updates, Repair of ICT equipment, Routine system maintenance and data cleaning and maintenance. From Table 4.11, the value of adjusted R2 is 0.323. This clearly indicated Regular system updates, Repair of ICT equipment, Routine system maintenance and Data cleaning and maintenance greatly enhanced the performance of the Kenyan banks.

**4.8.2 ANOVA (b)**

Analysis of Variance (ANOVA) is a method used in statistics to test the differences between two or more means or Analysis of Means (Fritsche, 2010). Inferences about means are made by checking the variance as shown in Table 4.12.
Table 4.12: Analysis of Variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>20.926</td>
<td>1</td>
<td>20.926</td>
<td>134.170</td>
<td>.003a</td>
</tr>
<tr>
<td>Residual</td>
<td>43.359</td>
<td>278</td>
<td>.156</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>64.285</td>
<td>279</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant) Regular system updates, Repair of ICT equipment, System Maintenance and Data cleaning and maintenance.
b. Dependent: Service delivery

The data collected shows that the independent variables are statistically significant in predicting service delivery. The study established a significant value of p=0.003 showing a statistical significance relationship.

The analysis of variance was found to be significant since its probability value is below 5%. The total variance (64.286) was the difference into the variance which can be explained by the independent variables (Model) and the variance which was not explained by the independent variables (Error). This implied that the level of variation between independence and dependent variable was significant.

This indicated that the model formed between effects of ICT support practices and service delivery was a good fit for the data. The strength of variation of the predictor values and the effect on service delivery was significant at P= 0.000<0.05.

4.8.3 Model Coefficients

In simple regression, the size of the coefficient for each independent variable gives you the size of the effect that variable will have on the dependent variable, and the sign on the coefficient that is positive or negative shows you the direction of the effect (Fritsche, 2010).
Table 4.13: Model Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficientsa</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.141</td>
</tr>
<tr>
<td></td>
<td>Regular system updates</td>
<td>.651</td>
</tr>
<tr>
<td></td>
<td>Repair of ICT equipment</td>
<td>.621</td>
</tr>
<tr>
<td></td>
<td>Routine system maintenance</td>
<td>.571</td>
</tr>
<tr>
<td></td>
<td>Data cleaning and maintenance</td>
<td>.641</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant) Regular system updates, Repair of ICT equipment, Routine system maintenance and Data cleaning and maintenance.

b. Dependent: Service Delivery

The simple linear regression equation obtained from this study include

\[ Y = 0.141 + 0.651X_1 + 0.621X_2 + 0.571X_3 + 0.641X_4 + \epsilon \]

\[ Y = \text{Service delivery} \]

\[ X = \text{Regular system updates, Repair of ICT equipment, System Maintenance and Data cleaning and maintenance.} \]

The established regression equation is:

\[ Y = 1.141 + 0.621X_1 + 0.651X_2 + 0.752X_3 + 0.828X_4 + \epsilon \]

The findings in Table show the coefficients of the regression. According to the findings, (P=0.001), is significant as it has a value of less than 0.05.

4.9 Discussion of the Findings

The objectives of the study included identifying the ICT support practices in Kenyan banks, determining the challenges faced in ICT support service provision as well as establishing the relationship between ICT support practices and service delivery. The results of the study conform to the suggestions by Jeucken and Klinkers (2017), who argued that ICT
support practices such as regular data backups, data maintenance and cleaning, data encryption, authentication of data are core if the success of any organization is to be achieved. From the above findings, data encryption, regular maintenance of ICT equipment, securing of laptops and computers with strong passwords to deter unauthorized access, troubleshooting, securing of laptops were found to be always used meaning that ICT Support Practices greatly enhance Service Delivery in the banks. These practices cover the whole infrastructural component of ICT (Glushko, 2008).

The challenges faced in ICT support provision that include the emergence of newer technologies, high costs related to the acquisition of ICT equipment, inadequate technology know how by the staff and lack of network availability, Increased costs of training the necessary workforce has been a major blow to ICT support service provision factors and this was alluded by (Pucel, 2008) who said that the trend of ICT challenges is going to continue as the availability expands and the cost of access continue to decline.

Customers are important as they enable the banks to be competitive in the market. Thus the banks have to adjust themselves at times in order to serve the interests of customers by ensuring adequate measures are put in place to enhance service delivery.

Today, with more competitiveness in the banking sector, what is very important for maintaining clients present, attracting new clients and as a result increasing growth of success in organizations is having a suitable relation with clients. The usage of ICT support practices by the various banks was found to have resulted in increased market share, increased profits, sales through better market segmentation, return on investment and less operational costs. It also ensured lasting customer-retention and loyalty. The results of the study were found to be consistent with Jeucken and Klinkers (2017), findings on ICT
support practices. The study by the two found that ICT support practices had a positive relationship with service delivery. This is by integrating the elements of technology, procedures, and people.

The findings also concurred with (Njoka, 2013). Who found out that there is need of managers to find a way to minimize and reduce the possibility of such ICT challenges occurring to ensure a successful implementation and use of ICT.
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study findings as presented in the previous chapter. The research findings, conclusions and recommendations were discussed in line with the study objectives for policy adoption and future research respectively.

5.2 Summary of the Findings

From the findings, an assessment of age distribution, qualification and experience indicated that most of the respondents were young people and most of them had at least a first degree as prerequisite and had also a post graduate degree, a larger percentage of the employees had many years of experience. These results imply that the respondents were well positioned to assess the level of ICT usage in the bank in delivering customer service. The age group indicated that majority of the respondents were experienced persons with a clear perception of customer expectation as far as service delivery is concerned. Although they have a small number of years, their fast integration into the sector pose a signal of the potentiality coupled with ICT in service delivery. Respondents’ education level, age and work experience point out that they regularly interact with customers thus are well placed to evaluate the objectives of the research. Their ability and skill in the banking puts them in the best position to understand the effects of ICT on service delivery.

In general, the use of ICT support practices in the provision of banking services is widespread across the banking sector. However, there are a number of challenges faced by the banking industry in the use and implementation of ICT support practices in service
delivery. A majority of respondents reported that lack of thorough knowledge of technology knowhow by customers was a hindrance to the use of ICT in the banking industry. Other obstacles included the emergence of newer and more improved versions of ICT solutions that had posed a great challenge. In addition, Inadequate technology know by the staff has hindered service provision representing as many people are adamant in adopting new emerging technologies. In addition, Low competence of use of ICT tools and equipment was acknowledged to be a challenge.

5.3 Conclusion

From the findings of the study; it can be affirmed that the ICT support practices have contributed positively to service delivery in the banking institutions thus enhancing service delivery. ICT support practices such as regular data backups, use of passwords to deter unauthorized access, regular data cleaning and maintenance, data authentication and troubleshooting enhance service delivery to the customers. A lot of information has also been availed to the customers hence enabling them to make more conversant decisions. Commercial banks have embraced effective ICT support practices to create value-based services to their customers in order to remain competitive globally.

5.4 Recommendations

The study recommends that commercial banks keep adopting ICT since it has brought a total paradigm shift on the performance and customer service delivery in the banking industry. In order to match up with global growth, improve the quality of customer service delivery and improve efficiency, banks require to extensively invest heavily in ICT. The banks should give high priority to customer service delivery and should consider electronic banking as important key drivers towards successful implementation of customer service
delivery ICT development has a significant effect on development of more flexible and customer friendly banking services. There is also need to train customer on ICT awareness since a large percentage of customers in Kenya literate and may affect ICT uptake.

The study also recommends that commercial banks should invest more resources in modern technologies. This is critical in enhancing increased customer access to banking services and products and eventually effective service delivery. This will enhance flexibility and convenience resulting into increased customer satisfaction. Central Bank of Kenya should set policies to provide an enabling environment for online users of commercial banks to be able to transact fairly. This will help in dealing with unethical business practices and ensure customer funds safety.

5.5 Limitations of the Study

The study was limited to banks’ staff who work in the ICT department and customer service due to time constrain and resources. Furthermore, the customers were not interviewed since they are the final recipient of the services. The study also concentrated on the Commercial banks in Kenya therefore the results cannot be generalized across the other sectors.

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 Suggestions for Further Research

In future, researchers should conduct a similar study in another country either in the region or in the developed countries to ascertain the impact of ICT support practices and service delivery in the commercial banks across the globe. This will provide a window of opportunity for the researchers to compare findings afterwards hence a more plausible conclusion can be drawn. A replica of the same study should be conducted in another industry for example the Mobile Telecommunication firms in Kenya to ascertain some of the ICT support practices and their impact on service delivery. This will allow researchers to compare findings and a more reliable conclusion can be drawn.
REFERENCES


Alter, S. (2012). Work system perspective on service, service systems, IT services, and service science. Retrieved 08 16, 2015, from USF Scholarship Repository: http://repository.usfca.edu/at/45


APPENDICES

My name is Nyachieo Nyatichi Florence, a post graduate student undertaking a research on ICT support practices and service delivery in Kenyan banks. I am kindly requesting you to answer the listed questions provided below. The answers given will be treated with utmost confidentiality.

Appendix I: Questionnaire

SECTION A: DEMOGRAPHIC INFORMATION

Answer all the questions by either ticking the appropriate option or filling in the provided spaces.

RESPONDENT

1. What is you gender?
   
   Male [ ] Female [ ]

2. How old are you?
   
   25 years and below [ ] 26-35 years [ ] 36-45 years [ ]
   46-55 years [ ] above 55 years [ ]

3. What is your title/position in your bank?

   ICT Manager [ ] Assistant ICT manager [ ] ICT officer [ ]
   Others specify [ ]

4. How long have you worked in the banking sector?

   1 year or less [ ] 1-5 years [ ] 6-10 years [ ] over 10 years [ ]
5. Level of education

Diploma level [    ]  Bachelor’s Degree [    ]  Post Graduate [    ]

Others specify [    ]

FIRM

6. Bank ownership  Foreign [    ]  Domestic [    ]  Both [    ]

7. How long has the bank been in operation

Below 5 years [    ]  5-10 years [    ]  11-15 years [    ]

16-20 years [    ]  21-25 years [    ]  over 25 years [    ]

8. No of employees in the bank  0-99 [    ]  100-200 [    ]  201-300 [    ]  above 300 [    ]

9. No of customers 1000-5000 [    ]  5000-10000 [    ]  above 10000 [    ]

SECTION B: ICT SUPPORT PRACTICES

10. Using the following scale, indicate the extent to which each of the following ICT support practices are applied in the bank. Where 1= To no extent,  2= To a little extent,  3= To a moderate extent,  4= To a great extent,  5= To a very great extent

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<tr>
<th>Statements</th>
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<th>3</th>
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<tr>
<td>Authentication of data</td>
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<td>Awareness of scams/unsolicited files</td>
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<td>Data cleaning and maintenance</td>
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<tr>
<td>Data encryption</td>
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<tr>
<td>Denial of network accessible resources</td>
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<td>Installations of antivirus software to computers</td>
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<tr>
<td>Keeping logs or repairs and scheduling for troubleshooting</td>
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<tr>
<td>Regular backups of data</td>
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</tbody>
</table>
Regular maintenance of ICT equipment
Routine system maintenance
Securing of laptops and computers with strong passwords to deter unauthorized access

11. Which other ICT support practices have your organization adopted?

………………………………………………………………………………………………
………………………………………………………………………………………………

C: CHALLENGES FACED IN ICT SUPPORT SERVICE PROVISION

12. Using the following scale, please indicate the degree to which you agree with each of the following challenges faced in ICT support service provision in your bank. Where

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree,
5= Strongly Agree

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<tbody>
<tr>
<td>High cost related to the acquisition of ICT equipment has been a hindrance to ICT support service provision</td>
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<td>Digital Divide has been a challenge to ICT support service provision</td>
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<td>Emergence of newer and more improved versions of ICT solutions</td>
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<td>Concerns on the security of funds by the customers has been a challenge in ICT support provision</td>
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<tr>
<td>Inadequate technology know how by staff has hindered service provision</td>
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</table>
Increased costs of training the necessary workforce
Lack of technology know how by the staff has been a major blow to ICT support service provision
Low competence of use of ICT tools and equipment
Network issues limit availability of services which hinder the ICT service provision

13. What other challenges does your organization face in ICT Support service provision?

………………………………………………………………………………………………
………………………………………………………………………………………………

SECTION D: RELATIONSHIP BETWEEN ICT SUPPORT PRACTICES AND SERVICE DELIVERY

Please tick the one that best describes your opinion in relation to the relationship between ICT support practices and service delivery in the banking sector in Kenya.

14. How long does it take to serve a customer?
   5 minutes or less [ ]  6-15 minutes [ ]  over 15 minutes [ ]

15. What is the average waiting time for each customer?
   10 minutes or less [ ]  11-20 minutes [ ]  over 20 minutes [ ]

16. How many referrals are there in a month?
   100 or less [ ]  101-200 [ ]  201-500 [ ]
   501-1000 [ ]  above 1000 [ ]
17. What is the average number of customer complaints in a month?

- 20 or less [  ]
- 20-100 [  ]
- 101-200 [  ]
- 201-300 [  ]
- Above 300 [  ]

**SECTION E: SERVICE DELIVERY INDICATORS**

Using the following scale, indicate the extent to which each of the following service delivery indicators has been realized in your bank:

1= To no extent, 2= To a little extent,
3= To a moderate extent, 4= To a great extent, 5= To a very great extent

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<tr>
<td>Customer satisfaction</td>
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<td>Customer retention</td>
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<td>Customer defections</td>
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<tr>
<td>Decrease failure of equipment</td>
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<td>Increased accountability</td>
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<td>Improved profit margins</td>
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<td>Ease of scheduling tasks</td>
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<td>Reduction of waiting time</td>
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</table>

Thank you!
Appendix II: List of Commercial Banks in Kenya

1. ABC Bank
2. Bank of Africa
3. Bank of Baroda
4. Bank of China
5. Bank of India
7. Chase Bank Kenya
8. Chase Bank of Kigali
9. Citibank
10. Commercial Bank of Africa
11. Consolidated Bank of Kenya
12. Cooperative Bank of Kenya
13. Credit Bank
15. Diamond Trust Bank
16. Dubai Islamic Bank
17. Eco Bank Kenya
18. Equity Bank
19. Family Bank
20. First Community Bank
21. FirstRand Bank
22. Guaranty Trust Bank Kenya
23. Guardian Bank
24. Gulf African Bank
25. Habib Bank AG Zurich
26. HDFC Bank
27. Housing Finance Company of Kenya
28. I&M Bank
29. Imperial Bank Kenya (In receivership)
30. Jamii Bora Bank
31. Kenya Commercial Bank
32. Mayfair Bank
33. Middle East Bank Kenya
34. National Bank of Kenya
35. Nedbank
36. NIC Bank
37. Oriental Commercial Bank
38. Paramount Universal Bank
39. Prime Bank
40. SBM Bank Kenya Limited
41. Sidian Bank
42. Spire Bank
43. Stanbic Bank Kenya
44. Standard Chartered Kenya
45. Trans National Bank Kenya
46. United Bank for Africa
47. Victoria Commercial Bank