

# Perceived benefits of E-Banking and its Relationship on Banking Performance in Tanzania

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**Abstract**— *Not so long ago, numerous banks in Tanzania have commenced using of digital technologies to influence business transactions; however, there is little understanding on the perceived benefits of these products on the performance of the banks. The study scrutinized the perceived benefits from using E-Banking and its relationship on banking performance in Tanzania taking CRDB and NMB banks as the case study. The specific objectives of the research were three and they include; (i) look on benefits of internet banking and its effect on banking performance, (ii) to assess the perceived benefits of mobile banking and how it impacts the banking performance and (iii) to determine the perceived benefits of ATM services and how it impacts on banking performance. The study adopted a quantitative research design whereby a questionnaire was distributed to 352 banks customers in Mwanza region in an attempt to arrive to a larger sample of respondents. A simple random sampling technique was used in this study so as to allow an equal chance of participants to fill up in the questionnaire and to reduce the elements of bias. The regression results on the overall model showed that the model accounted for adjusted  $R^2$  value of 51.3% of the variance explained by the indicator; and the  $F$ -statistic of 124.391 which was significant as  $p = .000$ . With respect to individual variables, the results of the study brought out forward that the benefits of internet banking were positively related to banks performance although the effect was moderate. Similarly, ATM teller machines and mobile banking had positive and significant effects on the banking performance. In the end it was recommended for commercial banks to improve awareness to customers on some of the e-banking product like internet banking, in addition the commercial banks are supposed to maximize the number of e-banking product so as to minimize congestion on banking premises, and to place banking facilities to various locations to ease access by customers.*

**Keywords**— *Banking, E-banking, Bank performance, Automated Teller Machine (ATM).*

## I. INTRODUCTION

Globalization, competition, innovation, customer needs, and globalization are reshaping banking industry. On account of the information and communication technology, banking services have experienced big changes on the latest time. Clients may be enjoying significant benefits from technology-established services including ATMs, internet banking and mobile banking. But the best part is that they have access to all banking services for 24 hours to 7 nights (Tunay&Tunay, 2015).

Accordingly, ICT is now a fundamental concern for all banks. It also serves as a prerequisite for competitiveness

locally and globally in the banking sector. Therefore, electronic banking is no longer an option to 21st century business owners (Wisdom, 2012). Nearly all the business transactions are now conducted online; the businesses interaction with the customers has been much influenced by the big rise in internet banking usage. E-commerce has led banks to offer a strong service through the internet. This is now known as E-Banking or internet banking (Mchomba, 2018). Banks have had the chance to inspire customers, thereby encouraging them to bank with them. The adoption of E-Banking benefactions by bank customers has upgraded from recent years to

approximately 25% to 30%, in point of fact, banks are deliberately doing improvements in E-Banking offerings for keeping and bringing new customers, and are significantly making massive investments in enforcing the currently E-Banking approaches to preserve and increase their bettering (Hammoud, 2018).

The permit of the management to point out and influence strategies that give them a competitive edge in their target markets. The evaluation of financial records, market share, and management strategies are all useful methods for assessing performance. These are some of the most important indicators of an organization's financial health (Ilyukhin, 2015)

E-banking has many advantages over traditional banking systems. It reduces transaction costs, improves payment efficiency, and provides financial services to customers. E-banking innovations are always dealt with carefully assessment of the likelihood and costs involved so that there are no adverse effects on bank performance (Hammoud, 2018). One, the efficiency and effectiveness of electronic banking is directly linked to bank performance (Hammoud, 2018).

Presently, there is rising competitiveness in the financial service market which resulted in power to increase and adventure different delivery instruments to stay and sustain in the market. A strong banking sector is vital in every nation and can have an important consequence in supporting economic development through efficient financial services. The continuous development of electronic banking has made the provision of some services, especially those that do not require continuous physical customer-service provider contact to extend their provision though electronic means. The characteristic illustration of such services is banking, which is still travelling into internet banking. With the acknowledgment of the cost and functioning advantages of electronic banking, banks have incorporated electronic banking to create a competitive improvement (Laukkanen, 2016; Xue et al., 2011).

The role of the banking sector is going with the globalization undertaking at the everyday level. This change will comprise moving from orthodox service to electronic service delivery of banking services. E-Banking structure has smoothened the way of chances to the existing banks and financial sector. This expertise allows business process serving borderless market, re-engineering, to attain zero latency leading to development in customer service levels and better risk administration because of real-time settlement. Since its evolution in 90th decades, it is having unprecedented growth. The growth

rate is higher in developed nations and lower in least developed nations (Chang, Dillion, & Hussain, 2006).

The positive effect of electronic banking on the carriage of the function of cost-effectiveness is significant. A transaction at a branch can cost 40 to 80% less than if it was done online (DeYoung, 2001). The internet banking costs and other electronic functions reduces the estimated total overhead expenses and the operational costs rendered by banks (DeYoung, 2001). The use of electronic banking services by banks is categorized as "innovative", and their distribution channels are more extensive than the sector average. Their costs are also lower than the sector average (Pigni, Ravarini, Tagliavini, & Vitari, 2002).

The 1900s could have had an influence on Tanzanian banking activities. These practices were introduced by colonialists so as to make smooth their financial obligations in Tanzania and East Africa. The earlier banks were created under the Tanganyika regime of Germany. The British regime in Tanzania in 1919s enacted many laws to regulate banking activity in Tanzania. They not only introduced more banks than those held by Germans but also enacted numerous banking regulations. The colonial banking legacy of the British Empire was carried on banks after independence. In 1967, the Arusha declaration nationalized all private banks. In the untimely 1990s, a Nyirabu Commission report was issued on its inquiry into Tanzania's banking and monetary systems. Its significant contribution to banking development is immense. This is why the Banking and Financial Institution Act (1991) was created. Despite its extraordinary contribution, the latter didn't mention anything about electronic banking. This is because most Financial Institutions in the country had not yet adopted ICT. However, developed countries like the USA and UK already felt the benefits of ICT (Douglas, 2011)

Seeing that, financial service providers have used electronic messages to pass on via exclusive software systems (intranets), for a long time before the advent of internet. The permeable of internet in the 21st Century has caused a revolution in traditional transaction methods. This has led to most banks and financial institutions in many countries to adopt this technology for most commercial activities. Although electronic banking is still in its infancy, there is a lot of interest in Tanzania. It is a proud moment to see various banks adopt Automated Teller Machines. Other communication companies such as Tigo and Vodacom also adopt m-banking. This allows for quick deposits, transfers, and payments via electronic payment services (Kato, 2019). Electronic banking is a key part of the country's economy. This was evident in the adoption by CRDB bank of electronic banking (Robert 2011).

Electronic banking in Tanzania has been confirmed by the adoption of electronic banking by CRDB and NMB, DCBs, Exim Bank, and NBC.

In recent years according to Mayonga (2014) Tanzania banking sector has made a noteworthy progress in development of ICT by introducing a banking service known electronic-banking. Bank like CRDB, NMB, NBC, TPB have invested significantly in ICT by introducing different form of E-banking to facilitate electronic cash movement. New services are originating such as mobile banking, internet banking and others. This is to say with E-banking it is even easier for a holding bank to control its subsidiary bank allocated at a distant as a result of technological advancement. In Tanzania E-banking is in its early stages, though a great response of use is witnessed. The adoption of Automated Teller Machines (ATM) by various banks and financial institutions is of pride, the adoption of mobile banking by various communication Companies such as Tigo, Vodacom, Airtel, gear habits for deposits and quick transfers of money or payments via electronic payments services. The adoption of E-banking by banks such as CRDB, NMB, and NBC evidently indicates the role played by E-banking in the country. Since then, financial service providers have been using electronic message transmitted through proprietary software system (intranets) for some time before ICT introduced internet. Come the 21st century and introduction of internet caused a dramatic revolution in the old traditional methods of transactions which has necessitated most banks and financial institutions in most countries introduce the use of such technology in most commercial activities (UNCTAD, 2008).

According to Gupta (2008) and Kamel (2005), E-banking is a key component of banks' transformation efforts in areas in the same degree as products and services and how they are carried through. It's a powerful and valuable instrument to promote innovation and improve bank competitiveness. Information technology is an important component of the bank's development drive. It has been proven to increase customer loyalty and business efficiency.

This shows that information technology facilitates the delivery of quality and efficient services. Similarly, Christopher, Mike, & Amy (2006) brought forward the e-banking importance and the channels for selling products and services to banks and is considered a requirement for banks to succeed. Because of the integration and use of information technology in banking operations, the quality and regulation of the banking industry have increased dramatically worldwide. The research executes the

perceived benefits of e-banking and its relationships on banking performance.

## II. LITERATURE REVIEW

The findings pin pointed out the assessment of the perceived benefits of E-Banking and its relationship on banking performance the fact that the researcher was involved in the actual public operations that has been a great advantage in making solid assessment and arriving at the right conclusions and eventually coming up with constructive suggestions.

### 2.1 Banking

According to Indian Banking Regulation Act, 1949 defined Banking is the business that accepts money from the public for saving, investment or lending. It can be withdrawable by cheque, draft or order. According to Ravi (2001), banking technology is the combination of computer science and sophisticated information and communication technologies. It gives banks ample time to give out best services and safe reliable to customers and make them cheap in way to maintain a competitive advantage over others banks.

### 2.2 E-Banking

The future of businesses is electronic banking. It is the conveyance of traditional and new banking spin-off and services to customers via a personal computer. Initially, electronic banking was a medium for information to market products and services. However, banks now use internet banking for both transactional and informational purposes.

Electronic banking is the cutting-edge route utilized by banks in the arrangement of services and products to its clients. Electronic banking utilizes web and cell phone energize as the channel of achieving clients. The idea of e-banking is depicted from various perspectives; Chang and Hamid (2010) strategized the-banking as the plan of action throughout that the customers finish money exchanges electronically in the absence of going to the banks physically or without going by banks premises. Alsajjan& Dennis, (2010) characterized e-banking as the way toward giving banking services through innovation without utilizing physical assets of banks and additionally clients by utilizing e-banking, banks can convey services to clients and other e-products through the web instead of going to the bank premises physically (Cheung & Lee, 2006). The classification of these banks was considered to be applied via the channels which are mostly safe for carrying internet banking and they include;

- Mobile banking

- Internet banking
- Automated teller Machine

In addition, this can be taken to mean the provision of small- and retail products of banking services through the channels of electronics. E-banking (or electronic banking) touch on the supplying of financial services and trading making use of electronic communication. Banks are moving to multi-channel dispensation of their financial services through amalgam platforms which allows them to provide the traditional banking services. These include account management, deposit-taking, loaning, account management, financial advice, and electronic bill payment.

### 2.3 Perceived benefits of E-Banking

Electronic banking is a great way to save money. Electronic banking offers both the customer and the bank many benefits. First, the e-banking service offers a competitive branding option and a better understanding of market needs. According to Jen & Michael (2006) have shared their perspectives that electronic banking has opened up new doors for businesses and banks around the globe. They can draw out the malleable customers by providing portable money-related services which makes them to prosper. Wind, (2001) stated that numerous commercial banks are motivated to make implementation E-banking by the elements. Electronic banking is responsible for the increased use of credit cards. Electronic banking allows customers to shop anywhere in the world without having to carry paper money.

### 2.4 Internet Banking

The customers of Internet banking are allowed to go through their bank account online using Personal Computers, mobile phones or web-browser (Arunachalam & Sivasubramanian, 2007). Also, according to Ongkasuwan&Tactichattanon, (2002) Internet banking is mentioned to be a banking service that permits the bank customers to have information of their bank accounts and make financial transactions from anywhere with an Internet connection. Internet banking in the study is explained to be an electronic payment method that authorizes customers to make payments on a website of a financial institution including banks, credit unions, or retail banks.

More comfort and adaptability offered by Internet banking to customers joined with a for all intentions and purposes total control over their banking. Service conveyance can be both informative (educating clients about bank products) and value-based. It is the best way to provide retail banking services. It is an elective conveyance for retail banking and has all the same effect on profitability as Telephone Banking or PC Banking (Chang & Abdul ,

2010). It is most cost-effective mechanical methods for yielding higher profitability. It wipes out the boundaries of distance, time and gives consistent profitability to the bank to beyond far-off clients.

This is an electronic banking solution which is accessible through the Internet that gives business clients access to their accounts, allowing customers effective financial management anytime and anywhere by means of a site. This solution offers digital banking convenience with cost-effective, secure banking at your fingertips.

### 2.5 Mobile banking

The mobile banking is a type of E-banking that is offering banking products and services by the use of devices such as mobile phones (cell phones) (Chidindi, 2014). However, Porteous, (2006) stated that the mobile banking is a component of electronic banking that enhances customers to acquire different banking products through electronic bank channels, which includes credit tools and savings. Venable Telecommunications (2008) stated that the mobile banking is the financial transaction that has wireless handsets. The financial services and banking are provided by the use of mobile devices which are mobile telecommunications oriented. Mobile banking is conducted mainly through mobile applications and short messages. The customers are provided with the two types of account access their bank information: a web-based interface as well as a simple text message interface. The customer can however use the accounts to access bank services anywhere and anytime.

Nowadays Mobile Banking is additionally called "Sim banking" and would be taken to be considered as a comparatively remote or digital controlling the bank account, which is specifically the transfer of department money-related offerings through media transmission devices where customers of the bank can implement the retail banking exchanges by calling a phone or customer service desk, which is in association with an automated organization of the bank by the application of Automated Voice Response (AVR) innovation (Hammoud, 2018). The requirement of the Mobile banking is to be having downloaded the formal application of the particular bank into your Smartphone to be having the broad range of services provided by the bank or to dial special number for example \*150\*03# for CRDB customers those who are using Vodacom network.

### 2.6 Automated Teller Machine ATM

Reference to Automated Teller Machine, is to mean that it is as well-known as an automated banking machine (ABM), or Cash Machine, is an electronic telecoms instrument that enables financial institutions customers to fabricate transactions in spaces which are public in the



absence of the need of a human clerk, bank teller, or cashier. Modern ATMs allow customers to be recognized by putting in a card with a magnetic stripe, or a smart card with a chip. The card has the unique number additionally security information, like a CVVC (CVV) and expiration date. The customer enters a personal identification number to authenticate the transaction. Numerous customers can acquire their bank's accounts through an ATM to take their money or cash advances on credit cards. They can also look over their account balances and purchase prepaid cell phone credit.

Automated teller machines (ATMs) consolidate a workstation record keeping substructure and trade vault out one unit, giving customers chances to substructure and enter the bank's accounting with a card that is containing a Personal Identification Number (PIN) or through battering an exceptional code number into the workstation connected to the bank's network that modernizes records 24 hours every day" Rogers, (1995), once get to is picked up, it offers a few retails banking services to clients. They are for the most part situated outside of banks, enabling clients to approach whenever of the day. ATMs provide variety range of choices and a different of services, for example, influencing deposits, to finance exchange between two records and bill settlements.

As stated by Obiano, (2009), Automated Teller Machines (ATMs) are available for the substitutions of labor-intensive transaction channels which impacted by what is time and time again known as paper-based payment tools. A bank customer can make different transactions from different ATM machines in the world using an automatic teller machine. Consequently; the ATM works for the conventional tasks of bank tellers and any other service provider. It is electronically operated, therefore responding to a customer's request is instantaneous.

### 2.7 Bank Performance

The estimations of profitability, net income margin (NIM), and return-on-assets (ROA) have been the focal point of banking performance (Naceur & Omran, 2009). A published paper by Thomas & Saunders (1981), presented a theoretical framework for the determinants NIM (dealership model). The market competition was intended to depend on interest margin as well as interest rate risk, according to the authors. A drop in NIM can indicate a more efficient banking system (Kasman, 2010). It does not necessarily reflect an improvement in efficiency. Nevertheless, this might cogitate an in-bank taxation minimization, or a higher loan default rate (Demirguc-Kunt & Huizinga, 1999).

Bank performance is measured by key indicators such as profitability, net margin (NIM), and return on assets.

Flamini, McDonald, & Liliana, 2009), (Naceur & Omran, 2011).

## THEORETICAL FRAMEWORK

A theoretical frame work refers to the way the possible answers could be founded by the researcher on the development of his thoughts in putting the ideas in an organized manner. These thoughts and theories are then clustered into themes that frame the subject (Mutinda & Paul, 2016). This research mainly focused on assessing Perceived benefits of E-Banking and its relationship on banking. The study is constructed basing on the theory of Technology acceptance model (TAM).

### *Technology acceptance model (TAM)*

The TAM was proposed by Fred Davis (Davis, 1989). The theory was adapted from the Theory of Reasoned Action (TRA). This model is the most widely used for exploring user acceptance of a technology. According to this model, the use of an information system depends on perceived usefulness and perceived ease of use. Satisfactory or unsatisfactory outlooks toward any technology are a function of perceived ease of use and perceived usefulness about the technology. The first belief, perceived usefulness (PU), is the user's "subjective probability that using a specific application system will increase his or her job performance" (Davis, 1989).

TAM examines the mediating role of perceived usefulness and perceived ease of use in their relation between systems characteristics (external variables) and the probability of system use (success indicator of system). It used to predict the acceptance and the use of new information technology (software and information systems) within organizations.

TAM focus on two theoretical constructs perceived ease of use (PEOU) and usefulness (PU) (Davis, 1989). Not only both of them will influence customers' intention of using the system but also will significantly influence customer interaction with electronic banking (Dejene, 2018).

### **Conceptual Framework**

While several theoretical models seek to explain the acceptance, adoption and usage of new technologies, the technology acceptance model, developed by Davis (1989), is the most widely applied and validated model for various contexts and across a variety of technologies. In many studies, antecedent variables have been added to the twin TAM constructs, namely perceived ease of use and perceived usefulness (Davis, 1989).

This is study expedient that meant to assist a researcher to develop focus and understanding of the feasible reasons of action. This study conceptual framework conceptualizes that dependent variable which in this case is Banking which is expected to be affected by the independent

variable which is Electronic Banking. Successive organization will strive to improve all aspects of their banking system. The courting among impartial variable (Automated teller machine, mobile banking and internet banking) and dependent variable (Banking) is moderated by factor which is perceived benefits. Therefore, for

customer’s perceived usefulness of E-Banking, there is need for better functional relationship of independent variables (Sangali, 2018). The relationship of these variables is summarized in conceptual framework figure 2.1.

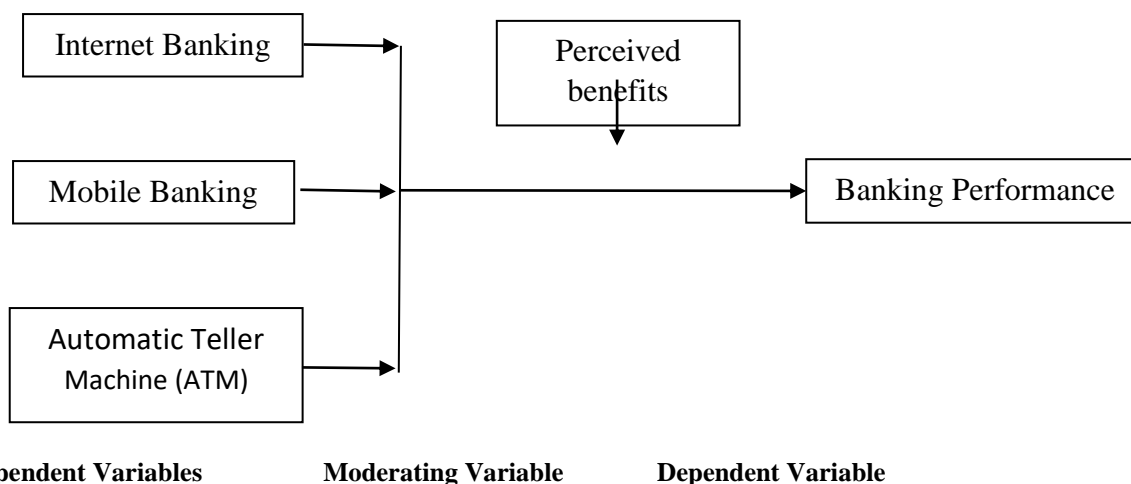


Fig.2.1; Conceptual framework

Source: Researcher 2021

**Perceived benefits of internet banking and its impact on banking performance**

Internet banking and further electronic based bank functions are faster than traditional processes, largely because the starting setup costs for different electronic banking are relatively low. This encourages the emerging to focus on countries electronic banking. The customer base expansion is actually important in improving the performance of the services that adds to the success of the bank (Sullivan, 2000).

When clients are aware that banks offer internet banking service, they generally tend to use the internet banking and that they see its usefulness in several ways including time, convenience, cost and money and the degree of awareness is influenced by the amount of information obtained by the customer, If banks can create user-friendly websites providing the kind of security clients’ demand, the idea of internet banking could be profitable for them (Ahmad, Bhatti, & Hwang, 2019).

Ulaya (2016) examined the factors for the acceptance and the benefit of electronic banking for customers. The study aimed to evaluate the components that determine the customer’s choice of electronic banking, the level of customer use of electronic banking, and the assessment of

the benefits to customers of using electronic banking services. Structured questionnaires in data collection. The study finds that demographics have had a notable impact on consumer adoption of electronic banking. The study also found that the majority of e-banking users agree that the value-based benefit of e-banking lies in convenient, time-saving and efficient transactions.

In their study, Malhotra and Singh (2009) found out that internet banking improves performance because it targets global customers, efficient, reliable, and profitable. Furthermore, researchers pointed out that Internet banking is one of the e-banking strategies that modern banks have adopted and implemented in the provision of banking services. Obeidat and Saxena (2016) revealed that security, safety, and convenience are significant drivers whereas slow computers, poor quality of internet and lack of customer care are main barriers.

Internet banking has the potential to increase bank asset quality and directly impact ROA performance (Kagan, Acharya, Rao, & Kodepaka, 2005). However, the indirect impact on profitability via cost is also significant. The average operational cost and other electronic banking services reduce of banks that are able to bear physical overhead expenses (Ahmad, Bhatti, & Hwang, 2019).

This is why banks have such a critical need for an electronic infrastructure. Transaction costs and improves profitability are caused by better the infrastructure; armature minimizes. The success of online banking services has been supported by both the education level and the functionality of the website of the banks.

Sullivan 2000, Sullivan stated that the internet banking usage is probably huge with the clients with higher education than ordinary bank customers. If the number of clients who use internet banking electronic services does not increase the bank will not be able to make a profit.

Siam (2006) inspected the impact of e-banking upon Jordanian banks and presumed that large a part of the banks is giving offerings at the internet thru their web sites and his discoveries display that the attention is greater to engaging in e-banking as satisfying and pleasurable customers' needs. He likewise inferred that there need to be an all-round verbalized approach to make development and advantages over the lengthy haul.

The central variables in the literature have been present for years. They go hand in hand with ICTs application design and the Technology Acceptance Model approach (TAM) (Davis, 1989). Amin (2009) also reported that other factors influence Internet banking use, such as recognized credibility, recognized enjoyment, and social norms. Restricted financial literacy and the "digital gap" may also inhibit customers with low incomes from using Internet banking (Akinci, Aksoy, & Atilgan, 2004).

Ayadi (2003) discloses that entrance to electronic methods for payments and the high number of clients associated with the web has changed the impression of banks toward advertising and expanded the advancement of web saving money. He contends that Internet saving money requires a sound security technique that includes outlining powerful strategies through which clients can be validated in a remote situation to such an extent that exchanges being led are anchored inside their particular surroundings. Web managing an account innovation has rolled out exceptional improvements in the banking industry, which include: cost lessening because of electronic handling completed on the Internet.

Apart from the connected computer with internet, the Internet-banking can also be accessed from the smart phone or tablet linked to Internet, no matter where it is and E-banking operations are the same as. View of the accounts' situation, transfers, exchange transmission of payment orders, etc. Chang, Dillion, & Hussain, (2006) it was recommended that believe technology have come into the attention of the essential environment keeping and friendly recently to give an online user the sensation for giving judgment before making conclusions. They

also pin pointed that the fostering business capabilities and the economy, have created concerns with security, trust, privacy and risks and these are the dynamic issues. The issues could destruct the use of E-banking If they are not given permanent solutions with in a timely fashion, they. Determinant of perceived usefulness has been found to be trust, especially in an online environment, because part of the guarantee that consumers will obtain on the usefulness of a web interface depends on the people behind the website (Chidindi , 2014). Effect of internet banking on performance of banks has been predicted to be positive by the study and subsequently gives the following hypothesis:

*H1: Internet banking is positively related to banks performance*

### ***Perceived benefits of mobile banking and its impact on banking performance***

"Sim-banking" as a virtual managing an account which basically is done though the instruments which are media transmission oriented whereby the bank clients can perform and access the banking services by dialing a touch-tone phone or mobile correspondence unit which is a conveyance of branch monetary services.

Mobile banking is an applicable solution to so many people (customers) mobile phone can be part in growing markets to customers who have access to internet banking and be the mainstream financial system. The financial services are made ease by reducing costs such as travel time and distance between branches, overheads and transaction costs by the use of mobile banking can make. Opportunity to offer banking services to new customers through mobile banking is done by the financial institutions, which can help them increase their market share (Kithaka, 2014). He also suggested that the main driving force behind e-banking lies in the prospect of minimizing operating costs and maximizing operating revenues.

In Asia, the use of mobile phones has expanded and grown exponentially in the banking industry. According to Puschel et al. (2010), trends in the banking industry shows that bankers have noted the shift in the accessibility of banking services as more customers own and prefer using their mobile phones in performing tasks every day. For instance, in Japan, Jibun Bank in Japan has realized the trend of mobile banking and decided to provide extensive services through mobile banking (Kim &

According to Mbiti and Weil (2011), M-Pesa has improved the adoption of mobile banking because it encourages money transfers and accessibility of money in the financial markets. The use of the mobile phone has

revolutionized Kenya because statistics show that 93% of Kenyans own phones, 73% use their mobile phones to transfer money, and at least 23% transfer money daily (Demombynes&Thegeya, 2012). Banks in Kenya has noted the opportunity presented by the use of mobile phones to transfer money and have devised mobile banking to meet unique needs of customers. According to Njoroge and Mugambi (2018), mobile banking has a significant effect on the commercial banks' performance because it is accessible, convenient, affordable, and usable. Therefore, it is evident that mobile banking has a powerful effect on commercial banks' performance.

As maintained by Payam et al. (2012), found that by the investigation, apparent handiness, convenience, and the requirement for communication, hazard, and cost, the similarity with a way of life, validity and trust. Numerous people in the world and in the country now own mobile phones and the banks are advertising mobile banking to serve the customers who want to use Mobile banking to access different services as long as they are registered to internet banking (Ahmed & Hassan , 2011).

Kambona, (2013) investigated the adoption of web-based banking services in Tanzania. The focus was to demonstrate the client's awareness towards web-based banking within the banking industry in Tanzania. To understand how banks can use the web-based savings money framework, the investigation examined the client's mindfulness towards web-based banking in Tanzania. Interviews, surveys, and documentation were used as information gathering techniques by the researcher. Banks have a direct level client mindfulness. They are less likely to promote web banking services and the quality of their web banking services. To increase their market share, the researcher suggested that banks advertise their online services and take advantage of the market opportunities.

According to Kiri, (2020), the on factors like the purpose to use the mobile banking in the company of the bank customers will rely (perceived usefulness and perceived ease of use) on attitude towards the use of new technology, the construct awareness means users know the availability of mobile banking, benefits, process of login, different service and risk involved (Kiri, 2020). Online banking is considering awareness as a very important factor for adoption. Gaining the trust on Mobile banking is in its initial phase to potential customers and provides accuracy in carrying out financial transactions and accessing financial information by using mobile phone is not as prevalent as anticipated (Raza, Umer, & Shah, 2017).

However, this is somewhat the opposite of what developing countries have embraced mobile phones in

effecting financial transactions. In Tanzania for example, mobile baking has revolutionaries the economy by contributing to the government revenue while individual banks have increased their income overtime due to charges and transaction fees (Rumanyika, 2015). Hence this study anticipates that mobile banking to have an impact on banks performance. Hence the following hypothesis is put forward:

*H2: Mobile banking is positively related to banks performance*

***Perceived benefits of Automatic Teller machine (ATM) services and its impact on banking performance***

timely withdraw and deposit of cash is already developed forms of access of services that customers perceived usefulness on the use of ATM with little charges such as, ATM card fee, ATM fees charged, carriage of large sum of money using, print of readable slips and financial cleanliness of ATM stations ,min statements, payment of bills on-line, easy application process for ATM cards, ATMs not out of order accuracy of ATM transactions, ease of access to ATMs, privacy at ATM stations, convenient location, , employee speed in solving ATM issues and cash availability (Howard, 2017).

Steve (2012) claims that ATMs are convenient. They allow people to make purchases, withdraw money at any time, and pay their bills. He also argues that an ATM has a significant advantage in that it can be accessed at any time. An ATM can be used to provide other banking services as well as withdraw money. An ATM allows the user to transfer funds between accounts or deposit checks at any hour of the day. Customers can also conduct balance inquiries at ATMs. An ATM allows the user to quickly and easily check the balance of their account.

The competition in the banking the Banking industry is too high and therefore banks are struggling to win clients and use of ATM and other improved services and quality of service delivery to clients been number one thing to consider if banks want to win more customers. However, Anouze&Alamro , (2019) conjure that money is deposited through the ATM point is not so effective and safe as cash withdraws because the deposit of cash is not updating the account automatically in developing.

Magara, (2018) presented that the services rendered through the ATM depends much on the network boosts and induces fast services delivery to provide effectiveness services to clients with Effective service delivery channels are improved for better services that is meant to bring practice, Customer forecasted services concerning the encounter of the experiences and service delivery techniques in the collection to bring the whole idea of what quality service are constituted of and therefore key



issues that need to be taken into consideration with the regard to the implementation to the implementation of any environment change. service product or service process is what is meant to be effective service delivery and basically laid on some technology or systematic. New client interaction channel it may be as the systems and channels are mixed in the distribution (Magara, 2018). Hence, the study posits the following hypothesis

*H3: Mobile banking is positively related to banks performance*

### III. MATERIALS AND METHODS

#### 3.1 Study Population and Sample

CRDB and NMB have approximately over a million customers. The population contemplate combined all clients of CRDB and NMB banks accessible and works in the Mwanza City, from which the sample size was drawn. The rationale of such population was that it provides the researcher with an adequate sampling frame.

The main unit in this case was the CRDB Customer and NMB customers as all are involved in banking activities. The collected data from individuals by the researcher will go into the analysis depending on the numbers of the outcomes from the questionnaires.

The description of the sampling from was from the list of all population units from which the sample was selected (Chimwani, Iravo, &Tirimba, 2014) . As stated by Krejcie&Morgan,in (1970) table in the attached appendix section of this proposal, from the population of around a million, corresponds to an approximately sample size of 384 CRDB and NMB customers were selected to be the main information providers for this study. Also, according to Kothari, (2004) recommends that in order to reproduce most important characteristics of the closeness to the researcher, enough time for the researcher and the constraints on the sample size must be as large as possible.

#### 3.2 Variable and their measurement

The variables of the study were of two types namely the Dependent variables and the Independent Variables. In the middle of the variables there is a relation between them and is the key/central theme of this study (Independent versus Dependent variables).

The independent variable has a specific influence and effect of on the connection through the relationship with the dependent variable revealing the findings that will eventually be implicated to the direction of the findings and results.

Based on this study, the independent variables are hereby identified to be; Mobile banking Automated teller Machine, and Internet banking of which were measured against the dependent variable.

Variable's relationships have therefore been extracted using the questionnaires designed to use inquisitive statements that used a psychometric scale which is commonly involved in studies that employs questionnaire. As the matter of fact, respondents disclosed their extents of disagreement or agreement on a given symmetric agree-disagree scale for a series of statements to capture the intensity of their feelings and opinion to a statement provided.

Quantitative methods have sought the empirical support for the research hypotheses as established on chapter four and chapter five of this document

#### 3.3 Data analysis method

In the aspects quantitative nature, the information and collected data were analyzed. Quantitative method was used to collect numerical and standardized data obtained from the field questionnaires.

The data were quantitatively analyzed with the help of Statistical package for social science (SPSS) whereby statistically they data were conveyed and done especially frequency in order to make the data clean to be analyzed as the background information. Then the sub factors of the hypotheses were transformed to form one independent hypotheses in each hypothesis then the result obtained were finally used for Inferential analysis which were meant for dependent and independent variables were determined by their potential connection between them and the analysis of the regression were able to identify their perceived usefulness that influences have significant on the relationship to banking sector.

Inferential analysis as an advanced step used to analyze quantitative data (Hair et al., 2010). The larger population from which the sample was drawn data from a sample and makes inferences about them. Conclusions from a sample and generalize them to a population was the purpose of inferential statistics, so as to have confidence that the sample accurately reflected the given population (Frost, 2021). Consequently, the study performed One-Way ANOVA, Pearson Product Correlation and regression analysis.

### IV. DATA ANALYSIS, RESULTS AND DISCUSSIONS

Under this chapter the description of the findings is made and analyzed using the research methodology discussed in chapter 3. Before analysis, the data were prepared and

edited to easier codification process and then with the aid of Statistical Package for Social Science (SPSS), statistical data analysis was done, then series of simple analysis of the regression was done to establish mathematical relationship between variables followed by variable testing on the perceived benefits of E-Banking and its relationship on banking performance basing on the collected data and pre formulated variable. This part has two-part, first part is Preliminary data analysis which is about the characteristic of the respondent used for data collection and the second part is detailed data analysis of findings in relation to the study objectives in section 1.3 and questions in section 1.4.

**4.1 Demographic information**

The general characteristics of the respondents such as gender, age and education level are described in this section.

**4.1.1 Response rate and Transacting bank**

As shown in table 1.1, out of the 384 questionnaires being sent to respondents, 352 of them filled correctly and handled back to the researcher hence giving a response rate of around 91.7 percent which is excellent. According to Chebet, Ahmed, &Kitheka, (2016) said the response rate of 70% and over is excellent; a rate of 60% is good and a response rate of 50% is adequate hence since the response rate is 91.7% the response rate was adequately sufficient.

*Table 4.1.1; Response rate*

Category	Frequency	Response Frequency	Response Percent
<b>CRDB Customers</b>	200	199	99.5
<b>NMB Customers</b>	184	153	83.2
<b>Total</b>	384	352	91.7

**Source: Researcher 2021**

**4.1.2 Gender of respondents**

As stated in the findings as shown in the Table 4.1.2.1 as well as in figure 4.1.2.1, 161 of the respondents which are 45.7% were female and 191 which are 54.3% of the respondents indicated they were female as the study thought to find out the gender of the respondents. This postulated that males are dominant when it comes to saving with the bank and consequently male are transacting more using e-banking. This finding was in line with the findings by Mishanga (2011) that men are more likely to save than women. Also, Laforet& Li,

(2005) studied the factors affecting the adoption and use of internet banking in China and concluded that most users of internet banking in China are men.

*Table 4.1.2.1; Gender of the respondents.*

Category	Response Frequency	Response Percent
<b>Female</b>	161	<b>45.7</b>
<b>Male</b>	191	<b>54.3</b>
<b>Total</b>	352	<b>100</b>

**Source: Researcher 2021**

**4.1.3 Age of the respondents**

The findings as shown in table 4.3 as well as in figure 4.2 reveal that 19.9% of the respondents were aged less than 25 years, 42.3% of the respondents were aged between 25 and 35, and 29.0% of the respondents were aged between 36 and 45 while 8.8% of the respondents were aged above 45 years.

*Table 4.1.3.1; Respondent Age group*

Category	Response Frequency	Response Percent
<b>less than 25years</b>	70	<b>19.9</b>
<b>25-35 years</b>	149	<b>42.3</b>
<b>36-45 years</b>	102	<b>29.0</b>
<b>Above 45</b>	31	<b>8.8</b>
<b>Total</b>	352	<b>100.0</b>

**Source: Researcher 2021**

The discovery revealed that younger people preferred mostly to use e-banking in commercial banks. This assertion was supported by Akinci, Aksoy, &Atilgan, (2004) findings in Turkey that the younger people using e-banking in their transactions with the bank are higher than older people. Agarwal, Rastogi, & Mehrotra, (2009) studied customer’s viewpoint regarding e-banking in a developing economy in India younger age people open to opportunities and new ideas and ready to learn and adopt to the use technology in its new forms as compared to older people.

**4.1.4 Customer experience**

The result of the findings as shown in Table 4.4 as well as in figure 4.3, reveals that, 7.4% of the participants had Less than 5 years’ experience while 10% of respondents indicated had 5-10 years’ experience, 20% of the respondents had11-15 years’ experience and 16.7% had

16 and above years. The results indicate that most of the customer who responds to the questions are more experienced with the banks and hence enable the researcher to get more reliable data regarding the topic.

Table 4.1.4.1; Customer experience

Category	Response Frequency	Response Percent
Less than 1 year	62	17.6
1-5 years	105	29.8
5-10 years	137	38.9
10 and above	48	13.6
<b>Total</b>	<b>352</b>	<b>100.0</b>

Source: Researcher 2021

#### 4.1.5 Academic Qualification

As shown in Table 4.4 as well as in figure 4.4, the study reveals that 31.8% of the respondents had acquired below Advanced diploma/1st degree education level, 48.3% of the respondents had acquired advanced diploma/1st degree while 11.6% of respondents indicated had acquired advanced diploma/ university degrees and 8.2% had acquired post graduate degrees. These academic qualification distribution level indicate that the respondents could give responses that are factual because 48.3% of them acquired advanced diploma/ university degrees. The fact that the many of respondents have degrees or are other degree holders, according to the findings. Because there are enough respondents with high education, the researcher can draw a conclusion about the adoption of electronic banking and customer perceptions of its usefulness. There is a correlation between education level and the use of new technology, as we have already seen. Polatoglu&Ekin (2001), found that highly educated and wealthy people are more likely to accept changes, which makes the e-banking to be most likely adopted.

Table 4.1.5.1; Respondent Academic Qualification

Category	Response Frequency	Response Percent
below A. diploma/1st degree	112	31.8
A. diploma/1st degree	170	48.3
Postgraduates	41	11.6
Above Postgraduates	29	8.2
<b>Total</b>	<b>352</b>	<b>100.0</b>

Source: Researcher 2021

#### 4.1.6 The frequency of using e-banking

Customers had a different number of times of using e-banking. The number of times customer uses e-banking is what we call the frequency of using e-banking. The analysis of the findings showed that, 8 respondents equivalent to 2.3% use e-banking very often, 80 respondents equivalent to 22.7% use e-banking at least once a week, 24 respondents equivalent to 6.8% use e-banking at least once after every two weeks, 149 respondents equivalent to 42.3% use e-banking at least once a month and 91 respondents equivalent to 25.9% use e-banking at least once after every three months. The outcomes are in Table and Figure 4.1.6.1 below

Table 4.1.6.1; The frequency of using e-banking

Category	Response Frequency	Response Percent
very often	8	2.3
least once a week	80	22.7
at least once after every two weeks	24	6.8
at least once a month	149	42.3
at least once after every three months	91	25.9
<b>Total</b>	<b>352</b>	<b>100.0</b>

Source: Researcher 2021

#### 4.2 Detailed data analysis

Regression and correlation analysis were applied for inferential statistics. The associations and the effect of e-banking upon banks' performance are defined in their implications of strong effects. These sections will cover regression and correlation analyses. Pearson correlation analysis was used to evaluate the nature and degree of the associations between variables, the of the study. The correlation coefficients can be used to regulate the direction and extent of the relationship between variables of interest. As shown in chapter one (section 1.3.1) the core objective of the study was to assess the perceived benefits of E-Banking and its relationship on banking performance.

#### 4.3 Correlation analysis

Highlights of the findings were entered into the model for regression analysis which was done by the correlation analysis and the serial correlations among the independent variables were examined as analyzed below in different tables which. The regression analysis issues are

commonly in the influence the results of the regression analysis. Two or more independent variables (predictors)

in a regression model are moderately or highly correlated in the process known as Multicollinearity.

Table 4.3.1; Correlations

		<b>Banking Performance</b>	<b>Internet Banking</b>	<b>Mobile Banking</b>	<b>Automated Teller Machine</b>
<b>Banking Performance</b>	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	352			
<b>Internet Banking</b>	Pearson Correlation	.623**	1		
	Sig. (2-tailed)	.000			
	N	352	352		
<b>Mobile Banking</b>	Pearson Correlation	.509**	.284**	1	
	Sig. (2-tailed)	.000	.000		
	N	352	352	352	
<b>Automated Teller Machine</b>	Pearson Correlation	.251**	.078	.320**	1
	Sig. (2-tailed)	.000	.143	.000	
	N	352	352	352	352

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

Source: Researcher 2021

The correlation in the middle of the E-banking and Banking performance was done by Pearson Product Moment correlation coefficient where it can give the direction to both positive or negative and strength of association were determined using. This would help in evaluating whether there exists any association the study variables before the next regression analysis was performed. The factor used was that Correlation Coefficient of 0.7 and above was strong, 0.4 and less than 0.7 was assigned moderate 0 and less than 0.4 weak (Sekara & Bougie, 2010).

The statistically significant relationship between mobile banking and bank performance is moderate (r = 0.806, p= 0.000). This is consistent with Kathuo, Rotich, &Anyango, (2015) who found that mobile banking has a

strong correlation with banks' performance. This could be attributed to customers using mobile phones more than ever before. internet banking also has a statistically significant positive relationship to the banks' performance (r = 0.623; p = 0.000). The performance of banks is moderately influenced by ATM banking (r = 0.623, p =0.000). It is clear that ATM banking and agency banking have a significant impact on the performance of banks due to their positive relationships. Kalinda Unfortunately, Automated Teller Machine was found to have weak correlation coefficient of 0.251.

**4.4 Multiple regression analysis**

Researcher assumed and used Multiple relations in the middle of the dependent and independent variables by using the statistical software package SPSS.

Table 4.5.1; Model Summary

<b>Model Summary</b>				
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
<b>1</b>	.719a	.517	.513	.534
<b>a. Predictors: (Constant), Automated Teller Machine, Internet Banking, Mobile Banking</b>				

Source: Researcher 2021

As table depicts, the value of the coefficient of determination, was found to be .513. This communicates

the fact that 51.3% of the factors determining the banking performance are explained by the independent variables



(E-banking: Automated Teller Machine, Internet Banking and Mobile Banking) under consideration in this study.

The remaining 48.7% of the factors determining banking performance are explained by factors outside the model.

Table 4.5.1; ANOVAa

**ANOVAa**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	106.448	3	35.483	124.391	.000b
	Residual	99.268	348	.285		
	Total	205.716	351			

**a. Dependent Variable: Banking**

**b. Predictors: (Constant), Automated Teller Machine, Internet Banking, Mobile Banking**

Source: Researcher 2021

ANOVA statistics in table shows that the P value for the overall model is 0.000 and F statistic of 124.391. Since this is less than the critical value (0.05), it leads to the conclusion that, at 5% level of significance, the overall

model is significant. This implies that, perceived benefits of E-Banking (Automated Teller Machine, Internet Banking and Mobile Banking) have a significant effect on the banking performance.

Table 4.5.1; Coefficients<sup>a</sup>

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.008	.197		.039	.969
	Internet Banking	.532	.040	.521	13.425	.000
	Mobile Banking	.380	.047	.327	8.001	.000
	Automated Teller Machine	.098	.036	.105	2.679	.008

**a. Dependent Variable: Banking Performance**

Source: Researcher 2021

In terms of each component, Internet banking has a coefficient of 0.323, with significant value (p) = 0.003 or, (p<0.05). Thus, Mobile banking has the most significant impact on banking performance. Similarly, the coefficient of Mobile banking is 0.000, Sig. = 0.591 (p>0.05). Because of that, Mobile banking also has significant positive influence on banking performance. Other remaining independent variable ATM 0.027, Sig. = 0.832 (p > 0.05) have greater than significant level 0.05, so all these components are not significantly effect on banking performance.

**4.4 Discussion and Interpretation of the Findings**

**4.4.1 Internet Banking**

The findings finally reveals that Internet Banking use is positively related to Banking performance with  $\beta=0.521$  and it was it was significant with  $p=0.000 < 0.05$ .

This finding goes in line with the finding by Mateka, Gogo, &Omagwa, (2016) who found that internet banking is positive and significant (beta=0.896, p value 0.000) to the banking performance. Besides, there is evidence of existence of linear relationship between internet banking and performance of First Bank Nigeria Plc (beta= 0.453, p value 0.000), Abuja. The  $R^2 = 0.94$  indicates that 94% of internet banking (cheaper internet costs, 24 hours internet services and information and

communication technology competence of customers) embarked upon by First Bank (Murat & Opusunju, 2019).

#### 4.4.2 Mobile Banking

The results finally show that Mobile Banking use is definitely related to Banking performance with  $\beta=0.591$  and it was significant with  $p = 0.000$  ( $p < 0.05$ ). This is signifying that the more the number of mobile banks transactions in a commercial bank, the better the banking performance of the bank.

This is agreeing with the results of previous studies such as Kithaka, (2014). This similarity is also further supported by a similar study done by Mas & Kumar, (2008) whose study findings show that mobile banking greatly impacts on banking performance. Kathuo, Rotich, & Anyango, (2015) found that mobile banking had a significant effect on the performance of commercial banks. Customers prefer it because of its convenience, accessibility, affordability, and affordability. Mobile banking is safer and more accessible than Internet banking and ATM banking. Mobile banking is a predictor of banks' financial performance because it offers convenience and flexibility (Too, Ayuma, & Ambrose, (2016), Kathuo, Rotich, & Anyango, (2015)). M-PESA, which encourages customers to use banking services and adopt it, is the key driver of mobile banking in Kenya (Mas & Radcliffe, 2010). The study reveals that mobile banking has a significant impact on the performance and performance of banks.

#### 4.4.3 Automated Teller Machine ATM

The results finally show that ATM use is positively related to Banking performance with  $\beta=0.251$  and it was significant with  $p < 0.05$ .

This result goes in line with the finding by Mateka, Gogo, & Omagwa, (2016) who found that ATM is positive and significant ( $\beta=0.190$ ,  $p$  value 0.000) to the banking performance.

#### 4.4.4 Research model

Table of Coefficients indicates the unstandardized and standardized beta coefficients. They predict a change in the independent variables (Internet Banking, Mobile Banking and ATM), would give out an impact on the dependent variable (Banking performance). According ANOVA table overall regression model is significant so, the model can be presented as;

Analyzing the coefficients of a regression model shows that mobile banking ( $b=0.380$ ,  $p=0.000$ ) and agency banking are statistically significant predictors. However, internet banking ( $b=0.532$ ,  $p=0.000$ ) as well as ATM banking ( $b=0.098$ ,  $p=0.008$ ) are statistically insignificant predictors for the performance of banks. Coefficient table

shows that the coefficients for the regression model are statistically significant predictors. The overall regression model is significant so, the model can be presented as;

$$\text{Bank Performance} = 0.08 + 0.532 \text{ Internet Banking} + 0.380 \text{ Mobile Banking} + 0.098 \text{ ATM Banking} + \epsilon$$

Here,  $\epsilon$  is constant

While keeping other variables constant, it can be explained that one unit change in internet banking will positively change banks performance by 0.532 units. Next most influencing variable is Mobile Banking. It leads to the changes in banking performance by 0.380 positively.

The relatively small result of Variance ATM Factor (VIF smaller than 10) shows that this independent variable is not closely related to each other so there is no Multicollinearity (Field, 2013). The coefficients analysis shows the result of multiple regression analysis. Positive mark of regression coefficients shows that components in the regression model above has positive relationship with banks performance and negative mark of regression coefficients show the negative relationship with (dependent variable) Banking Performance.

## V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The descriptions and conclusion of the research problem, research objectives and research hypothesis were done in this chapter. Recommendations for banking institutions and governments towards the achievement of banking performance are also provided here.

### 5.1 Summary

The assessment of the perceived benefits of E-Banking and its relationship on banking performance was aimed in this study. The assessment the perceived benefits of E-Banking and its relationship on banking performance was the general objective of this study whereas the specific objectives of the study included (i) assess the perceived benefits of internet banking and its effect on banking performance, (ii) to ascertain the perceived benefits of on banking performance and mobile banking and its effects and (iii) to determine the perceived benefits of ATM services and its effect on banking performance.

The model accounted for 51.3% of the variance in performance from the regression findings and revealed as shown by the  $R^2$ . The  $F$ -statistic of 124.391 was significant at 5% level of significance,  $p = .000$ . The explanation of the relationship between the independent variables and the Banking performance was fit as shown by the model.

The relationship between the perceived benefits of internet banking and banking performance was intended to be established by the study. The results reveal that perceived benefits of internet the banking performance had a pragmatic and significant outcome on and this effect was significant at 5% level.

The relationship between the perceived benefits of mobile banking and banking performance was intended to be established by the study. The findings reveal that perceived benefits of mobile banking had a positive and significant effect on the banking performance and this effect was significant at 5% level.

The was meant to establish the relationship between the perceived benefits of Automated Teller Machine (ATM) and banking performance. The results reveal that perceived benefits of mobile bank Automated Teller Machine (ATM) had a significant effect on the banking performance which is positive and the outcome at 5% level significantly.

## **5.2 Conclusion**

The study conducted to assess the perceived benefits of E-Banking and its relationship on banking performance. The result of this study gives the banking sectors with better understanding of the perceived benefits of E-Banking and its relationship on banking performance which was useful to them to develop proper banking performance strategies.

### **5.2.1 Internet Banking**

There is a significant relationship between Internet banking and the banking performance from the results of the data analysis showed as showed, the internet banking is influence on income has been occasioned by the ease that internet has offer to both retail and corporate customers and hence making it faster ,convenient easy, and to make transactions. The increase in Internet banking activities corresponds to a better performance of the banks, a key driver of cost management in banks therefore the internet banking. Singh and Malhotra (2015) and Sayar and Wolfe (2007) who found that adoption of Internet banking services culminates into better performance of the banks had the same results as found in the study.

Clients are able to access banks' services round the clock and this creates strategic advantage against competitors hence leading to customers' loyalty and derived sense of security as opposed to over-the-counter banking with e-banking. Also, as a result of increased efficiency internet banking saves time.

### **5.2.2 Mobile banking**

Mobile banking has a positive and significant effect on the banking performance. With effective use of all types of mobile services, mobile banking is expected to continue growing were the findings revealed in the study. Mobile banking provides greater convenience for customers as it allows them to accomplish tasks "on the go." The barrier and challenges that could hinder easier access to mobile banking by customers However, there is needed to eliminate (Rumanyika, 2015).

As a commercial bank increases its mobile banking coverage, enhanced awareness among consumers and trained them on the applications of mobile banking this is how the study was consequently winded up that, minimized the threats and risks of mobile banking, banks would attract more customers mobile to their banking platforms and therefore an improved banking performance. These findings are also in line with previous study findings as stated in the literature review chapter.

### **5.2.3 Automated Teller Machine ATM**

A significant relationship between ATMs and the banking performance was revealed in this study. A unit increase in number of ATM installation leads to an increase in the overall banking performance of banks this was particularly established in the study results. ATMs help customers simplify the manner in which customers conduct their transactions with the bank this was further found in the study. the findings by Kaplan & Norton, (2002) which established that ATM allows a bank customer to conduct his/her banking transactions from almost every other ATM machine in the world hundreds of bank customers via the ATM technology are hand in hand with the results in this study.

## **5.3 Recommendations**

These recommendations were based on the research results in previous sections and literature. the following are considered by the researcher in the recommendations:

Commercial banks should increase awareness of internet banking products to their customers. This product is less popular than other e-banking products.

To minimize bank premises congestion, commercial banks should increase the availability of e-banking products. Customers will be able to serve themselves rather than visiting banks by increasing the number of e-banking products

To quickly resolve technical issues in the e-banking system, banks should provide better technical support to their customers.

Customers would be more probably to use e-banking if they have access to it at convenient times and places.

Banks need to ensure that ATMs and other e-banking services are available in as many places as possible.

Banks should reduce transaction fees incurred by customers and introduce mobile banking with ATM and repayment and disbursement services. This will encourage customers to use mobile banking services. This will increase bank performance and the number of transactions.

#### 5.4 Future studies.

The perceived benefits of E-Banking and its relationship on banking performance; the researcher limit himself to conduct the study in Mwanza but for the other researcher may try other regions was the main reason for this study to be carried out. The researcher examined three variables which were internet banking, Mobile banking and ATM, another researcher may try to modify them if there is something that is left or try to focus on in only one factor or other factors than that.

Also, it is suggested that numerous researches should be carried out to assess the factors influencing the usage of E-Banking, since there are relatively few references particularly in Tanzania. Furthermore, other researchers could do studies to investigate on challenges of electronic banking adoption to customers as it still in its infancy as compared to mobile banking.

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