THE FACTORS AFFECTING THE ADOPTION OF E-BANKING IN TANZANIA BANKING INDUSTRY : THE CASE OF BANKS IN DAR ES SALAAM REGION.

BY

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A DISSERTATION SUBMITED IN PARTIAL FULLFILMENT FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA) OF THE OPEN UNIVERSITY OF TANZANIA

2014

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Dar es Salaam a Dissertation entitled: The factors affecting the Adoption e-banking in Tanzania banking industry: The Case of Banks in Dar es salaam Region in partial fulfillment for the recruitment for the degree of Masters of Business Administration in the Open University of Tanzania.

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PROF: M.R. Mhoma

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DECLARATION

I, **Illuminatus Jones Mkoka** hereby declare that this Dissertation is my original work and that it has never been presented and will not be submitted for any higher degree award in any other University. All the materials, like data, figures, or statements, which have been quoted from other writers and used in the course of writing this Dissertation have been dully acknowledged and included as reference materials.

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ACKNOWLEDGMENT

A large part of the success of this Dissertation should go to **Prof. Mhoma** of the Tumaini University at Iringa who provided me with overall guidance, supervision and all valuable inputs at all stages.

Special thanks should go to my Brother **Luke J. Mkoka** who made me climb the hill, also to my friends **Nolaskus Mpota, Martin Kihunrwa and Aloyce Rukaka** for giving me support. However, many people including my family have been involved and contributed much to completion of this work. If it could have been possible I would like to convey my heart felt gratitude to each and everyone in person for the support and cooperation they have extended to me. Unfortunately, this is not possible due to the long list. I thank them all.

Also I extend my sincere thanks to my respondents for contributions and cooperation they gave me during this study. Thanks go to my course lecturers, all members of commercial banks: NBC, CRDB, DCB and NMB and my colleagues in the MBA course for assistance and academic advice they accorded me during the program.

I wish to state hereby that all deficiencies or errors that may be contained in this document are absolutely my responsibility

DEDICATION

To my lovely wives, the late Elizabeth Mkoka and Dorcas Mkoka, my sons and daughters whom their love and perseverance inspired me to pursue this course.

ABSTRACT

In recent years, the adoption of Electronic banking (E-banking) began to occur quite extensively as a channel of distribution for financial services due to rapid advances in the information technology (IT) and Intensive Competitive banking market. Electronic banking offers numerous benefits to both banks and customers. Customers can check account balances, transaction costs, establish greater control over bank accounts and other banks. They can also benefit from lower transaction cost, less paper work and less staff. Despite knowing the benefits of E- banking, Tanzania's banks continue to conduct most of their banking transactions using traditional methods. Understanding the reasons for lack of such technological innovation in developing countries such as Tanzania will develop a fruitful research. This study aimed to investigate the factors that affect the adoption of E-banking in Tanzania Banking Industry (enablers and inhibitors).Other objectives and research questions were developed in order to have proper investigation and analysis on various variables .

The study has employed a case study strategy with questionnaires, interviews, consultations, observations and pilot study as main data collection methods. Moreover, qualitative and quantitative techniques have been used in the analysis of the problem. The primary data have been obtained by questionnaires and analyzed and indicated clearly on tables and figures. The secondary data on the other hand have been analyzed and shown on tables as well as reading different literatures from the scholars, while the data from the questionnaires have been processed by using computer programme Statistical Package for Social Sciences (SPSS) to access the enablers and inhibitors of the adoption of e-banking.

The study has come up with an integrated model including seven variables (Organizational Capabilities, Received Benefits, Perceived Received Benefits, Perceived Credibility, (Perceived Regulatory), Institutional Readiness and Institutional Influence) which influence the adoption of e-banking in developing countries. The findings revealed that all these seven variables jointly provide an excellent understanding of the factors affecting the adoption of E-banking in the Tanzania's Banking Industry. Also, the study underscored that apart from the perceived benefits as an enabler, other six variables are inhibitors of adoption of e-banking. Services offered by banks to its customers are not adequate, thus leading to retail or personalized banking (B2C). However, with all inhibitors, e-banking have positive impact on economic development and Mobile banking have helped e-banking to spread to unbanked areas. Mobile banking is cheap, time saving and the service can be provided elsewhere using different platforms and inter operability.

The study concluded that regulators, law makers, ICT industries, institutions, and the banking industry itself have the task to alleviate these inhibitors by providing guideline/policies, cyber laws, adoption of fast changes in ICT technologies, develop partnership, have enough capital budget for ICT investment and training, in order to develop trust, security, capability, basic bank supervision and increase in service coverage from personalized to SME and Corporate. The study covered commercial banks namely NBC, CRDB, NMB, and DCB located in Dar es Salaam Region.

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LIST OF ABREVIATIONS

ADB	-	African Development Bank
ATM	-	Automatic Teller Machine
BOT	-	Bank of Tanzania
CBN	-	Central Bank of Nigeria
CRDB	-	Cooperative and Rural Development Bank
CSMA	-	Capital and Stock Markets Authority
DAWASCO	-	Dar es Salaam Water and Sanitation Company
DCB	-	Dar es Salaam Community Bank
DFI	-	Direct Foreign Investment
EADB	-	East African Development Bank
IT	-	Information Technology
ICT	-	Information and Communication Technologies
ID	-	Identity
IFM	-	Institute of Finance Management
IMF	-	International Monetary Fund
KYC	-	Know Your Customer
NBC	-	National Bank of Commerce
NMB	-	National Microfinance Bank
OUT	-	The Open University of Tanzania
SME	-	Small and Medium Enterprises

TANESCO	-	Tanzania Electric Supply Company
TCCIA	-	Tanzania Chamber of Commerce, Industry and Agriculture
TCRA	-	Tanzania Communication Regulatory Authority
THB	-	Tanzania Housing Bank
TIB	-	Tanzania Investment Bank
UDSM	-	University of Dar es Salaam
WAP	-	Wireless Application Protocol
ZAP	-	Zain Mobile Banking Service Now Known as Airtel Money
Z-Pesa	-	Zantel Mobile Banking Services Now Known as Ezy-Money

CHAPTER ONE

BACKGROUND INFORMATION

1.1 Overview of the Study

This chapter focuses on background information of the adoption of E-banking in Tanzania's Banking Industry.

1.2 Background

Information and Communication Technologies (ICT) advanced since the end of 20th Century is being introduced in all fields and changes the world with innovations such as innovation of Information Technology (IT) financial products, liberalization and consolidation of stock and financial markets, and banking activities. Electronic devices play a dominant role in satisfying the growing needs of the customers.

A strong banking industry is important in every country and can have a significant effect in supporting economic development through efficient financial services. In Tanzania the role of the banking industry needs to change to keep up with the globalization movement both at the procedural level and at the information level. This change will include moving from traditional distribution channel banking. To give the almost complete adoption of E-banking in developing countries like Tanzania is an important research that will be addressed by this study. These changes are being made due to the influence of IT, the development of the technology of telecommunications and electronic data processing. Information Technology, which implies the integration of information system with communication technology has

altered the traditional contribution channel banking and allowed banks to wipe out the time differences as well as distance by providing E-banking.

The definitions of electronic banking varies among researchers because electronic banking refers to services offered by the bank to their customers who can request information and carry out banking services via computer, television or mobile phones. Daniel (1999) defines E-banking as the provision of banking services to customers through internet technology. Other authors (Daniel 1999; Karjaluoto 2002) indicate that banks have the choice to offer their banking services through various electronic distribution channels technologies such as internet technology, video banking technology, telephone banking technology and WAP technology. However, Karjaluoto (2002) indicate that internet technology is the main electronic distribution channel in the banking industry. Also he defines E-banking as a live banking that involves the provision for banking services such as accessing accounts, transferring funds between accounts and offering online financial services. Therefore E-banking is mandatory in order for the bank to survive in the banking arena. Also various researchers came up with findings showing the importance of E-banking. Wang et. al., (2003) claims that in 1990s E-banking was underutilized as business organizations used it only to market their products and services. Tan and Teo (2000) noted that the challenge to expand and maintain banking market share has influenced many banks to invest more in making better use of internet. The emergence of E-banking had many banks rethink their IT strategies in competitive markets. They suggested that failure to respond to the emergence of E-banking in the market would likely lead to lose customers and the cost of offering E-banking services is less than

cost of keeping branch banking. This notion was also confirmed in a study conducted by Jasimuddin (2004) who investigated the role of E-banking in Saudi Arabia. Jasimuddin found that the majority of Saudi Arabia banks had taken advantage of internet technology to establish web sites but few offered E-banking services. He suggested that if the Saudi Arabian banking industry wished to be successful in the global economy it would need to integrate internet technology into its banking strategy.

Despite the fact that internet technology acceptance is growing worldwide, banks in Tanzania are yet to adopt-fully internet technology. This study aims to extend the existing adoption models and to propose an integrated and conceptual framework of factors which influence adoption of E-banking behavior. To accomplish this, we start with critical understanding of adoption of E-banking behavior and factors that could drive or inhibit wider adoption and use of E-banking. We then examine the roles of institutions in the E-banking adoption process and how effectively they can play a role in expending the adoption of E-banking. Finally we develop theoretical model by integrating theories of rationalistic goal mental behaviors of firms and institutional theories in order to better explain technology adoption in Tanzania.

1.3 Statement of the problem

The research problem addressed in this study is that despite an increase in number of banks; customers and awareness and knowing the benefits and the fact that acceptance is growing worldwide, banks in Tanzania are yet to fully adopt E-

banking; thus continue to conduct most of their banking transactions using traditional methods.

This problem facing most of the developing countries is partial or non adoption of e –banking by banks. Tanzania is among developing countries which are poor. It has a population of about 40 million people. The banking industry is growing very fast with the emergence of new banks and networking. More than 40 banks are operating in Tanzania; categorized as commercial banks, microfinance banks, financial institutions; community banks and merchant/corporate banks.

In fact the banking systems in Tanzania have various gaps. There are banks which are still operating in the back office they have not yet gone to front office. For example, Efatha Bank, Habib Africa Bank etc. There are banks who fail to offer an adequate services which lead to long ques in the banking halls. In order to be served using traditional model of operations that make ordinary people do not see the differences in the technological changes. There are no prudent guidelines and policies concerning adoption of e-banking to stakeholders that make each bank give its own and sometimes customers are told how to operate ATMs only. This lacks of proper law and legal framework regarding e-banking. Even the Banks and Financial Act of 2006 did not spell how to deal with e-fraudulent. It still insists on signed document as an evidence. People are being sued either under economic crime or ordinary theft and not under cyber crimes because we do not have such laws; as a result customers are losers of their money stolen in their accounts. People fear to keep money in banks because of security, knowing that banks shift burden to customers.

The study wants to investigate the factors affecting the adoption of e-banking in the banking industry in Tanzania. Therefore have chosen adoption of e-banking by banks as Dependent Variable (DV) while seven variables are taken as Independent Variables (IV), those are; perceived benefits, perceived credibility, organizational capability, perceived regulatory support, financial, Financial Institution Readiness and pressure from the institutions and institutional influences. The study investigated the e-banking products/services offered by the banking industries in Tanzania and examined the factors affecting he e-banking adoption in Tanzania. Together helped to show how these gaps have impacts on the full adoption of e-banking and how to overcome it through filling the gaps.

1.4 Objectives of the study

1.4.1 General objectives

The main objective of this research is to critically examine the factors affecting the adoption of E-banking in the banking industry in Tanzania.

1.4.2 Specific objectives

(a) To investigate the E-banking products/services offered by banking industry in Tanzania.

(b) To examine the factors affecting E-banking adoption in Tanzania.

1.5 Research questions

The study was guided by the following research questions:

(a) How do banks offer services/products to their customers?

(b) What are the factors affecting the adoption of E-banking in Tanzania?

1.6 Relevance of the research

The study expected to deliver the following theoretical and practical orientation:

(a) The findings were expected to assist banking industry to fill up the gap on adoption of E-banking and enlighten other areas which need further research.

(b) The study will help decision makers like government, regulatory bodies and donors in reviewing existing laws and policies to suit the innovation of ICT and also the adoption of E-banking in Tanzania.

(c) The study findings would be users' guide manual for adoption of E-banking.

(d) The study could be used as secondary data for scholars, students and other researchers in the relationship between banks and various categorized customers e.g. SME, corporate and others.

(e) If this study will be accepted it would lead the author to be awarded Masters in Business Administration Degree.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

Research is past and current findings done by researchers on certain issues. Therefore, no academic research stands on its own. Any research is based on ideas already accepted and contributed by practitioners on field and draws on and contributes to a body of knowledge. This study draws on ideas from various studies carried out and intends to contribute the existing knowledge literature on the adoption of e- banking in Tanzania Banking Industry. This chapter covered the conceptual framework, theoretical literature review, empirical and critical literature reviews on adoption of E- banking in Tanzania's Banking Industry.

2.2 Conceptual Framework and Definitions

The central task of assessing factors is shown at the centre (F-4), that is, "adoption of E-banking by Banks". The uniqueness of this framework lies in its integration of all the related variables which influence adoption of E-banking as a whole in Tanzania. On the one hand, internal factors (F-1) in terms of perceived benefits (lower administrative cost, increased internal efficiency, improved relationship with business partners improved competitiveness and improved quality of information), perceived credibility (level of risk, security, trust and privacy) and organizational capabilities (people, structure and technology) provide competitive advantages to the Banks. And on the other hand, the external factors (F-2) in terms of ICT industry readiness, regulatory support, readiness of financial institutions and pressure from other support institutions play a crucial role for ICT adoption. Above all, the ultimate

adoption rate of this service depends on institutions (F-3) which influence external factors directly and internal factors indirectly.

A logical explanation of relationship between inputs and output is possible considering internal factors (F-1), external factors (F-2) and institutions (F-3) as inputs and adoption (F-4) as output. Mathematically, the input-output function can be expressed as:

$$y = f(X_{1n} + X_{2n} + M_j)$$

Where, y = adoption;

X_1 = internal factors……1st items

X_2= external factors……. 2nd items and

M = institutions and other influencing factors…….jth items.

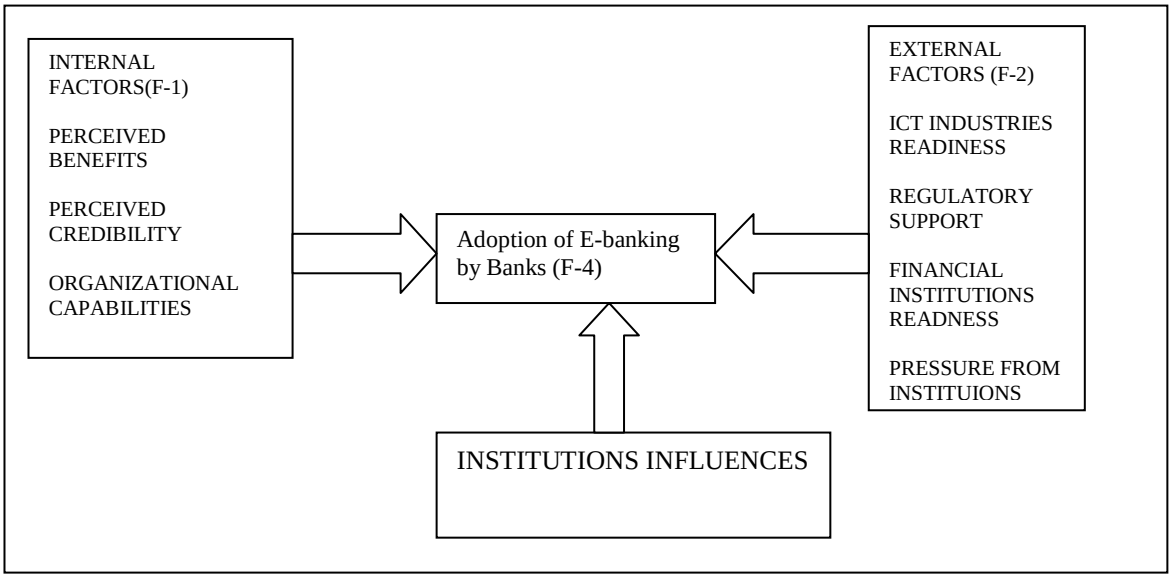

Figure 2: 1 Conceptual Framework of E-banking Adoption in Tanzania Banking Industry.
Source: Researchers Model (2011)

In practice, output can be a function of many factors- 'M' including X_1 and X_2. Outputs may have several dimensions and can be measured both at micro and macro

levels. At micro level, we can measure the impact of internal factors (F-1) on E-banking adoption (F-4) and at macro level, the overall contribution of external factors and support services can be assessed in terms of profitability, growth rate of adopted Banks.

2.2.1 Conceptual Definitions

2.2.1.1 The meaning of E- banking

Information Communication Technology is a facilitator of the adoption of E-banking. Daniel (1999) defined e- banking as the provision of banking services distribution on channels of technologies such as internet technology, video /TV banking Technology, telephone banking technology and WAP Technology. (Daniel, 1999 Krjaluoto, 2002). In e- banking internet technology is the main electronic distribution channel in the banking industry which facilitates and online banking that involves the provision of banking services such as accessing accounts, transferring funds between accounts and offering online financial services. Therefore e- banking is also defined as electronic connection between banks and customers in order to prepare, manage and control financial services offered by banks.

2.2.1.2 Definition of information and communication Technology

ICT is the integration of information system with communication technology. The development in information collection, storage, processing, transmission and distribution technology have influenced all aspects of banking activity. ICT is the

main driving force for the changes in banking industry. Technology has altered the traditional ways of doing banking and enter in the globalized banking.

2.2.1.3 Electronic Fund Transfer

2.2.1.3.1 EFT offers several services that consumers may find practical:

(a) Automated Teller Machines or 24 – hour Tellers are electronic terminals that let your bank almost any time to withdraw cash, make deposits, or transfer funds between accounts. You generally insert an ATM card and enter your PIN. Some financial institution and ATM owners charge a fee, particularly to consumers who do not have account with them or on transactions at remote locations. Generally, ATMs must tell you a charging fee and the amount at the terminal screen before you complete the transaction. Check the rules of your institution and ATMs you use to find out when or whether a fee is charged.

(b) Direct Deposit lets you authorize specific deposits, such as paychecks and Social Security checks to your account on a regular basis. You may also pre-authorize direct withdrawals so that recurring bills such as insurance premiums, mortgages, and utility bills are paid automatically.

(c) Pay –by – Phone lets call your financial institution with instructions to pay certain bills or to transfer funds between accounts, and pay bills electronically.

(d) Point – of – Sale Transfers let you pay for purchases with a debit card, which also may be your ATM card. The process is similarly using a credit card with some important exceptions. While the process is fast and easy a debit card purchase transfers money –fairly quickly – from your bank account to the store's account. So it's important that you have funds in your account to cover your

purchase. This means you need to keep accurate records of the dates and amounts of your debit card purchases and ATM withdrawals in addition to any checks you write. Your liability for unauthorized use and your right for error resolution may differ with a debit card.

(e) Personal Computer Banking lets you handle many banking transactions via your personal computer. For instance, you may use your computer to view your account balance. Request transfers between accounts, and pay bills electronically.

(f) Electronic check Conversion converts a paper check into an electronic payment at the point of sale or elsewhere such as when a company store cashier, the check is processed through an electronic system that compute your banking information and the amount of the check. Once the check is processed you're asked to sign a receipt authorizing the merchant to present the check to your bank electronically and deposit the funds into the merchant's account. You get a receipt of the electronic transaction for your records. When your check has been processed and returned to you by the merchant, it should be voided or marked by the merchant so that it can't be used again. In the mail – in situation, you should still receive advance notice from a company that expects to process your check electronically.

2.3 Theoretical Literature Review

2.3.1 Overview

The study starts with a critical understanding of adoption of E-banking behavior a theories and factors that could drive or inhibit wider adoption and use of e- banking.

2.3.2 Organization Perspectives

In deriving a Frame work for this study three existing behavioral research theories were considered as follows:-

2.3.2.1 The theory of reasoned action

Fishbein and Ajzen (1995) developed the Theory of Reasoned Action in 1975. They later defined it with empirical evidence to support its validity and reliability (Ajzen and Fishbein, 1980). In summary they postulated that: an individual's behavioral intention is the immediate determinant of behavior their attitude and subjective norm are mediated through behavioral intention and their behavioral and normative beliefs are mediated through attitude and subjective norm. Also it can be described as one of the most influential theory to explain human behavior's attitude toward adoption of innovation (venkatesh et al, 2003).

2.3.2.2 The theory of planned behavior

After identifying some problems with the theory of reasoned action, specifically if that was designed to predict and explain behavior based on the assumption that this was under a person's volitional control. Ajzen (1991) came up with a modification: The Theory of Planned Behavior (TPB). To achieve this, Ajzen extended TRA by adding another construct called perceived behavioral control, which absence of requisite resource and opportunities (Ajzen and Madden 1986:457) required to perform the specific behavior.

2.3.2.3 The Diffusion of Innovations

The theory of diffusion of innovations as described by Rogers (1995) is well known. Rogers describes diffusion of innovation as "the process by which an innovation is communicated through certain channels over time among the members of social system. It is special type of communication in that the messages are concerned with new ideas." (Rogers, 1995:5). A decision not to adopt an innovation relates to the rejection of the available new ideas. However, in order to explain the rate of adoption of innovations Rogers suggested measurement of the following perceived characteristics of innovation 1) relative advantage 2) compatibility 3) complexity 4) triability and 5) observability.

2.4 Internal Factors affecting Adoption of E-banking

These are those factors which have direct influence direct on bank performance in terms of perceived benefits, perceived credibility and organizational capability.

2.4.1 Benefits of Electronic Banking

Using e- banking customer can apply online for lines of credit, credit cards, loans and mortgages, hence, less visit is required to banks for doing banking transactions Through internet customers can do research in banking products, interest rate, terms and choose lenders that best fulfill their expectations and need. Customers prefer E-banking for convenient speed, round the clock services and access to the account from any part of the world (Cheng, 2006). Also found the favorable impact of the application of the information technology on SME finance. Also mentioned that online SME businesses are more profitable and produce higher revenues than SMEs

that use only traditional channel. E-banking offers benefits to banks as well, Banks can benefit from lower transaction costs as E-banking requires less paper work, less staff and physical branches (Cheng, 2006) E- banking leads higher level of customers satisfaction and retention (Polatoglu and Ekin, 2001). E-banking reduces loan processing time as borrowers loan application can be viewed by loan processing and loan approval authority simultaneously (Smith and Kupp, 2003). Typically loan applications received at the branch level and send to head office for approval. This documents transfer to and from branch to head office consume much of time and delay loan transaction period.

2.4.2 Perceived Credibility

Under this, bankers are to prove beyond reasonable doubt that by using e- banking services the level of risk, security, trust and privacy is observed.

2.4.2.1 Security

Security is the first and fore most requirement of e- banking as the internet is inherent unsecured security process. E-banking involves authenticating both consumers and bankers and protecting their information to be transmitted from inceptions. Federal Financial Institutions Examination Council on its issue of August 2001 regarding authentication of electronic banking environment reported that "reliable electronic customer authentication is necessary for financial institutions engaging in any form of E-banking." The identified most common authentication method for existing customers requesting access to E-banking system is the entry of user name or ID and secret string of characters such as password or PINS. O'Connel

(1996)) suggested security as the main reason for slow growth of E-banking in Australia. Further, Basel Committee on banking supervision (1998) identified security risk as a primary concern relating to E-banking. External threats such as "hacking" surfing, spoofing and denial of services, attacks, expose banks to new security risks. Open electronic delivery channels creates new security issues for banks with respect to confidential integrity of information, reputation of transactions, authentication of users and excess control. In supporting the above Celik (2008) stated that "security threats might include exposure of confidential data, loss or destruction of data, modification of data, denial of services and errors in web application." Also he explained that authentication is the most secure method for risk mitigation, authentication techniques include passwords, digital signatures, biometric measures, such as finger prints scan and measures involving hard ware such as smart cards.

2.4.2.2 Risk Management

Adoption of electronic banking activities elucidated that E-banking has brought the issue of technology systems and application integrations to the fore front. Many large banks are currently faced with task of interaction system of E-banking services with their existing legacy systems and with the systems of multiple service providers. The banks are exposed to significant operational risks from errors in transactions processing, if the system for E-banking are not properly integrated. Many large banks are making significant investments in technology infrastructure in order to create improved internal controls and enhanced risk management oversight process. While these general developments by large banks are positive, small and medium

size banking organizations are particularly challenged because of budget restrictions for acquiring hardware and software as well as attracting and keeping technical staff (Basel Committee on banking supervision, 1998). In addition to the above security is the most important component of the financial institutions. These institutions are supposed to manage the risk of invested or deposited money By making the acceptance of e-medium to transfer location of money caused by the security system to mean much than just strong building and safe deposits. Also he went further saying that an electronic delivery channel comes with its own security. Since most segments of these channels are used to transmit digital data, kinds of attack are rather technical than by force. He identified the network and facility as major components when considering the security of the channels.

2.4.2.3 Trust and privacy

The failure of internet as retailed distribution channels have been attributed of lack of trust customers have in the electronic channel. Customers are worried to loose in case there is any error mattering the withdrawal funds. If you fail to notify the financial institution of the error within 60 days, you may have little recourse. Under federal law the institution has no obligation to conduct an investigation if you miss 60days deadline.

The traditional duties of the banker to the customer are not easily accessed, by customers operates through device and the account can be viewed elsewhere in the institution. There fore there is no privacy that bankers contravene to the traditional duty of secrecy to their customers affairs (Holden, 1991).

2.4.3 Organizational Capability

2.4.3.1 Knowledge Deployment

Adoption of E- banking requires knowledge to employer, employees and customers. In order to offer and maintain e- banking without any fault, banks need skilled manpower.(Various researchers observed that banks lacked skilled manpower and sometimes faced resistance from the staff members to establish these services because they fear to lose their jobs. They concluded that the bank should create awareness and provide training to the staff members before introducing the services. David cracknel (2004) explained that marketing e- banking for poor is likely to involve more financial education than for other products and services. Also concluded that a fit between task that is banking, technology (user interface and its reliability) and individuals that is customers and their knowledge about using the service is the key to success in the e- banking services.

2.4.3.2 Competitive Advantage or Perceived Relative Advantages

Construct relates to the degree to which the bank managers think that internet technology might help their bank gain advantages in the industry. Major issues emerged relating to the perceived relative advantage are convenience of services, innovative use of Information Technology and management of banking services, (Tan and Teo, 2000). Rogers (1995) postulated that the adoption of innovations is influenced by five characteristics, namely relative advantage, compatibility, complexity, triability and observability and that they can explain the rate of technology adoption. Also Benbaset et al (1991) extended by adding two constructs, which is image and voluntariness for using innovations of technology adoption.

The theories are adapted from the developed countries but it might happen they can not play the same to the developing countries. Therefore developing countries are required to test different theories and have crumbier theories which could give better results.

2.5 External Environmental Factors Affecting Adoption of E-banking

External factors are in the form of ICT readiness, regulatory support, readiness of financial institutions and pressure from other institutions.

2.5.1 Information Communication Technology Industries Readiness

ICT infrastructure includes telecommunication network, internet connectivity, technological environment both electronic and telecommunication where a particular firm operating have influence on ICT adoption (Dholakia and Kshetri, 2004).

The information and communication Technology infrastructure is a prior most to offer and to implement e- banking services. Other remarks indicated that E- adoption need to have a well developed infrastructure with enough budgets by easing wood and storey (1996). Also the importance of e- banking stipulates that a properly configured e banking infrastructure will ensure orderly growth and sustainable economic progress. Therefore shortage of ICT infrastructures Act as barriers to sustaining growth of on line commerce (Chircu and Kauffman, 2000). Hence we conclude that e – banking adoption depends of ICT industries readiness.

2.5.2 Perceived Regulatory Support

Legislative and regulatory issues at National, Regional, International laws, rules and regulations are important perquisites for successful adoption of E-banking,

(Rotchana Kitumnuai and Speece, 2003) found that legal support for on line banking to safeguard customers is the most important. Customers hesitate to use the E-banking services if there are in adequate laws on it. Thomas et. al. ;(1998) mentioned that who will bear the liability of financial loss occurs is another concern as sometimes it is hard to recognize the location of on-line service providers. Bank transfer the risk to users of this services (Attaran, 2000). In developing countries, regulatory environment is more critical than in developed countries in adoption of Innovation (Zhu et al, 2004, 2006). Due to its importance the regulatory support in E- banking adoption is included in this construct in the conceptual model.

2.5.3 Financial Institutions Readiness

E-banking offers numerous benefits for banks as well as for their customers. .E – banking is described as wallet sharing for both financial institutions and customers (Sato and Hawkms, 2001). For banks to adopt E-banking they require huge amount of investment and a well developed infrastructure with enough budget. Easing, W and Storey (1996) after that banks would ask their customers to use E-banking.

Zhu et. al.,(2003) mentioned that lack of trading partner readiness is significant adoption of E-banking inhibitor. Trading partner readiness encourages small firms adopt ICT and electronic commerce (McCote and Ramsey, 2005) and the same expected to apply in e- banking adoption by banks and customers.

2.5.4 Pressure from Institutions

Institution is a social structure that has attended high degree of reliance (Scott, 2001). King et. al., (1994) provide a list of institutions including government, government

institutions and business associations. Pressure may merge due to competition and as well as from regulation. Institutions can exert pressure through many ways including enacting laws and policies, providing training, subsidy, electricity, providing ICT, innovation directives and standards. Therefore, the ultimate adoption rate of this service depends on institutions which influence external factors directly and internal factors indirectly. The model proposed by Sathye (1999) for internet banking adoption, summarized all above mentioned factors which drive or inhibit adoption of E- banking in Australia. The model argued that the intention of internet banking in Austria signification was influenced by variable of systems in security, easy of use, awareness of services and its benefits, reasonable price, availability of infrastructure and resistance to change to improve socio- cultural aspects in this study by perceived usefulness and perceived easy of use with external variable to the model and knowledge deployment. Institutional pressure can be coercive, normative and mimetic (Dimaggio and Powell, 1983). This research includes pressure from institutions as a construct in the E – banking adoption framework

2.5.5 Institutional Influences

The role of institutions, government and financial services providers' is vital for diffusion of E-banking as both institutions and government are working with public (Chong and Parvan, 2007). The government through setting up infrastructure and enacting rules and regulations can create environment for technological uptake. Donor institutions also help governments in developing countries in setting up infrastructures as well as through funding economic development projects and IT projects. IT service providers are also important and provide support to banks and financial institutions. The roles of resource centers (includes training institutes,

consultants, business association) are limited in creating awareness and providing consultancy services as well as training. They mostly depend on external sources of funding either from donor or from government. Association of IT service providers and association of banks are also part of resources centers.

Although all institutions have certain roles to play, among all groups, government's role is most important (Scupola, 2003) and it was acknowledged in various literature (Kuan and Chau, 2001). Pressure from financial institutions is also important to adopt E-banking as online channel decreases transaction cost and banks can reach larger segments of customers (Claessens, 2002 and Zekos 2004). That is why both government and financial institutions are grouped as influencing institutions. Banks lack technical expertise (Mirchandani & Motwani, 2001) hence they rely on vendors and external expertise for website development, technological up-grading, security of their online systems (Gehling, 2007). Industry associations, educational institutions, training centres also have impact on technology adoption and hence they are also included as influencing institutions.

2.6 Empirical Literature Review

2.6.1 Overview

Under this section the study dealt with the historical background of IT and banking revolution, the adoption of E-banking in developing countries, banking industry development in Tanzania and mobile banking in broader context.

2.6.2 IT and Banking Revolution

In 1960s primarily information technology was used to automate the back office of the banks. This situation was changed by a loop of IT into front office of the banks

and the beginning of using the management information system (MIS). The technology was deployed to extend the back office (process and support) to the front office and beyond the branch. The industry expansion made the banking enter a new era of explosion of using IT in providing banking service. Also the distance between front and back office of banks decreased to the extent that blurred increasingly by appearing in the integrated system.

New channels in delivering banks services such as ATM, loan processing, electronic fund transfers in banking are done through E- banking .E-banking grows faster than other e- commerce sectors as financial services are data intensity and require no physical delivery, Kim (2004) and Zekos (2004).

2.6.3 The adoption of E-banking in Developing Countries

In developing countries adoption of E- banking started in 1990s. Although e – banking has been operating since then, some of the bank services or activities are done using traditional methods. Few banks adopted e- banking; others still use traditional methods, for example, in 2007 in Bangladesh 29 banks out of 48 banks offered on- line financial services (Rahman, 2007). The emergence of e- banking made many banks rethink their Information Technology (IT) strategies in competitive markets. They suggested that failure to respond to the emergence of e-banking in the market is likely to lose customers and that cost of offering e- banking services is less than the cost of keeping branch banking (Jasimuddin, 2004). Apart from behavioral change in the organization, other factors which affect adoption in e-banking include ICT innovations and huge investment cost. Legal and regulatory bodies, government and other institutions and also environmental factors, mostly

infrastructures like electricity, internet services are concentrated in towns, therefore, it is difficult to spread services to the rural areas.

2.6.4 Banking Industry Development in Tanzania

2.6.4.1 Evolution of Banking Industry in Tanzania.

The Development of banking industry in Tanzania can be categorized in 3 stages: colonial and the period before Arusha Declaration 1967, Post Arusha Declaration and Prior to Banks and Financial Institutions Act of 1991, Post to Banks and Financial Institutions Act of 1991 to date. Also the technological innovation passed 3 phases live manual, mechanization and IT and adoption of e- banking.

2.6.4.2 Colonial era and the period before Arusha Declaration 1967

Under the German rule-Tanganyika there were two Commercial banks, Deutsche Ostrfrikanaishe Bank (1905) and Handles Bank (1911). After World War I under British Government rule the banks were National and Grindlays Bank, Standard Bank and Barclays Bank, D.C.O. in 1950s. Other banks from India opened branches in Tanganyika. The banks were Bank of India and Bank of Baroda. There were also Anglo French Institution as Ottoman Bank and Bank of Pakistan (1962). After Independence the Government opened Tanzania Bank of Commerce (1965) and Zanzibar People Bank of Zanzibar (1966). During this period banks were under East African Currency Board. The Technology used was MANUAL; all books were being posted using hand writing. The disadvantages under this mode were slow in operation, non accuracy and decentralized customer account (You can not operate in another branch).

2.6.4.3 Post Arusha Declaration and Prior to Banks and Financial Institutions Act 1991

After the Arusha Declaration Tanzania Government nationalized all private banks to state owned bank called The National Bank of Commerce (1967). It was the sole commercial bank and expected to foster economic development under socialism.

Thereafter the Government saw the necessity to establish development banks to fill the gap left by commercial bank and established Tanzania Investment Bank (TIB) in 1970 for investment purposes, Tanzania Housing Bank(1971) to loan people for building houses. Tanzania Rural Development Bank in 1972 for rural development and changed to Co-operative and Rural Development Bank (1984) for cooperative and rural developments. Therefore development banks were opened for special purpose.

During the time banks used in machine to post books. It was called mechanization era. From 1970s up to 1984 mechanization was used to back office. Other activities to the front office and pass books posting were handwritten (manually) From 1985 Management Information System (MIS) was started. At that time the government and the parliament were discussing the non- balancing of books in the banks. Although townships/ regions and some districts went mechanized, other districts and divisions which had branches were still operating manually because in these districts and divisions, there was no electricity.

2.6.4.4 Post to Banks and Financial Institutions Act 1991 to Date

The country passed through various economic reforms which led to banks restructuring and later privatized. Under these reforms development banks either

were closed like THB and /or tried to add other products like maintaining customer accounts which means there were receiving deposits and paying cash from customers. The major commercial bank (The National Bank of Commerce spilt into NBC 1997 and NMB Banks). Also the development bank CRDB was restructured and formed a commercial bank and development.

These state owned banks were allowed to enter joint venture with other shareholders and also allowed competition and greater need of innovation of technology. In 1990s banks started use of Information Technology for back office and later adoption of e-banking using their ATM webs or through Umoja switch. Although internet technology is acceptable world wide, Banks in Tanzania are yet to adopt fully internet technology due to lack of capital, poor networking (banks are concentrated in cities and regional municipalities) and lack rural electrification.

2.6.5 Critical Success Factors in E- Banking.

i. Flexibility and speed of services delivery. Customers prefer e- banking for conveniences, speed, round the clock services and access to the account from any part of the world (Cheng, 2006).

ii. Quick responsive products / services. E-banking leads to higher level of customers' satisfaction and retention, Poatogh and Ekin (2001). It also reduces loan processing time, borrower loan application can be viewed by loan processing and loan approval authority (Smith &Rupp, 2003).

2.6.6 Threats in E-Banking

There are various threats but these are available in E- banking.

i. Huge cost of introducing new offer in order to introduce E-banking require huge investment and developed infrastructure with enough budget (Easing Wood and Storey, 1996) loss of customers if their need and requirements cannot be met.

Failure of internet as a channel of distribution channels have been fallen as lack of Trust customers have in electronic channels, they lose confidence and reliability. They fears loosing funds in case of errors.

Loss of position in some segment of market in Tanzania e- banking is provided in urban therefore it's possible loose the market in the rural areas. Lack of internet and website to people of Tanzania also can make it loose the segment of the market. Small and medium enterprises and corporate customers need to have internet or websites in order to adopt E-banking. In developing countries E –banking has been discussed from retail point of view (B_2C) (Wan and Chow, 2005 and Celik, 2008) however financial services to SME_S have so far received limited attention. Gehling (2007). Non availability of Policies or guidelines and legal framework on adoption of E-banking many countries in developing countries has adopted e- banking without guidelines or policies. Nigeria (CBN, 2003) when issued their guideline, they are addressed the following-:

(a) Information communication Technology standards that is, Technical solutions deploy and ensure they meet customers needs. The economy and international best practice in areas of communication hardware, software and security.

(b) Monetary Policy address issues relating to how increased usage of internet banking and electronic payments delivery channels would affect the achievement of CBN_S monetary policy objective.

(c) Legal guidelines to address issues on E-banking regulations and consumer rights protection under these they clarified that digital signatures should not be relied as sorely as evidence in E-banking transactions as there is presently no legislation on e-bank in Nigeria. Under E-banking bankers fail to meet duty of secrecy and confidentiality of their customers accounts therefore banks should institute adequate risk control measure to manage such risks. Also electronic banking products and services should comply with the money laundering act 1995 as amended and know your customers (KYC) rules and many others.

(d) Regulatory and supervisory to address issues that though peculiar to payment system in general may be amplified by use of electronic media

2.6.7 Implications for Banks Risk Profiles and Management Practices

E- banking using the internet as an added delivery channel may shift bank risks profile to some degree and create new risk control challenges for banks. Decoding, banks superiors need to consider the implication of a bank use of the e-bank delivery channel on its strategic risk, operational risks, reputation risk, legal risk, credit risk, liquidity risk, market risk and foreign exchange risks.

2.7 Underlying Theories and Models

2.7.1 Overview

Literature on technologies adoption and diffusion suggest us to be open to more than one approaches of technology adoption to identify relevant factors of any technology adoption (Khalifa & Davison, 2006). Abrahamson (1991) also advocates for using multiple perspective in innovation research. He argues that under the condition of

uncertainty, ‘fad’ or ‘fashion’ model, based on institutional theory of innovation, better suits with innovation research than ‘rationalistic goal oriented’ model. The underlying notion of rationalistic goal oriented or efficient theory is individual make choice regarding adoption of an innovation based on goals and technical consideration. Inclusion of more than one theoretical perspective enriches the depth and breadth of innovation research (Poole and Van de Ven, 1989 and Wolfe, 1994). In this paper we present four dominants technology adoption model. Out of four, TAM (Davis, 1985) and TOE framework (Tornatzky & Fleischer, 1990) are known as rationalistic goal oriented model. Institutional Intervention Theory of King et al., (1994) and Institutional Theory of DiMaggio and Powell (1983) are two dominant institutional theories in technology adoption.

2.7.2 The Technology-Organization-Environment Framework

To study adoption of general technology innovations, technology-organization environment

(TOE) framework was developed by Tornatzky & Fleischer (1990). TOE framework shown below identified three aspects, technological context, organizational context, and environmental context, which influences technology adoption by firms’ (Tornatzky & Fleischer, 1990).

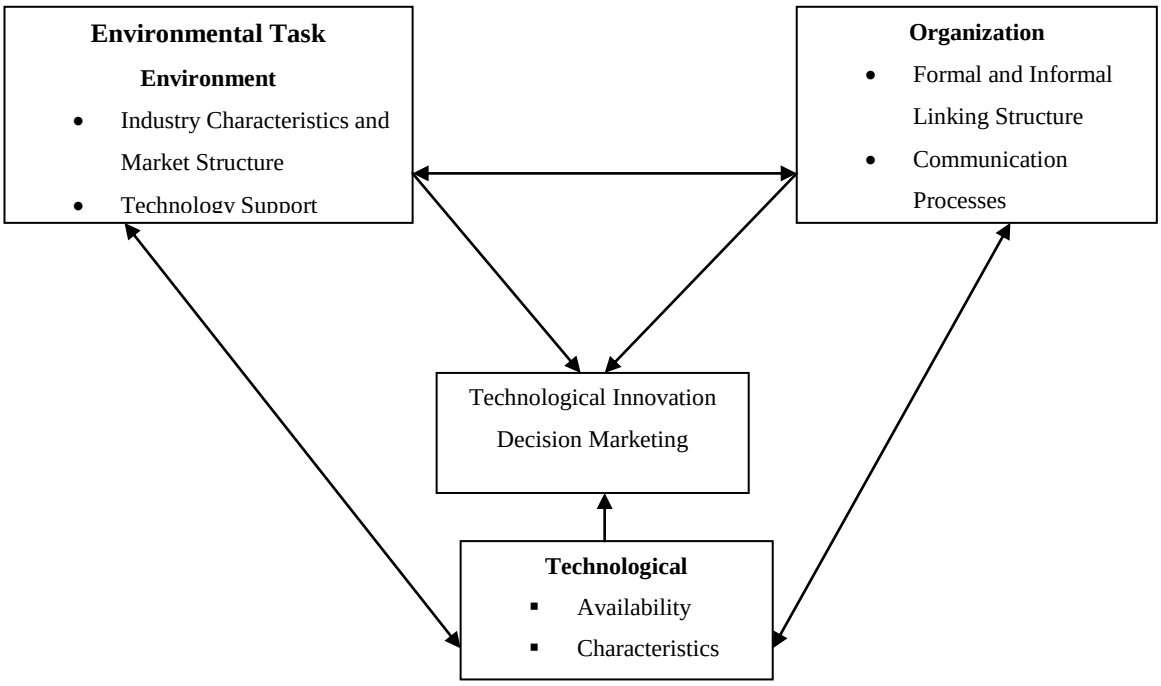

Figure 2: 2 Organization- Technology- Environment (TOE) Framework Tornatzky and Fleischer (1990)

As a generic theory of technology diffusion, the TOE framework can be used for studying any kind of information systems (IS) innovation research (Zhu, K, 2003) including E-banking (Liao, and Y.P. Shao 1999). The TOE framework has been used extensively in various IS adoption empirical works. Exhibit 2.2 summarizes few studies based on TOE framework.

Exhibit 2: 1 Major IS Adoption Studies on T-O-E Framework

Authors	Types of IS Studied	Construct used in	TOE Framework		
			Technology	**Organization**	**Environment**
Zhu & Kraemer (2005)	E- Business Adoption	Technology	**Yes**		
		Competence		**Yes**	
		Size		**Yes**	
		International Scope		**Yes**	
Xu (2004)	Internet Adoption	Financial Commitment			**Yes**
		Competitive Pressure Regulatory Support			**Yes**
		Technology Competence	**Yes**		
		Firm Size	**Yes**		
		Global Scope	**Yes**		
Lin (2008)	IS Adoption	Enterprise Integration			
		Competition			**Yes**
		Integration			**Yes**
		Regulatory Environment			
		Explicitness of Technology	**Yes**		
		Accumulation of Technology	**Yes**		
		Organizational Encouragement	**Yes**		
Lina & Lin (2008)	E- business Diffusion	Quality of Human Resources	**Yes**		
		Environmental Uncertainty			**Yes**
		Government Support			**Yes**
		IS Infrastructure	**Yes**		
		IS Expertise	**Yes**		
		Organization Compatibility	**Yes**		
		Expected Benefit of E-business			**Yes**
		Competitive Pressure Trading Partner Readiness			**Yes**

2.7.3 The Technology Acceptance Model

Technology Adoption Model (Davis, 1985, 1989) has been the foundation of many technology adoption and diffusion research and it is rooted in the Theory of

Reasoned Action (TRA). As per TAM, the two important independent variables of actual use of technology are:

a) *Perceived ease of use*, defined as 'the degree to which a person believes that using a particular system would be free of effort'

b) *Perceived usefulness*, defined as 'the degree to which a person believes that using a particular system would enhance his or her performance'

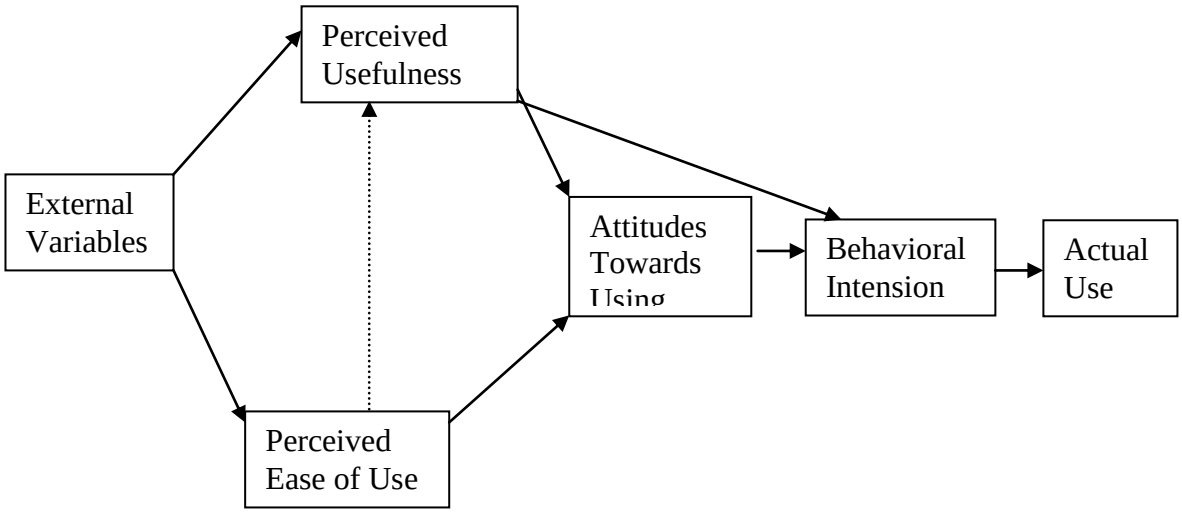

Figure 2: 3 The presentation of TAM (Davis, 1985) .

TAM was developed to explain and predict particular IT usages. However, this particular model has been using by many researchers in studying adoption and diffusion of various IS technologies. Exhibit 3 shown the empirical support of Technology Adoption Model:

Exhibit 2: 2 Empirical Support of Technology Adoption Model

Sources	Types of Technology	Sample Size
Wang (2003)	Internet Banking	123 Internet Banking Users in Taiwan
Kleijner (2004)	Wireless Finance	105 Mobile Phone Users in USA
Cheng (2006)	Internet Banking	203 Internet Banking users in Hong Kong
Celik (2008)	Internet Banking	161 Internet Banking Consumers in Turkey

2.7.4 Institutional Intervention Theory

In the adoption and diffusion of an innovation, influence and regulatory actions are important (King, 1994) provide a list of institutions in their seminal paper and claim that potential institutional action may take two dimensions and draw a model in line with that. Institutions can exert pressure through influence and regulatory power and 'Supply push' and 'Demand pull' forces lay down the context for those actions to take place (King, 1994). Both 'Supply push and 'Demand pull' are required for innovation adoption (See Exhibit 2.3 for details). Supply push innovation comes from the supplier of innovation and demand pull generates from the users to enjoy the innovation. This theory has been used in many technology adoption studies like e-commerce adoption (Scupola, 2003); EDI adoption (Dansgaard and Lyytinnen, 2001).

Exhibit 2: 3 Dimensions of Institutional Intervention (King, *et. al*.,1994)

	SUPPLY PUSH	**DEMAMD PULL**
I N F L U N C E	KNOWLEDGE BUILDING Funding of Research Project KNOWLEDGE DEPLOYMENT Provision of education services SUBSIDY Funding development prototypes Encouragement of capital markets to support R&D. INNOVATION DIRECTIVE Direct institutional operation of Production facilities for innovation	KNOWLEDGE DEPLOMYMENT Training programs for individuals and organizations to provide base of skilled talent for use SUBSIDY Procurement of innovative products and services Direct or indirect provision of complementarities required for use Direct or indirect suppression of substitute products or services MOBILATION Program for awareness and promotion
R E G U L A T I O N	KNOWLEDGE DEPLOYMENT Regulates education and training of all citizen SUBSIDY Reducing in general liabilities for organizations engaging in innovative activity Modification of legal administrative, or competitive barriers to innovation and trade STANDARDS Establishment of standards under which innovative activity Might be encouraged. INNOVATION DIRECTIVE Establishment of requirement for investment in R&D by organizations	SUBSIDY Procurement support for products or process that facilitate adoption and use STANDARDS Require particular products or processes to be used in any work for institution Require conformance with other standards that essentially mandate use particular products or processes INNOVATIVE DIRECTIVE Requires that specific innovative products or processes be used at all times

2.7.5 Institutional Theory

Institutional theory asserts that in societies where organizations work are guided by both rational rules and activities as originations are treated as system. DiMaggio and Powell (1983) and Scott (2001) claim that three types of institutional pressures-coercive, normative and mimetic determine the technology adoption by individuals and firms. ***Coercive pressure*** are exerted by organizations or other bodies on social actors to adopt the prescribed attitudes, behaviors, and practice as the later have

resource dependency to the former (DiMaggio and Powell, 1983). At organization level, coercive pressure may come from resource dominant organizations and regulatory bodies (Teo, 2003). Shi (2008) mentioned that coercive pressure significantly influence the attitude and intention to adopt Internet banking. Normative pressure occurs when an organization voluntarily, but unconsciously imitate the attitude, behaviors and practices of other organizations. Although this imitation is not pushed by large actors, however, social actors those who have not adopted innovation may feel discomfort when peers whose they admirer have adopted the same (DiMaggio and Powell, 1983). Shi (2008) have found the significant influence of normative pressure on Internet banking adoption.

Mimetic pressures are directly associated with the both voluntary and conscious imitation or copying of the practices and behaviors of competitors or successful and high status actors (DiMaggio and Powell, 1983).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter focuses on the description of methods applied in carrying out research study. It is organized under research design, research strategy, sampling techniques, research instruments, data collection procedures and data analysis.

3.2 Research Design

A research design is a formulated plan structure of the research showing all major parts of the research work together to address the research questions. Orodho (2003) defines it as the scheme, outline or plan that is used to generate answers to research problems. Also a study is planned and conducted, the procedures and techniques employed to answer the research problem or question. Therefore it is an arrangement for data collection and analysis in the manner that aims to combine relevance findings with the research propose. It constitutes the blueprint for collection, measurement and analysis of data (Kothari, 2003)

This study adopted and executed descriptive as well as diagnostic studies. The design in such studies must be rigid and not flexible and must focus attention on the following;

(a) Formulating the objective of the study (what the study is about and why is ti being made?)

(b) Designing the methods of data collection (what techniques of gathering data will be adopted)

(c) Selecting the sample (how much material will be needed?)

(d) Collecting the data (where can the required data be found and with what time period should the data be related?)

(e) Processing and analysing the data

(f) Reporting the findings.(Kothari, C .R 2003)

3.3 Research Strategy

In this study it was preferable to use a case study in order to achieve the objectives. A case study is sleeved to describe a unit in detail in context and holistically (Kombo and Tromp, (2006). It is the way of organizing data and looking at the object to be studied as a whole; the result can be obtained from few examples of the phenomena understudy. Therefore, the study selected Dar es Salaam region. To be single case design, this can give impact of the adoption of E-banking. The Dar es Salaam region was selected due to the fact that it is a focal point of banking industry in Tanzania almost all banks have their head offices in Dar es Salaam except for community banks which are opened at their community/local locations. Also availability of time and resources. The planned study completion time was very short to conduct comprehensive study with multiple cases or major case with sub-cases. Also multiple cases could require more resources in terms of money and logistics. Therefore, a decision to select a single case where fit in terms of locations of banks, time and resources in order to obtain actual data, analysis and have better information/ result.

3.4 Research Instruments and Data Collection Methodologies.

Data collections were made through research Instruments like questionnaires, direct interviews and observation, Pilot study; sampling and data analysis. The study will be conducted to bank staff, management of the banks, sampled bank and customers.

3.4.1 Data Collection Method

3.4.1.1 Primary data collections:

Primary data have been collected by means of structured questionnaires. The data are collected from Bank staff and management and customers.

3.4.1.2 Secondary data collection

Have been research reports and other readily available documents (compendia) including journals, materials from the Internet, office reports, brochures and documents and libraries of UDSM, OUT and IFM.

3.4.2 Sampling method:

The questionnaires are to be distributed to various Bank staff and customers in random sampling techniques.

3.4.2.1 Direct Interviews and observations

Method the study conducted to various groups in the Location as follows:-

a) Oral interviews to bank staff and management.
b) Oral interviews to individual customers.
c) Observation to the Banking operations at Azikiwe branch

3.4.3 Pilot study

The study to be conducted for a week to underscore the direction of the research, reducing operational costs of the research, determine customer behavior, development of communication interactive, as well as finding flaws within questionnaires and assist training, also the study help anticipate market positions

which also assist to know the appropriate volume of transactions predictable. It has been done at CRDB Azikiwe Branch.

3.5 Sampling Procedure

3.5.1 Sampling Techniques

Banking industry in Tanzania concentrated much in Dar es Salaam, due to that and other limitations like time and money, probability and non probable judicial sampling design has been used to get the targeted respondents taking into account their sex, age, type of business undertaken. The simple random sampling technique has been used to avoid biasness on the responses on the various types of banks in the banking industry.

3.4.1 Sample Size

The quality of good sample size, it should be “optimum” a mere , size alone does not ensure representation, thus a small sample, but well selected sample, may be superior to a larger but badly selected sample (Kothari 2003). Hence the sample should neither be too small nor too large. Therefore optimum size of samples size is one required because it is efficient, presentable, reliable and flexible.

In choosing respondents, informants particularly key informants, possess special knowledge related to study and other restrictions were made in order to obtain respondents that could contribute to the research purpose and objectives selected sample sizes for the study was 100, selected randomly normally have been enough.

3.4.2 Research Area

The study was carried out in Dar es Salaam; purposive sampling was used to select Dar es Salaam as the area of study. This was because Dar es Salaam is the economic capital of Tanzania with over four million inhabitants. Therefore the research area was selected due to business opportunities available and Dar es Salaam is the focal point for Banking Industry, thus have customers doing business under retail, corporate and international trade and finance.

3.4.3 Target Populations

The data, including opinions and expressed attitudes focus Dar es Salaam respondents have been drawn. Thus the target population have been, bank staff and management and Individual customers.

3.5 Data Processing

The data have been collected by the researcher through the mentioned techniques, processed and analyzed. Data collected by self administered questionnaire have been coded, where applicable, data from open ended, responses have been categorized for further analysis. Data collected have been presented in tabular forms, charts and word processing system. Moreover, data collected have been analyzed by using the Statistical Package for Social Scientists (SSPS- 12.0 Version). Also qualitative and quantitative methods have been carried out in the analysis so as to safeguard the drawing of conclusions concerning this study.

3.6 Variable and Measurement Procedure The researcher has ensured that every variable of the research has been measurable at any levels of measurement and

that instruments prepared for data collection were valid and reliable. Depending on whether responses have been recorded in numbers or words data have called quantitative or qualitative, respectively. Depending on the source of information, data have been called primary if they are collected a fresh and for the first time.

3.8 Data Cleaning

One hundred questionnaires were administered in this study. Out of these, 92 questionnaires were returned giving a response rate of 92%. Each questionnaire was inspected and corrected for the purpose of detecting errors as well as cleaning data before being coded in the computer. The inspection and correction was done in two ways; firstly, in the field and secondly, during the process of coding the data. In the field, the data were inspected to detect the most garish omissions and inaccuracies in the data. To clear the data, interview was arranged with particular respondents in order to get accurate data. Then before coding the data, 12 questionnaires were dropped because of being improperly filled and contained incomplete answers. Thus we remained with 80 usable questionnaires giving a response rate of 80% which were considered satisfactory for subsequent analysis.

3.9 Validity and Reliability of Data:

Validity is the most critical criterion and indicates the degree to which an instrument measures what is supposed to measure while reliability is concerned with consistency of responses with which the repeated measure produces the same results across time and observers (Saunders et al., 2007).

Content validity is all about whether the measures represent the meanings of the concept. Content or logical face is the extent to which professionals agree that the

scale logically appears to measure the concepts. Consulting expertise and the use of pilot study was used, thus information gathered was used to determine if the scales were able to capture the intended information (Mbura, 2007).

3.10 Data Coding

Factor effecting the full adaption of E-banking.

Customer response	**Code of organization and presentation**	**Code Analysis**
Strong Disagree	SD	1
Disagree	DA	2
Neutral	NT	3
Agree	AG	4
Strong Agree	SA	5

Number of times customers/Staff experience difficulties or usage (frequency).

Customer response	**Code of organization and presentation**	**Code Analysis**
Very frequently	VFR	1
Frequently	FR	2
Sometimes	ST	3
Occasionally	OC	4
Not at all	NA	5

For the purpose of this study I have estimator, which is efficient, Consistent, sufficient and unbiased in which its expected (value) mean is exactly equal to perimeter being estimated. Unbiased estimator was used as sample mean (x) and sample standard deviation (Std). Confidence interval is also used with a limit of 95% (1.96) to justify the result.

CHAPTER FOUR

PRESENTATION, ANALYSIS, AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents analysis of the findings and discussion of the results obtained from responded questionnaires, interviews, documentary review, and observations. The study intended to investigate the factors affecting adoption of E-banking in Tanzania's Banking Industry: the case of banks in Dar es Salaam region. The presentation has been made in order of the specific research objective and research questions. Data were analysed with the help of the SPSS, a Statistical Package for Social Sciences.

4.2 Description of the Variables Used in the Analysis

4.2.1 Respondents Personal Information.

One hundred customers and employees were targeted in this study, 92 questionnaires were returned, giving a 92% response rate. However, after inspection and errors detection, only 80 questionnaires which was 80% were seen to be useful for further analysis. Out of these 20 were employees , equivalent to25% and 60 were bank customers which was equal to 75%.

4.2.2 Sex /Gender of Respondent

The findings in Table 4.I and show that 45 respondents equivalent to 56%. were male and 35 respondents equivalent to 44% were female. This implies that there was somehow gender balance of the respondents, which make the study to have the opinions of both males and female.

Table 4: 1 : Sex of the Respondents (N = 80)

		Frequency	Percent
Valid	Male	45	56
	Female	35	44
	Total	**80**	**100.0**

Source: Researcher Analysis (2011

4.2.3 Age of the Respondents

Furthermore, findings in Table 4.2 shows that 20 Respondents equivalent to 25%were aged below 25. Twenty seven respondents, equivalent to 33.3% of the respondents, were aged between 25 and 35 years. Twenty three equivalent to 28.3% of the respondents, were aged between 36 and 45.Ten equivalent to 13.3% of the respondents were aged between 46 and 60 years. This implies that majority of the respondents(Employees and Customers) were in the productive age and therefore were in a better position to do business efficiently and effectively as they were energetic.

Table 4: 2: Age of the Respondents (N = 80)

		Frequency	Percent
Valid	Below 25	20	25.5
	26 – 35	27	33.3
	36 – 45	23	28.3
	46 – 60	10	13.3
	Total	**80**	**100.**

Source: Researcher Analysis (2011)

4.2.4 Sex/gender –Age tabulation

A cross tabulation in Table 4.3 of sex versus age shows that there were 13 males aged below 25 years, while females were 9, in the same way 17 males and 9 females

aged between 25.36 Thirteen males and 10 females aged between 36 and 45 years. Two males and 7 females aged between 46 and 60 years.

Table 4: 3: Sex * Age Cross tabulation (N = 80)

Sex		Age				Total
		Below 25	26 - 35	36 - 45	46 - 60	
	Male	13	17	13	2	45
	Female	9	9	10	7	35
Total		**22**	**26**	**23**	**9**	**80**

Source: Researcher Analysis (2011)

This further implies that there are more male respondents than female who were in productive age.

4.2.5 Education Level of the Respondents

The findings in Table 4.4 also show that 18 equivalent to 22% of the respondents, were primary school leavers. Fifteen equivalent to 18.7% of the respondents, were secondary school leavers. Fourteen , equivalent to 18% of the respondents, were certificate holders. Seventeen equivalent to 21.3% of the respondents were diploma holders. The findings also show that there 12 degree graduates and 4 postgraduate equivalent to 16% of the respondents. This implies that respondents had sufficient academic qualifications for reading and understanding the questionnaires properly and therefore there is reason to believe that they replied to the questions posted to them correctly.

Table 4: 4: Educational level of Respondents (N = 80)

		Frequency	Percent
Valid	Primary School Leaver	18	22.0
	Secondary School Leaver	15	18.7
	Certificate Holder	14	18
	Diploma Holder	17	21.3
	Undergraduate	12	15
	Postgraduate	4	5
Total		**80**	**100.0**

Source: Researcher Analysis (2011)

4.2.6 Respondents Experience

The analysis of the respondents' experience was made and from the Table4.5 below the findings show that 16 respondents, equivalent to 20% had experience of working and being customer with the bank for less than one year. Twenty nine equivalent to 36% of the respondents, had an experience between 1 and 3 years. Twenty equivalent to 27% of the respondents, had an experience between 4 and 6 years. Fifteen equivalent to 17% of the respondents had an experience of more than 7 years. This signifies that out of the 80 Customers and Employees surveyed, the majority had experience of less than three years, which implies that more respondents had an experience in managing their business operations and therefore they were in a better position to tell about their experiences concerning the adoption of e banking in Tanzania banking industry and factors which affecting it.

Table 4: 5 Respondents' Experience (N = 80)

		Frequency	Percent
Valid	Less than 1 year	16	20
	1 – 3 year	29	36
	4 – 6 years	20	27
	More than 7 years	15	21.3
Total		**80**	**100.0**

Source: Researcher Analysis (2011)

4.2.7 Location of the Banks

The findings in Table 4.6 show that 14 equivalent to 17.5% of the respondents were either customers or employees of The Dar es Salaam Community Bank. Twenty two equivalent to 27.5% of the respondents were either customers or employees of The National Bank of Commerce. Twenty four, equivalent to 30% of the respondents, were either customers or employees of the CRDB Bank. Twenty equivalents to 25% of the respondents were either customers or employees of National Microfinance Bank. This implies that there was somehow a balance in the selection of the respondents which had removed a bias of options. This is important because it helps us know and discuss issues that cut across the entire region of Dar es Salaam without favoring or basing on opinions from few places of the region. The Employees were present in equal number of 5 people each banks and Customers are settled all over Dar es Salaam region therefore there was even participation.

Table 4: 6 : Location of the Banks (N = 80)

		Frequency	**Percent**
VALID	DCB	14	17.5
	NBC	22	27.5
	CRDB	24	30
	NMB	20	25
	Total	**80**	**100**

Source: Researcher Analysis (2011)

4.3 How do Banks offer services/products to their customers?

4.3.1 Internet and E –banking Usage

4.3.1.1 Customers who Maintain Internet

The study wanted to investigate, how many customers maintain internet. From the Table4.7 below the results show that many customers do not have internet

Table 4: 7 The customers who maintain internet.

	Frequently	**Percentage**
No. of customer YES	10	17%
No. of customer NO	50	83%

Source: Researcher Analysis (2011).

Only 10 customers responded yes equivalent to 17% while 50 customers responded 'No' which is equivalent to 83%. The study showed that many customers maintain saving account which respondents 30 customers equivalent to 51% are holding savings account which 20% customers are holder of current account which is equivalent to 34% and 10 responded are holder of other accounts for example, Fixed deposit accounts. This shows many customers are ordinary customers.

4.3.2 Duration the Customer Used in Bank Services.

The Table 4.8 below the Study shows that 5 respondents were below one year which is equivalent to 8% while 23 laid to 47% and 20 customers responded under 3 – 5 years which is equivalent to 34% and above 5 years and 7 customers responded which is equivalent to 11%. This means that many customers have experience with banking services, therefore they have adopted new internet or E-banking services see the table below.

Table 4: 8: Duration the customer used in banking services.

Duration	**Frequency**	**Percentage**
Less than a year	5	8%
1 – 3 years	28	46%
3 – 5 years	20	34%
Above 5 years	7	11%
Total	**60**	**100**

Source: Researcher Analysis (2011)

4.3.2.1 The usage of internet

The table4.9 below shows that internet is mostly used by customers for information search (53%) and Basic Communication 41%,other services are used at very low profile that means other facilities/services which are provided by banks, are still offered using traditional distribution channel or lack of having internet includes the use of internet

Table 4: 9 The Usage of Internet.

Product/Services	**Frequently Yes**	**%**	**Frequently No**	**%**
Money Transfer	12	20	48	80%
Bill Payment	13	22	47	78%
Loan application	5	8	55	92%
Information	32	53	28	47%
Basic Communication	24	41	36	59%
Monitoring Products/ Services	2	3	58	97%
Others	2	3	58	97%

Source: Researcher Analysis (2011)

4.3.2.2 Customers Who Own Website.

The table 4.10 below shows that 55 customers responded that they do not own website which is 92% while only 5 customers own website which is equivalent to 8%. This means that many customers can not afford to maintain website, therefore online banking can not be feasible. For those who had website, they said that they used website for money transfer, information search, bill payment, basic communication, advertisements and marketing their products/services.

Table 4: 10 Customer who own website

	Frequency	%
Responded Yes	55	92
Responded No	5	8

Source: Researcher Analysis (2011)

4.3.3 Availability and the usage of ATM services to customers.

4.3.3.1 Customers who use ATM.

Table no.4.11 below shows that 88% of the respondents agreed that they use ATM while 11% they do not own cards and they do not use ATM.

Table 4: 11 Customers Who Use ATM

	Frequently	Percentage
Who responded YES	53	88%
Who respondent NO	7	12%
Total	**60**	**100**

Source: Researcher Analysis 2011.

(i) Experience on Using ATM

The table no. 4.12 shows that 40% of the respondents have experience from one year up to 3 years and followed of those who have experience of over 3 years to five which is 35% while10% those who have more than 5 years experience in using ATM by customers. It means that customer have enough experience.

Table 4: 12 : Experience on Using ATM by Customers.

Duration	Frequently	Percentage
Less than a year	9	15%
1 – 3 years	24	40%
3 – 5 years	21	35%
Over five years	6	10%
Total	60	100

Source: Researcher Analysis 2011.

4.3.3.2 Services Customers Use under ATM.

The table no 4.13 shows that customers are able to use more than one service, therefore, each service has to be analyzed separately.

Table 4: 13 Services customers' uses under ATM

	Use		Do not use		Total	
	fr	%	fr	%	fr	%
Depositing money	3	5%	57	95%	60	100
Encashment	53	88%	7	12%	60	100
Balance of the account	31	52%	29	48%	60	100
Mini statement	28	47%	32	53%	60	100

Source: Researcher Analysis 2011.

In the case of **depositing** money using ATM only CRDB has the service but still most people use traditional method of depositing that is sending money to the counter and teller. According to the study only 3 customers used depositing money which is equivalent to 5% of the total responded. 95% that is equivalent to 57 responded to not using it due to the fact that NBC, NMB and DCB do not provide this service.

Encashment is the common service used by bank customers. 53 respondents, equivalent to 88% use this service but still people use traditional method for bulk encashment and cheques. In order to enforce FIFO (First In and First Out) to customers who are saved using traditional mode of operation CRDB has introduced electronic customer services numbering machine to branches. Therefore customers need to have the number and therefore be called and saved according to their numbers. At Azikiwe branch which I took as pilot branch average of 800 people are saved daily using traditional method.

Balance of the account 31 respondents, equivalent to 52% take balance of their accounts and 29 respondents do not. Most of these customers are salary earners, they know their income and they don't expect extra ordinary deposit or withdraw, therefore they encash and go without taking balance. Also there are some customers who do not know how to use the facility.

Under the **Mini statement** 28 respondents equivalent to 47% use the service while 32 respondents equivalent to 53% which concludes that it is not the culture for bank customers to seek for mini or statement. Mostly, statements are given to SMES and cooperate customers. According to the above analysis ATM is used for Business to Customers (B_2C) that is retail banking.

4.4 E-Banking Services Provided by Banks to Customers

The question required to show multiple of service which offered by e-banks to customers which are used too. Table 4.14 below show how customers agreed/accepted that they use the services.

4.4.1 Direct debits

All customers agreed to have access to that while obtaining services via bank teller the accounts are directly debited or using ATM.

4.4.2 Automatic Teller Machine

53 respondents equivalent to 88% use ATM services frequently. All bank offers ATM services.

4.4.3 Point of sale

CRDB and NBC offers debit cards. Therefore 18 respondents equivalent to 30% use the service but there is no bank which offers credit cards.

4.4.4 Personal computer Banking:

Only CRDB is offering this service. 10 respondents equivalent to 17% are using the services.

4.4.5 Wireless banking (internet banking).

CRDB and NBC who are offering this services 6 respondents equivalent to 10% are using the services.

4.4.6 Telephone Banking:

CRDB is offering this services 7 respondents admitted to use the services which is equivalent to 12%.

4.4.7 Electronic fund transfer

System [EFT] 20 respondents equivalent to 33% said that they have used the services. This service is been done by commercial banks through correspondent agents. Therefore all banks under this research they are offering this service because they are all commercial banks.

4.4.8 Smart Cards

CRDB only offer smart card 10 respondents agree to use which is equivalent to 17%. From the analysis shows that many banks they lack facilities of capturing some of the services only CRDB left with credit card. Therefore full adoption of E-banking can not take place.

Table 4: 14 E - banking services provided by banks to customers

ITEM OF SERVICES	YES		NO	
	FR	%	FR	%
Direct debit	60	100	0	0
ATM	53	88	7	12
Point of sale: Debit card	18	30	42	70
Point of sale: Credit card	0	0	60	100
Personal Computer Banking	10	17	50	83
Wireless(Internet Banking)	6	10	54	90
Telephone Banking	7	12	53	88
Others: Electronic fund Transfer	20	33	40	67
Smart Cards	10	17	50	83

Source: Research Analysis 2011.

4.5 The Challenges Facing the Adoption of E- banking and how to Overcome them.

The study investigated difficulties on using ATMS, Lending and Documentary letters of credit.

4.5.1 Ease of use of ATM services/customers experienced difficulties or problems

Ease of use has been defined as the extent to which a person believes that using the system will be free of effort with no perceptions of uncertainty (Doll, et.al 1998). Therefore difficulties may exert in system due to factors of ease of use namely, age,

level of education and skills. Ease of use will address question no 9 in the questionnaire.

(a) Age as Factor of Ease of Use of ATM Services

Table 4: 15 Age as factor of ease of use of ATM services.

Age/ Year	VF	%	FR	%	ST	%	OC	%	NA	%		%
Below 25	0	0	0	0	9	15	2	3	4	7	15	25
23 – 35	1	2	2	3	3	5	6	10	8	13	20	33
36 – 45	2	3	4	7	3	5	6	10	2	3	17	28
46 – 60	2	3	3	5	1	2	2	3	0	0	8	13
Total	5	8	9	15	16	16	16	27	14	23	60	100

Source: Researcher Analysis 2011.

The table no.4.15 above shows that respondents who face difficulties ATM very frequently are those of age 36 – 45 and 46 – 60 with respondents 2 in each group, equivalent to 3% each. Generally people face difficulties in using ATM. Only 14 which is equivalent to 23% did not experience any problem, that is, they said it is not at all but 46 respondents which is equivalent to 77% experience difficulties at different lengths. 5 equivalent to 8% (very frequently), 9 equivalent to 15% (frequent) 16 each equivalent 27%. The analysis shows that aged people they fear to learn new technology.

(b) Level of Education as Factor of Easy Use ATM Services.

Table 4: 16 Customers experiencing difficulty due to level of education.

EDUCATION	VR		FR		ST		OC		NA		TOTAL	
	FR	%	FR	%	FR	%	FR	%	FR	%	FR	%
Primary level	2	3	4	7	6	10	5	8	1	2	18	30
Secondary level	2	3	3	5	4	7	4	7	2	3	15	25
Certificate Holder	1	2	2	3	3	5	5	8	3	5	14	23
Diploma	0	0	0	0	3	5	1	2	6	10	10	17
Graduate	0	0	0	0	0	0	1	2	2	3	3	5
	5	8	9	15	16	27	16	27	14	23	60	100

Source: Researcher Analysis 2011.

The Table 4.16 above Respondents shows that level of education has got great impact on adoption of E-banking and the use of ATM. 30% of respondents equal to 18 people their level of education is primary, 17 experienced difficulties, only 1 responded not at all. The study revealed that, problems decrease as a level of education increases.

4.5.2 The Customers Experience Problems Due to Lack of Skills /Experiences

Table 4: 17 customers experiences problems due to lack of skills/experiences

Duration	VF	%	FR	%	ST	%	OC	%	NA	%	Total	
one year	2	3	3	5	2	2	2	3	1	2	9	15
1 – 3 years	1	2	3	5	15	6	6	10	5	8	24	40
3 – 5 years	2	3	2	3	7	7	7	12	6	10	21	35
over 5 years	0	0	1	2	3	1	1	2	2	3	6	10
Total	5	8	9	15	27	16	16	27	14	23	60	100

Source: Researcher Analysis 2011.

Above table no 4.17 shows that skills/duration that customers use ATM also has influence difficulties faced by customers in adoption of E-banking and ATM services. Less experienced in using ATM face 45% of respondent's equal to 27 face

difficulties to use in less than 3 years. Above 3 years up to 5 years, 15 respondents equivalent to 25% face problems and above 5 years, 4 respondents equivalent to 7% face problems. Therefore skills/duration of the user in using ATM has the effect in adoption E-banking and the use of ATM service

4.6.3 Other customers heard or seen experiencing problems with ATM services.

Table 4: 18 Other customers experience problem/difficulties in using ATM.

	Frequently	**Percentage**
Who responded YES	51	85
Who respondent NO	9	15
Total	60	100

Source: Researcher Analysis 2011.

Table no 4.18 which answers the question in our questionnaire number 10 that enquires whether the customer has ever heard or seen other people experiencing problems with ATM services, 51 equivalent to 85% respondent YES admitting that they have seen people complaining about ATM.

Table 4: 19 Number of People Complaining about ATM.

Number of people	**frequently**	**Percentage**
1 – 5 people	8	13
6 – 10 people	25	42
11 – 20 people	22	37
Over 20 people	5	8
Total	**60**	**100**

Source: Researcher Analysis 2011.

The above Table 4.19 shows that over 70% have seen people, over 5 people and above complaining about ATM. The percentage is very high depicts that there are problem or difficulties in using ATM

4.5.4 Analysis of Causes which lead to difficulties or Problems in Using ATM Services.

Table no. 4.20 below shows that from the statistical analysis all the three causes have impact on ATM usage.

Table 4: 20 Analysis of causes lead to difficulties or problems in using ATM services

Causes	No.	Sample mean	Standard Decoration (std)	Capital limits	
Failure of the system time	60	3.767	0.140	95%	3.493-4041
Slow response time	60	2.736	0.353	95%	2.044-3.428
Low customer know ledge on ATM	60	3.717	0.218	95%	3.29 - 4.144

Source: Researcher Analysis 2011.

(a) Failure of the system time:

The statistical analysis shows that with population mean of 3.767 at the confidence limit of 95% ranging from 3.493-4041which shows that there are great problems. It is caused by banks claiming that there are network problems.

For example NBC from 28th of every month up to 4th of another month there is network/system problems. Customers are told of satellites problem to connect into their system. Ad hock change of system or breakdown are also advocated by the respondents. Also 44 respondents which is equivalent to 74% agreed that failure of the system is the cause of difficulties **.**

(a) Low customer knowledge:

From the table no. 4.20 above shows that with the population mean of 3.717 at the confidence limit of 3.29-4.144 the factor limits the use of ATM. Customers are not taught on the use of the ATM. Once the bank clerk/Officer receives the ATM card tells the customer to go and ask another customer on how to use the ATM, (especially with the CRDB they do not take time to explain to their customers). Also 45 respondents which is equivalent to 75% accepted that low customer knowledge inhibits the use of ATM

(b) Lastly slow response time:

Although statistical analysis show it has the population mean of 2.736 at confidence limit of 95% ranging from 2.044-3.428, it has influence associated with problems of the system failure which accompany network problems. Otherwise if the system is clear then the response time is faster. Also those who agreed are 15 respondents which equivalent to 25%. Therefore slow response has marginal impact to the use of ATM.

4.5.5 Analysis on Lending Money for Banks.

Customers are supposed to apply for the loan, negotiate and enter into agreement on the mode of payments and thereafter sign the Memorandum of Understanding [MOU]

(a) Customers Who Applied for the Loan

Table 4.21 shows that only 23 responded that they had applied for loan which is equivalent to 38% which show that the most customers do not use the facility due to various reasons, including conditions, high interest rates etc.

Table 4: 21 Customers who applied for the loan.

	FR	**%**
Customers who respondent YES	23	38
Customers who respondent NO	37	62
	60	100

Source: Researcher Analysis 2011

(a) Mode of instructions to negotiate loan

(b) From the table no.4.22 below 20 respondent equivalent to 33% shows that method of negotiating loans by visit to the bank and fill in necessary forms.

Table 4: 22 Mode of instructions to negotiate loan.

ITEM	**FR.**	**%**
Telephone calls and SMS Banking	1	2
E-mail	2	3
Personally visit to the bank and fill the necessary forms	20	33
Others do not take loan	37	62
Total	60	100

Source: Researcher Analysis 2011.

(c) Sign Memorandum of Understanding and/or Bankers Instructions

Table 4: 23 Sign Memorandum of Understanding and/ or Bankers instructions.

Item	**Fr.**	**%**
Telephone calls and SMS Banking	0	0
E-mail to instruct bank debit a/c	2	3
Personally visit to the bank	21	35
Others do not take loan	37	62
Total	60.	100.

Source: Researcher Analysis 2011.

From the table no 4.23 above, 21 respondents equivalent to 35% use tradition mode of signing memorandum of understanding / instructions this due to the fact that signing the bankers instructions need physical documentation and signature while under E-banking only instruction are given. Bankers need authentication of signature as pre-conditions, to establish Bankers order / Instructions to allow the bank to debit customers account. Therefore lending inhibits E-banking adoption.

4.5.6 Analysis on Issue / open and Receipt of Documentary letters of credits

The importation of goods under documentary letters of credit as mode of payment, is applied by the importers. Therefore the local bankers become the issuance banks of the letter of credits and under export the local banks become the receiving banks of the documentary letters of credits.

(a) Customers who applied or received letters of credit.

From the table no 4.24 below, 10 respondents equivalent to 17% have applied or received for documentary letters of credit that show that very few customers are

aware of the product. Also few people do international business hence more than 83% show they have never applied or received documentary letter of credits.

Table 4: 24 Customers who applied or received letters credit

Item	Fr.	%
Applied for DCL - YES	10	17
Do not apply DCL - NO	50	83
Total	60	100

Source: Researcher Analysis 2011.

(b) Mode used to receive or send documents under letters of credit

The table no 4.25 below shows that 9 out of 10 respondents which is equivalent to 15% still use courier's method of sending and receiving documents. Various port authorities and banks deferred using scanned or electronically sent documents as they loose originality and authentication. Therefore there are easy forged and thus can make wrongly presentation of goods. To some extent is the hindrance of E-banking.

Table 4: 25 Mode used to receive or sent documents under letters credit

Item	Fr	%
Electronically	1	2
Couriers	9	15
Other – Have not applied or received	50	83
Total	60	100

Source: Research Analysis 2011

4.6 Analysis of factors affecting full adoption of E-banking customer perspective.

The table no 4.26 below and 4.27 below shows that various variables depicted as follows:

Table 4: 26 Analysis of enablers and inhibitors of full adoption of E-banking customer perspective

Reason		Sample mean	STD deviation	Confidence limit	Confidence limit	
					From	to
Legal Issues	60	3.867	0.078	95%	3.847	3.887
Regulatory issues	60	3.533	0.222	95%	3.477	3.589
Government	60	2.833	0.329	95%	2.750	2.916
Donors	60	2.833	0.287	95%	2.761	2.905
Reliability of system	60	4.167	0.032	95%	4.159	4.175
Security of the system	60	4.183	0.016	95%	4.167	4.199
Privacy and Trust	60	3.550	0.065	95%	3.534	3.566
Risk Involved	60	4.017	0.08	95%	3.997	4.037
Organization capability	60	3.6	0.151	95%	3.562	3.638
Lack of knowledge	60	3.75	0.155	95%	3.711	3.789

Source: Researcher Analysis 2011.

4.6.1 Legal Issues.

42 respondents equivalent to 70% agreed and 8 respondents equivalent to14% strongly agreed that legal issues are reason for failure to full adoption of E-banking and from the statistical analysis showed that the population sample mean of 3.867 and the estimated population mean at 95% confidence limit ranging from 3.847 to

3.887 which mean that most customers agree that legal issue is a reason which inhibits full adoption of e-banking

4.6.2 Regulatory Issues.

20 respondent's equivalent to 33% agreed and 15 respondents equivalent to 25% that regulatory issue has an impact to the full adoption of E-banking. Also from the statistical analysis showed that population sample mean of 3.533 and estimated population at 95% confidence limit ranging from 3.477 to 3.589 which means that the most customers agree that regulatory issue is a reason which inhibits full adoption of E-banking.

4.6.3 Government

14 respondents equivalent to 23%strongly disagree, 15 respondents equivalent to 25% disagree, 6 respondents equivalent to 10%, 17 respondents equivalent to 28% agreed and 8 equivalent to 14% strongly agreed. The statistical analysis shows that population mean of 2.833 and estimated population mean at 95% confidence limit ranging from 2.750 to 2.916 means that to some extend government has influence to inhibit the adoption of E-banking.

4.6.4 Donors.

12 respondents equivalent to 20% strongly disagree 13 respondents equivalent to 22% disagree, 16 respondents equivalent to 27% are neutral, 11 respondents equivalent to 18% agree,8 respondents equivalent to13% strongly agreed. The statistical analysis shows that the population mean at 95% confidence limit ranging from 2.761 to 2.905 which means that to some extend Donors has influence to inhibit the adoption of E-banking.

Table 4: 27 Enablers and Inhibitions of full adoption of E-banking customers perspective.

Reason	SD		DA		NT		AG		SA		TOTAL	
	fr	%	fr	%	fr	%	fr	%	fr	%	fr	%
Legal Issues/support	1	2	4	6	5	8	42	70	8	14	60	100
Regulatory issues /supports	8	14	2	3	15	25	20	33	15	25	60	100
Government	14	23	15	25	6	10	17	28	8	14	60	100
Donors	12	20	13	22	16	27	11	18	8	13	60	100
Security of the system	0	0	0	0	2	3	45	75	13	22	60	100
Reliability of system	0	0	1	2	1	2	45	75	13	21	60	100
Privacy and Trust	4	7	5	8	11	18	34	56	6	10	60	100
Risk Involved	1	2	5	8	4	7	35	58	15	25	60	100
Lack of knowledge	5	8	1	2	12	20	28	47	14	23	60	100
Organization capability	5	8	6	10	2	3	42	70	5	8	60	100

Source: Researcher Analysis 2011.

4.6.5 Security of System.

2 respondents equivalent to 3% are neutral; 45 respondents equivalent to 75% are agree and 13 respondents equivalent 22% strongly agreed that means customers accepted that security has a great impact on the full adoption of E-banking. Also the statistical analysis shows that population sample mean is 4.183 and estimated population mean at 95 confidence limit ranging from 4:167 to 4.199 signifies that security of system, customers agree that is a reason which inhibits full adoption of E-banking.

4.6.6 Reliability of system.

One respondent equivalent 2% was disagreed; one respondent equivalent to 2% was neutral, while 45 respondents equivalent to 75% were agreed and 13 respondents equivalent to 21% were strongly agreed that reliability is the reason inhibit. Also from the statistical analysis shows population sample mean of 4.167 and estimated population mean at 95% confidence limit was ranging from 4.159 to 4.175 which means most customers would agree that reliability is a reason which inhibits full adoption of E-banking.

4.6.7 Privacy and Trust.

4 respondents equivalent 7% strongly disagree; 5 respondents equivalent to 8% disagree, 11 respondents equivalent to 18% were neutral while 34 respondents equivalent to 56% agreed and 6 respondents equivalent to 10% strongly agreed that privacy and trust is a reason for non effective in adoption of E-banking. Also from the statistical analysis showed population sample mean of 3.550 and estimated population mean at 95% confidence limit was ranging from 3.534 to 3.566 which means customers would agree that privacy and trust which inhibits full adoption of E-banking.

4.6.8 Risk Involved.

One respondent equivalent to 2% strongly disagreed, 5 respondents equivalent to 8% disagreed; 4 respondents equivalent to 7% were neutral while 35 respondents equivalent to 58% agreed and 15 respondents equivalent to 25% strongly agreed that Risk involve has impact on adoption of E-banking. Also from the statistical analysis

shows that population sample mean of 4.017 and estimated population mean at 95% confidence limit ranging from 3.997 to 4.037 which means most customers agree that Risk involved is a reason which inhibits full adoption of E-banking.

4.6.9 Lack of knowledge.

5 respondents equivalent to 8% strongly disagreed one respondents equivalent to 2% disagreed, 12 respondents equivalent 20% were neutral while 28 respondents equivalent 47% agreed and 14 respondents equivalent 23% strongly agreed that Lack of knowledge have impact effective adoption of E-banking. Also from statistical analysis shows that population sample mean 3.75 and estimated population at 95% confidence limit ranging from 3.711 to 3.789 which means that most customers agree that lack of knowledge is a reason which inhibits full adoption of E-banking.

4.6.10 Organization capability.

5 respondents equivalent to 8% were strongly disagreed, 6 respondents equivalent to 10% disagreed, 2 respondents equivalent to 3% were neutral while 42 respondents equivalent to 70% agreed and 5 respondents equivalent to 8% strongly agreed. Also the statistical analysis shows that population sample 3.6 and estimated population at 95% confidence limit ranging from 3.562 to 3.638 which means that most customers agree that organizational capability is a reason which inhibits full adoption of E-banking.

4.7 The status of E-banking in Tanzania Banking Industry

In the staff and management questionnaire sought to find out, status of E-banking that is the competence, the usage of E-banking and internet banking, and the products or services offered.

4.7.1 The bank experience in using E-banking

In the staff and management questionnaire, question no. 7 and 8, all the bank covered under this study provide E-banking (CRDB, DCB, NBC and NMB). They have experience of more than 3 years, therefore they are competent in using E-banking. The finding shows that 5 people responded equivalent to 20% that their bank used E-banking in less that 3 year, 5 respondents, responded that the used E-banking in less than 5 years and the 10 responded equivalent to 50% have experience more than 5 year. The finding needed bank to have competence as a criteria of good status of the bank. (Zhu and K.L Kraemer, 2005).

4:7.1.1 E-banking and Internet usage.

(a) E-banking and Internet availability.

E-banking and internet are crucial information and Communication technologies needed for the adoption of E-banking. The banks covered under this study they own website and they use internet and E-banking in various activities. Explicitness and Accumulation of Technology in IS adoption is needed (Lin 2008).

Therefore banks have potential in ICT thus can provide services ,trade internationally and established IT department for problems solving and running day to day operations

(b) **Usage of internet by banks**

The study wanted to know the use of internet in the Bank.

The table 4.28 below give the result from the respondents. 15 respondents equivalent to 75 % used the internet for account information, 3 respondents equivalent to 15% used the internet for money transfer, one each respondent equivalent of 5% each used for basic communication and information search no one respondent for loan application

Table 4: 28 usage of internet by banks

Application	Frequency	Percentage
Account information	15	75%
Money transfer	3	15%
Basic communication	1	5%
Loan applications	0	0
Information search	1	5%

Source: Researcher Analysis 2011.

(c) Usage of website by Banks

In question no. 6 of the questionnaire staff and management respond ended to the question as follows:

The table no 4.29 below shows that, 4 respondents equivalent 20% use website for Advertisement and marketing; 6 respondents equivalent to 30% use for communication with customers 8 respondents equivalent to 40% use for conducting banking operation 2 respondents equivalent to 10% they don't know.

Table 4: 29 Usage of website by Banks

	Frequency	**%**
Advertisement& marking	4	20
Communication	6	30
Banking operation	8	40
Not aware	2	10
Total	20	100

Source :Researcher Analysis 2011

(d)Usage of E-banking by banks

It tried to answer question N0. 9 in the questionnaire. The table 4.30 below shows that 3 respondents equivalent to 15% use for advertisement and marketing; 11 respondents equivalent to 55% use for online banking operations and customer service 5; one respondent equivalent to 5% Loan applications processing but not mortgage. 2 respondent equivalent to 10% use for fund transfer and 3 respondents equivalent 15% use for bill payments.

Table 4: 30 usage of E-banking by banks

Service	**Frequency**	**Percentage**
Advertisement marketing	3	15%
On line banking operation and customer services	11	55%
Loan application processing including mortgage	1	5%
Find transfer	2	10%
Bill payments	3	15%
Total	20	100%

Source: Researcher Analysis 2011.

4:7:2 Bank Competences

Competence of the bank will depend on the staff and management and the bank as the organization (Lin, C-Y, 2008).The study revealed that bank staff are educated to the minimum of diploma up to masters degree. Bankers undergo on job training and rotations which help to increase skills.

(a) Staff experience at work

Table 4: 31 Staff experience at work

No of years worked	No of people	Percentage
0 < 1 year	0	0%
1 – 3 years	4	20%
4 – 5 years	10	50%
Over 5 years	6	30%
Total	20	100%

Source: Researcher Analysis 2011.

The table no 4.31 above concludes the status of the bank in terms of capability of the staff in the bank. It showed that 10 respondents equivalent to 50% had experience 4 years up to 5 years and 6 respondents equivalent to 30% had experience of over 5 years while only 4 respondents equivalent 20% had experience of one year up to three years. Therefore more people had experience in the banking system they could provide services well and had enough exposure then they were able to express and give reliable information.

4.7.3 Analysis of Services offered by banks to customer using internet

In the questionnaire question No. 10 asked services offered to customer through internet by banks. The response given by bank staff and management showed that 18 respondents equivalent to 90% agreed to offer account information to their

customers, one respondent equivalent to 5% offer Loans application and processing 10 respondents equivalent to 50% offer bill payments, 15 respondents equivalent 75% offered balance account activities; 13 respondents equivalent to 65% offered transfer of funds between linked accounts and others services information search and basic communication 5 respondents equivalent to 25% responded yes while 15 respondents equivalent responded No.

Generally the finding showed that E-banking and Internet are ease of use and useful to both banks and customers. Therefore it behaves the TAM (Davis 1985, 1989)

4.7.3.1 Availability frequency of services offered by E-banking

In order to justify the frequency analysis under question 11, it wanted to know the services offered by the bank. The Exhibit no 4.1 below shows that services offered by each bank it was found that direct debits / credits are offered by all banks that is mean that over the counter services (Traditional distribution method of banking) ATM services and electronic fund transfer are also offered by all banks, wireless /internet Banking is offer CRDB, DCB, NBC and NMB, Debit card and point of sale terminal is been offered by CRDB and NMB; Pc banking, smart card and telephone banking offered by CRDB while credit cards and electronic check conversion are not provided by any bank.

Also from the eleven services are indicated that banks are suppose to deliver to customer CRDB offers equivalent of 82% NBC (55%) NMB (36%) and DCB (36%) it indicates that more effort is needed in order to reach full adoption of E-banking and abort queuing and using traditional distribution channel,

4.7.3.2 Frequency services offered by E-banking

Although services offered by banks are few in terms of how each bank offer their service but the study needed to analyse the impact of each service. 11 services are indicated but each bank offers as shown in exhibit 4.1 above. Also table no 4.32 below shows the analysis of each services.

Exhibit 4: 1 E-banking services by each bank

Category	CRDB	NBC	NMB	DCB
Direct services (debits/credit)	x	x	x	X
ATM	x	x	x	X
Debit card	x	x	-	-
Credit card	-	-	-	-
Point of sale terminal pos	x	x	-	-
PC Banking	x	-	-	-
Electronic fund transfer system (EFT)	x	x	x	X
Wireless /internet banking	x	x	x	X
Smart card	x	-	-	-
Telephone banking	x	-	-	-
Electronic check conversion	-	-	-	-
Percentage	82%	55%	36%	36%

Source: Researcher Analysis 2011.

(a) Direct services

This is traditional distribution channel that you enter and get service in the banking hall. The deposits and withdrawals are done across the counter. They use traditional distribution channel of banking services. This problem of queuing has become worth with and some customers do not prefer to use E-banking such that they queue up in the banking hall. Some customers do not have access of internet or they do not have information about the E-banking remain unsolved matter; ignorance and fear of change can also be other reasons as to why people still visit Banking hall rather than E-banking. CRDB has also gone a step further in trying to manage the queue problems that costs millions of dollars by placing queue management system.

Table 4: 32 Analysis of services offered by banks

Services	No.	Sample population	Standard division	Confidence limit %	From	To
Direct services	20	1.1	0.040	95%	1.083	1.117
ATM	20	1.4	0.212	95%	1.307	1.493
Point of sale	20	3.3	0.388	95%	3.130	3.470
Debit cards	20	4.4	0.421	95%	3.216	3.584
Credit cards	20	0	0	95%	0	0
Personal computer	20	4.2	0.238	95%	4.096	4.304
Wireless internet banking	20	2.45	0.109	95%	2.402	2.498
Telephone banking	20	4.3	0.183	95%	4.22	4.380
Electronic fund transfers	20	3.5	0.373	95%	3.337	3.663
Electronic check conversion	20	0	0	95%	0	0

Source: Researcher Analysis 2011.

The idea of this is to improve banking experience for customer services that is first in first out (FIFO) and optimize both branches and teller activities. Table 4.32 below shows that 18 staff and management equivalent to 90% respond ended that customer are frequently using direct services. The statistical analysis also indicate that sample population mean of 1.1 and estimated population mean at 95% confidence limit was ranging from 1.083 to 1.117. Which mean that customer use direct services or visit banking hall.

(b) Automated teller machine services or 24 hrs teller.

ATMs are electronic terminals that let your bank almost any time to withdraw cash, make deposits, or transfer funds between accounts, you are generally insert ATM card and enter your PIN. From table no. 4.32 above and the table no. 4.33 below shows that staff and management responded that 15 respondents equivalent to 75% agreed that customers use ATM very frequently while 3 respondents equivalent to 15% agreed that customer use ATM frequently and one despondent equivalent to 5% responded that customers some times and occasionally use ATM. Also statistical analysis showed that sample population mean 1.4 and estimated population mean at 95% confidence limit was ranging from 1.307 to 1.493 which mean that customer use ATM service.

(c) Point of sale terminals

Pos terminals let customers pay for purchases with debit card which also may be your ATM card. The process is similar to using a credit card with some important exceptions. The table no. 4.32 above and the table no. 4.33 below shows that 5 respondents equivalent 25% agreed that their customers use pos very frequently; 2

respondents equivalent 10% responded frequently,3 respondents equivalent to 15% responded some times 2 respondents equivalent to 10% responded occasionally and 8 respondents equivalent to 40% responded not at all from the statistical analysis shows that sample population mean of 3.3 estimated population mean at 95% confidence limit was ranging from 3.130 to 3.470 which mean there is a problem in using point of sale terminals.

The service is offered by NBC and CRDB only; therefore employees of DCB and NMB have got nothing to say as they do not provide the service.

(d)Debit card services

Are cards used to pay for purchases at the point of sale terminals. The process is fast and easy a debit card purchase transfers money – fairly quickly from your bank account to the store's account it's important that you have funds in your account to cover your purchases. The study tried to underscore the usage of debit cards from bankers point of view from the table no. 4.32 above and the table 4.33 below shows that 5 respondents equivalent to 25% use very frequently 3 respondents equivalent to 15% use frequently; 1 each respondent equivalent 5% use sometimes and occasionally while 10 respondent equivalent to 50% their banks do not use.

Also from the statistical analysis results shows that sample population mean 3.4 and estimated population mean at 95% confidence limit was ranging from 3.216 to 3.584 while depict that there is a serious problem in using debit card the proof is correct as the debit cards is offered by NBC and CRDB only.

(e)Personal computer banking

Given an opportunity for the customer to handle banking transactions via your personal computer for instance, you may use your computer to view your account balance. Request transfers between accounts and pay bills electronically. The study wanted to investigate the level of this services offered to the customers

The table no. 4.32 above and the table no.4.33 below shows that 2 respondents equivalent to 10% use very frequently; 2 respondents equivalent to 10% use frequently; one respondent equivalent to 5% sometime use it and 15 respondents equivalent to 75% their banks do not offer that service. Also from the statistical analysis indicates that sample population was 4.2 and estimated population mean at 95% confidence limit was ranging from 4.096 to 4.304 which mean that customer have serious problem in using personal computer in fact the service is been offered by CRDB only.

(f) Wireless or Internet Banking

Internet Banking is acquiring information through internet with the use of computer the table no. 4.32 above and the table no. 4.33 below shows that 7 respondent equivalent to 35% very frequently use, 3 respondent equivalent 15% frequent use, 3 respondent equivalent to 15 sometimes use,4 respondents equivalent to 20% they occasionally use it, 3 respondents equivalent to 15% they don't use or not applicable. Also the statistical analysis from population mean below shows that sample was 2.45 and estimated population mean at 95% confidence limit was ranging 2.402 and 2.498 which shows that internet services can also in inhibit full adoption of E-banking.

(g)Telephone banking or pay by phone.

Lets call your bank with instructions to pay certain bills or to transfer funds between accounts. Only CRDB has got these services therefore according to the table no. 4.32 above and the table no. 4.33 below shows that one respondent equivalent to 5% respondent that they use it very frequent. 2 respondents equivalent to 10% responded that they use it frequent and also 2 respondent equivalent to 10% responded sometimes they use while 15 respondents equivalent to 75% responded not applicable. Also according statistical result shows that sample population mean was 4.3 and sample population mean at 95% confidence limit ranged from 4.22 to 4.38 which means that telephone banking most inhibits full adoption E-banking.

(h)Electronic fund transfer

Although all mode of services mentioned are form of fund transfers but here we meant that transfer of funds between foreign commercial banks and Local commercial banks which requires to have correspondent agency arrangements. The funds were transferred by SWIFT. Customers who do business internationally bankers can open documentary letter of credit or advice customers to claim payment through correspondent banks for easy payment.

The table no. 4.32 above and the table no. 4.33 below shows that 4 respondents equivalent to 20% responded that they very frequently use, 3 respondents equivalent to 15% frequently use, 2 respondents equivalent to 10% sometimes use it, one respondent equivalent to 5% responded occasionally use. while 10 respondents equivalent to 50% responded not applicable, also the statistical analysis shows that sample population means 3.5 and sample population mean at 95% confidence limit

ranged 3.337 to 3.663 that mean electronic fund transfer most inhibit full adoption E-banking.

(i)Electronic check conversion

Electronic check conversion means converts a paper check into an electronic payment at the point of sale or elsewhere such as when company store cashier the check is processed through an electronic system that compute your banking information and the amount of the check. Once the check is processed you are asked to sign a receipt authorizing the merchant to present the check to his/her bank electronically and deposit the funds into the merchant's account. The paper will get receipt and the check marked "paid" to avoid representing it again. This can be used to both Business to Customer(B2C), Business to Business(B2B) ,Customer to Customer(C2C) and Government to Business(G2B) who maintain checkable (current) accounts. No bank provide this services actually it is the one which increase customers to visit Banking Hall because even if you need to get Tshs. 2000/= through check, also the same process if you need to deposit a check of Tshs. 10,000/= in the current account. The table no. 4.33 below shows that all members of staff responded not applicable that is equivalent to 100%. This to say electronic cheek conversion is the most great inhibit of the full adoption of E-banking.

(j)Credit cards

No bank issue separate credit card also the impact of it is solved by ATM. Therefore ATM is used as credit cards.

Table 4: 33 Frequency services offered Banks

	VF	%	F	%	ST	%	OC	%	NT	%
Direct services	17	85	1	5	2	10	0	0	0	0
ATMs	15	75	3	15	1	5	1	5	0	0
Point of sale	5	25	2	10	3	15	2	10	8	40
Debit card	5	25	3	15	1	5	1	5	10	50
Personal computer	2	10	2	10	1	5	0	0	15	75
Wireless	7	35	3	15	3	15	4	20	3	15
Telephone banking	1	5	2	10	2	10	0	0	15	75
Electronic Fund Transfer	4	20	3	15	2	10	1	5	10	50
Electronic Check transfer	0	0	0	0	0	0	0	0	20	100
Credit cards	-	-	-	-	-	-	-	-	-	-

Source: Researcher analysis 2011

4.8 Factors affecting full adoption of E-banking in Tanzania banking industry.

(Enablers and Inhibitors)

Although there are numerous benefits on using E-banking but the banking industry in Tanzania have not fully adopted E-banking. The research wanted to investigate the enablers and inhibitors using variables in research frame work. The table 4.34 below revealed the following:

Table 4: 34 Analysis on factors affecting full adoption of e banking in Tanzania banking industry

Reason /factors	No.	Sample population means	Standard deviation std	Confidence limit	From	To
Perceived benefits	20	1.75	0.212	95%	1.657	1.843
Perceived credibility	20	3.45	0.258	95%	3.337	3.363
Organization capability	20	3.9	0.259	95%	3.787	4.013
ICT Readiness	20	3.35	0.22	95%	3.254	3.416
Legal support	20	3.6	0.22	95%	3.508	3.692
Financial Readiness	20	3.35	0.304	95%	3.217	3.487
Pressure from Institution	20	3.2	0.307	95%	3.066	3.334

Source: Researcher Analysis (2011)

4.8.1 Perceived benefits of E-banking

E-banking is convenient, speed, round the clocks services and access to the account from any parts of the world, ease to use in various services offered by bank that is Loan processing, less transaction costs non consuming of time.

The research found that from table 4.35 below shows that 10 respondents equivalent to 50% strongly disagreed,, 6 respondents equivalent to 30% disagreed, while 3

respondents equivalent to 15% and one respondent equivalent to 5% respondent natural and agreed respectively. Also table no. 4.34 above, statistical
analysis shows that sample population mean was 1.75 and estimated population mean at confidence limit of 95% ranged from 1.657 to 1.843 which mean that perceived benefits are enablers of the fully adoption of E-banking.

4.8.2 Perceived credibility of E-banking.

Research wanted to investigate bankers are to prove beyond reasonable doubt that using E-banking services at what level of risk, security; trust and privacy. The study found that from table 4.35 below shows that 2 respondents equivalent to 10% responded strongly disagree, 3 respondents equivalent to 15% responded disagree, 3 respondents equivalent to 15 responded neutral while 8 respondents equivalent to 40% responded agreed and 4 respondents equivalent to 20% responded strongly agreed. Also table no. 4.34 above, the statistical analysis show that sample population mean 3.45 and estimated population mean at confidence limit of 95% ranged from 3.337 to 3.363, that mean perceived credibility is the most inhibitor of full adoption of E-banking.

4.8.3 Organization capability

The study investigated on the knowledge deployed to banks staff and customers also the competitive advantage or perceived relative advantage on the use and innovation of Technology of E-banking.

The researcher found that under table 4.35 below one respondent equivalent to 5% responded strongly disagree; 2 respondents equivalent to 10% responded disagree 3

respondents equivalent to 35% responded agree and 6 respondents equivalent to 30% responded strongly agreed. Also from table 4.35 above, the statistical analysis shows that sample population mean of 3.9 and estimated population mean at confidence limit of 95% ranged from 3.787 to 4.013 which mean that organization capability is the great most inhibitor of full adoption of E-banking

4.8.4 Information and Communication Technologies (ICT) industries readiness

The research wanted to study ICT infrastructure which includes Telecommunication network, internet connectivity, Technological environment. Both electronic and telecommunication act as a barrier to sustain growth of adoption E-banking the researcher found that table 4.35 below shows that 2 respondents equivalent to 10% responded strongly disagreed, 3 respondents equivalent to 15% responded disagree, 5 respondents equivalent to 25% responded neutral while 6 respondents equivalent to 30% responded agree and 4 respondents equivalent to 20% responded strongly agreed. Also under table no. 4.35 above, statistical analysis shows that sample population mean of 3.35 and estimated population mean at confidence limit of 95% ranged between 3.254 and 3.416 showing that ICT readiness in inhibitor of full adoption of E-banking.

4.8.5 Perceived regulatory support.

The study wanted to investigate legislative laws and regulatory issues how are tackled to avoid financial loss and to safeguard customers. The researcher found that table 4.35 below shows 2 respondents equivalent to 10% responded strongly

disagree, 2 respondents equivalent to 10% responded disagree, 4 respondents equivalent to 20% responded neutral, while 6 respondents equivalent to 30% responded agreed and 6 respondents equivalent to 30% responded strongly agree. Also table no. 4.34 above, the statistical analysis shows that sample population mean 3.6 and estimated population mean at confidence limit of 95% ranged from 3.508 to 3.692 which mean perceived regulatory support is most inhibitor of full adoption of E-banking in Tanzania banking industry

4.8.6 Financial Institution Readiness

E-banking offers numbers of benefits for banks as well as for their customers. E-banking is described as a wallet sharing to both financial institutions and customers (Sato and Hawkins 2001).

The study underscored the huge amount of investment and a well developed infrastructure required if they have enough budget. Also for those financial institution who do not have such investment are they ready to trade in partner? Our financial institution lack enough budget for E-banking investment and some of the small banks and financial institutions they entered into trade partnership with UMOJA SWITCH which have more 170 ATMS all over the country.

The findings on table no.4.35 below shows that 3 respondents equivalent to 15% responded strong disagree, 4 respondent equivalent to 20% responded disagree, 2 respondents equivalent to 10 % responded neutral while 5 respondents equivalent to 25% agreed and 6 respondents equivalent to 30% strongly agreed. Also the statistical analysis on table 4.34 above shows that sample population mean of 3.35 and estimated population mean at 95% confidence limit ranged from 3.47 to 3.483 that

mean financial institution readiness is an inhibitor for full adoption of E-banking in Tanzania banking industry.

4.8.7 Pressure from Institution

An Institution is a social structure that attended high degree of reliance (Scott, 2001) King. et al (1994) financial institution can have pressure form Government and government institutions, financial institutions, international bodies , resource centers and ICT services providers. The pressure which financial institution have is due to competition but also they lack laws and policies, good training, subsidy on ICT equipments and accessories, reliable electricity and ICT provider who can provide innovation directive and standard. The finding on table 4.35 below shows that 3 respondents equivalent to 15% responded strongly disagree; 5 respondents equivalent to 25% responded disagree; 2 respondents equivalent to 10% responded natural while 5 respondents equivalent to 25% responded agree and 5 respondents equivalent to strongly agreed.

Also statistical analysis on table 4.34 above showed that sample population mean of 3.2 and estimated population mean at 95% confidence limit ranged between 3.066 to 3.334 which mean pressure form institution is an inhibitor for the full adoption of e-banking in Tanzania banking industry.

Table 4: 35 (b) Factors affecting the fully adoption of E-banking

Factor/reason	SD		DA		NT		AG		SA		TOTAL	
Received benefits	10	50%	6	30%	3	15%	1	5%	0	0	20	100%
Perceived credibility	2	10%	3	15%	3	15%	8	40%	4	20%	20	100%
Organization capability	1	5%	2	10%	4	20%	7	35%	6	30%	20	100%
ICT readiness	2	10%	3	15%	5	25%	6	30%	4	20%	20	100%
Legal support	2	10%	2	10%	4	20%	6	30%	6	30%	20	100%
Financial readiness	3	15%	4	20%	2	10%	5	25%	6	30%	20	100%
Pressure from institutions	3	15%	5	25%	2	10%	5	25%	5	25%	20	100%

Source: Research Analysis 2011.

Although E-banking need huge amount of capital used for infrastructure and heavy investment for installation and maintenance of systems, the increased benefits to customers and banks, have positive impact of the adoption of e-banking. Therefore E-banking provides numerous benefits to both banks and

Customers.

Under the globalization the innovation of ICT

is vital. Thus positive impact overrides the negative impact. Therefore full adoption of E-banking is required.

Exhibit 4: 2 Factors affecting full adoption of e banking [enablers (drive) and inhibitors] E-banking in Tanzania banking industries.

Variables	Enablers (drive)	Inhibitors
Perceived benefits	To customers: conveniences speed, access of account. To bankers:- Low transaction costs, less paperwork, less staff and physical branches and profits	
Perceived credibility	Customers satisfaction (reduce conflict)	Customers trust, privacy security, risk management and loyalty
Organizational capabilities	Easy to learn increase automation processes innovation of ideas (rapid development of innovation ideas) management services (management to follow complaints and requests)	Ease of navigation Lack of knowledge to both staff and customers about internet technology and accessible of services Awareness
ICT readiness	Growth and sustainable economic progress	(a) Lack of enough budget (b) Poor ICT in fractures (c) Poor electricity power
Legislative and regulatory	(a) When there are laws and policies (b) Enhance protection of consumers rights (Reduces risks, enhance security and tmsts)	No laws and regulatory policies therefore customer fear who will bear the liability when financial loss occurs. Bankers shift burden to customers
Financial institutions readiness (FIR	(a) Productivity of employees (b) Business efficiency (c) Business partners introduction umoja switch	Profitability (high technology investment costs and need for the economies of scale for internet technology use). Lack of capital to invest and lack of business partner to join force, for small banks
Pressure from institutions	Copying of the practices and behaviors of computers or successful at high status actors	No laws and regulatory policies to safeguard consumers right on E-banking. Unconsciously imitation of attitude behaviors and practice of other organization

Source: Research Analysis 2011.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Overview

This chapter presents the conclusion for this study derived from the findings. Policy implications have been drawn to cover specific issues which need to be addressed specifically. The chapter also presents recommendations for future in matters related to full adoption E-banking by the banking industry in Tanzania. It ends by drawing attention to the areas for further research.

5.2 Summary of the findings

The study reveals that most respondents agreed that banks have experienced, aware, and skilled employees in E-banking. Customers fear to adopt E-banking due to the difficulties in using technology, trust, security, risk and reliability of the technology. Also respondents agreed that inadequacy of services offered by banks results to customers to continue using traditional distribution channel models of banking. Customers are still queuing in the bank and CRDB has gone farther by introducing a numbering machine to monitor queuing and serve as they enter in the bank, that is FIFO. The study conceptual analysis showed that respondents agreed on benefits perceived by both bankers and customers and also agreed that other variables that is perceived credibility, organizational capabilities, ICT readiness, legislative and regulatory, Financial Institution Readiness and pressure from institutions at length are inhibits of full adoption of E-banking in Tanzania's banking industries, directly or indirectly.

5.3 Conclusions

E-banking is a modern banking distribution channels which are obtained through Information and Communication Technologies (ICT) which is required under globalized banking. Banks are required to make sure that they under take full adoption E-banking in order to serve different types of customers that is holders of personal (B2C), small and medium enterprises (SMEs) and Corporate Accounts.

Banks under E-banking must be aggressive to enter into competitive market and ensure that services offered to customers are adequate, attractive in terms of quality and reliability (fast accurate and efficient), also level of risks, security, trust and privacy are observed.

E-banking is easy to use and the technology is useful to both banks and customers. It requires devices like computer network and phones. The change in technology from land line to cell phone has made the use of mobile banking easy and cheap to train customers to use.

When there are successes also there are challenges, therefore, unavailability of services like check conversion make use of E-banking to retail (personalized) customers (B2C) and leave other people continue to use traditional banking distribution models.

Customers like corporate and SMES mostly under B2B and C2C face these problems. Other inhibitors are perceived credibility, organizational capabilities. ICT readiness, legislative and regulatory, financial institutions readiness, pressures from

institutions have great impact on adoption of E- banking because customers need trust, privacy, security, knowledge and awareness, regulatory policies and laws in order to be sure who will bear the liability when financial loss occurs. There is a tendency that bankers shift burden to customers. Banks under E-banking are also required to train, to have availability of services, to have enough budget, good ICT and electricity power infrastructure, capital to invest and business partner. The banking industry has no laws and regulatory policies to safeguard consumer's rights on E-banking, unconsciously imitation of attitude, behaviors and practice of the other organization.

Although E-banking need huge amount of capital used for infrastructure and heavy investment for installation and maintenance of systems, the increased benefits to both customers and banks have positive impact of the adoption of e-banking. Therefore E-banking provides numerous benefits to both banks and customers. Under the globalization the innovation of Information and Communication Technologies (ICT) is vital. Thus positive impact overrides the negative impact. Therefore full adoption of E-banking is required.

5.4 Recommendations

5.4.1 Implication on Strategic Development of Socio-Economic

i. Network Accessibility

Banks should make sure that customers benefit from the expansion of network accessibility. Customer will adopt E-banking and development business models for network investment which reflect the behavior of Tanzania customers. This includes

low cost, low tariff models and making sure universal access strategies are effective in extending networks to remote areas, and ensuring that the poor have equity of access.

ii. Services Provided by Banks

Banks should provide comprehensive e-services which will involve all classes of customers and to all products provided by banks, including e-mortgaging. Also in order that the poor in rural area benefit from the technology, user friendly technology partnership for example UMOJA SWITCH should be promoted. Apart from mobile banking, bankers should propose to expand branch networks or services to rural areas. NMB has gone further to the district level, therefore, its ATMS could also be used by other banks customers who reside in that area.

iii. Mobile Banking

Banks are dealers to the Central Bank (Bank of Tanzania) while mobile phone operators are dealers to Tanzania Communication Regulatory Authority (TCRA). It is their duty to enable (agent) network growth as a precursor for mobile banking enhancing and scaling- up mobile banking or mobile phone financial services up-scale, encouraging implementation of second generation financial services for deepening financial access, encouraging interoperability of mobile banking and consumer protection in mobile services.

The regulators have a critical role in providing appropriate regulatory and supervisory frameworks that ensure safety and credibility of mobile banking that ultimately contribute to scaling-up of financial services. Consumer protection is a

fundamental in the mobile banking/financial services by maintaining consumer trust through ascertaining credibility and safety of mobile payment services.

Mobile phone operators should make sure that the mobile users benefit from access to financial services and it will accelerate the introduction of electronic services to the rural areas.

Create Awareness

Banks should create awareness to customers on E-banking and allied services offered through mobile banking in order to increase customers especially in rural areas who do not have banking services.

5.4.2 Regulations and Legislation

The Government and BOT are concerned to issue guidelines or policies concerned adoption of E-banking in Tanzania Banking industry. Tanzania has adopted E-banking without guidelines or policies. Also we do not have proper laws on adoption of E-banking. The Banks and Financial Act of 2006 do not cover the E-banking practice. The law still insists on documentary evidence and signature recognition, while under E- banking PIN is used for recognition. Therefore, our Tanzania's laws do not help to decide cases under cyber crimes which are increasing in the banking industry today. Customers hesitate to use E-banking because they do not trust it since there is no security and also risky on operation. The guidelines, policies, and laws will help customers to know their liability once financial loss occur; currently banks tend to shift burden to customers.

5.4.3 Capacity Buildings

In providing capacity building, banks should liaise with others actors like The Government international bodies, ICT service providers, resources centers and financial institutions.

i. Training and Knowledge Deployment

Banks require training and knowledge to employers, employees, and customers. Resource centres are required to have up to date curriculum on ICT and train employees and customers. Trained managers and employees on E-banking will bring competitive advantage or relative advantage to the bank.

ii. ICT Infrastructure

ICT infrastructure includes telecommunication network, internet connectivity, technological environment both electronic and telecommunication. Banks should have good ICT infrastructure and electricity agency.. Rural Electricity Agency will help to expand E-banking services to the rural areas.

iii. Capital and Investment

Banks should increase their capital / equity in order to overcome rapid changes in technology under internet and E-banking. IT investment requires huge amount to invest. In good corporate governance small banks which are profitable should list shares in stock market to enhance capital / equity and increase stakeholders who will be part of their corporate governance. Also they can acquire new technology for E-

banking because they will have enough capital to invest alone or enter into partnership.

5.4.4 Adoption of E-banking Technology

The TOE framework, TAM, Institutional Theory and Institutional Intervention Theory have strong theoretical bases, proven empirical supports, and applicability to wide range of IS innovation, therefore, all these theories have been adopted as underpinning theory for the research. However, all the theories described above are mostly applied and used for technology adoption studies in developed countries. The social, cultural and economic conditions of both developed countries and developing countries are different (Molla and Licker, 2005), therefore, developed countries technology adoption model cannot be applicable for developing countries without modifications in order to suit the study here in Tanzania's environment. Firstly, all the factors affecting E-banking were divided into two groups: internal and external, for better appreciation of these factors in determining technological adoption. Secondly, the role of different institutions in the adoption and diffusion process was acknowledged (Lynch, 1989, Abrahmson, 1991, Swan & Newell, 1995, Khalifa and Davision, 2006). Finally, I integrated two different approaches of research and develop an integrated framework that can better explain the E-banking adoption in Tanzania Banking Industry.

5.5 Limitations of the Study

The following were the hindrances before and during the study.

ii. Due to time and financial constraints the study experienced spatial

iii. constraints. It concentrated solely in Dar es Salam region especially the three municipalities.

iv. Also due to financial constraints the researcher selected only 100 respondents that would be capable to providing with research questionnaires and conducting interviews at their scattered places, some Bank officials from NBC, CRDB, DCB and NMB and customers.

v. In order to meet budget only one region was selected instead of all regions, in Tanzania

vi. Some respondents especially bank executives and staff were not being very open to reveal the actual situation especially when it came to giving numbers of incomes and value.

5.6 Delimitations

The Banks must be registered with the BOT as a bank. Also full adoption of e-banking can be delimited to banks which provide various banking services to customers like deposits and encashment using various instruments for example ATMS, Cheques and Withdraw forms or deposits forms and others.

5.7 Areas for Further Study.

i. Further research is still needed on the adoption of E-banking by customers especially SMES and corporate customers.

ii. Also it is important to study the impact of E-banking in social and economic development.

iii. However evaluation research on the adoption E-banking is needed. This will help to show if at all those inhibitors have been captured or not.

REFERENCES

Abrahamson (1991) ”*Institutional Theory of Innovation: International Journal of Information Technology*. vol.40, pp 41-95

Ajzen, I. (1991). "The theory of planned behavior: Some unresolved issues." *Organizational Behavior Human Decision Processes* 50(2): 179-211.

Attaran, M. (2000). "Managing legal liability of the Net: a ten step guide for IT managers." *Information Management & Computer Security* 8(2): 98-100.

Basel committee (1998)”Bank supervision.” *Basel committee* (2001)”

Risk management and Banking supervision.” CBN (2004)”Guidelines on Adoption of E-banking in Nigeria. *Issued by the Central Bank of Nigeria*.”

CBN, (2003). “Guidelines on adoption of E-Banking in Nigeria Issued by Central Bank of Nigeria”.

Celik, H. (2008). "What Determines Turkish customers' acceptance of internet banking?" *International Journal of Bank Marketing* 26(5): 353-370.

Cheng, T. C. E., (2006). "Adoption of internet banking: An empirical study in Hong Kong." *Decision Support Systems* 42: 1558-1572

Chircu, A. M. and R. J. Kauffman (2000). "Limits to value in electronic commerce related IT investments." Journal of Management Information Systems 17(2): 59-80.

Chong, S. and G.Pervan (2007). “Factors Influencing the Extent of Deployment of Electronic Commerce for Small-and Medium-Sized Enterprises” Journal of

Electronic Commerce in Organizations, 5(1), 1-29, January-March

Claessens,S. and T. Glaessner, (2002). “E-Finance in Emerging Markets: Is Leapfrogging Possible?” Financial Markets Institutions & Instruments 11(1): 1-125

Damsgaard, J. and K. Lyytinen (2001). "The Role of Intermediating Institutions in Diffusion of Electronic Data Interchange (EDI): How industry associations in the grocery sector intervened in Hong Kong, Finland, and Denmark," *The Information Society* 17(3): 195-210.

Daniel, E. (1996), “Provision of Electronic Banking in UK and The Republic of Ireland”:International Journal of Bank Marketing, 17,2,72,82.

David Crackwell (2004)” *Electronic for Panacea. Potential and Pitfalls*.”

Davis, F. D. (1985,1989)"Perceived usefulness, perceived ease of use, and user Acceptance of information technology" *MIS Quarterly* 13(3): 319-340.

Dholakia, R. R. and N. Kshetri (2004). "Factors Impacting the Adoption of the Internet among SMEs." *Small Business Economics* 23: 311-322.

DiMaggio, P. J. and W. W. Powell (1983). "The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields." *American Sociological Review* 48: 147-160.

Easing W and Storey (1996) “The value Multi-Distribution system in Financial services sector Service Industries”; *journal* no2, pp 223-241.”

Fishbein, M. and I. Ajzen (1975,1980). "*Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*." Boston, Ma: Addison Wesley.

Gehling, R. and D. Turner (2007), “Defining the proposed factors for small business online banking: Interviewing the IT professionals.” Journal of Financial Services Marketing. 12(3): 189-196

Holden, (1991), “Law and Practice of Banking” vol. 1: Banker and Customer relationship

Karjaluoto, H., M. Mattila, et al. (2002). "Electronic banking in Finland: consumer beliefs and reactions to a new delivery channel." *Journal of Financial Services Marketing* 6(4): 346-361.

Khalifa, M. and R.M. Davison (2006). “SME Adoption of IT: The Case of Electronic Trading Systems.”IEEE Transactions on Engineering Management, Vol.53, no.2, pp.275-284

Kim, J. J. (2004). "New Borrowers Get Credit Break” *Wall Street Journal* 244(August 225)(D2).

King, J., and V. Gurbaxani, (1994). "Institutional Factors in Information Technology Innovation." *Information Systems Research* 5(2): 139-169.

Kleijnen, M. H. P., and M. Wetzels, (2004). "Consumer Acceptance of Wireless Finance." *Journal of Financial Services Research* 8(3): 206-217.

Kombo, D.K. and Tromp, D.L.A (2006)”*Proposal and Thesis writing:An Introduction.*

Kothari {2003)”*Research methods.”Methods and Techniques: 3rd edition*

Kuan, K.K.Y. and P.Y.K. Chau (2001). “ A perception-based model for EDI adoption in small businesses using a technology-organization-environment framework.” Information & Management, vol.38, no.8, pp.507-521.

Liao, S. and Y. P. Shao, (1999). "The adoption of virtual banking: an empirical study." *International Journal of Information Management* 19 63-74.

Lin, C.-Y. (2008). "Determinants of the adoption of technological innovations by logistics service providers in China." *International Journal of Technology Management and Sustainable Development* 7(1).

Lina, H.-F. And S.-M. Lin (2008). "Determinants of e-business diffusion: A test of the technology diffusion perspective." *Technovation* 28: 135-145.

Lynch, J. (1989). "Looking overseas for new members." *Association Management*: 110- 115.

Mbura,O. (2007) " Entrepreneurships ". PHD Thesis, University of Dar es Salaam.

McCole, P. and E. Ramsey (2005). "A profile of adopters and non-adopters of e-Commerce in SME professional service firms." *Australasian Marketing Journal* 13(1): 36-48.

Mirchandani, D.A. and J. Motwani, (2001). " Understanding Small Business Electronic Commerce Adoption: An Empirical Analysis." Journal of Computer Information System,vol.41, no.3,pp.70-73.

Molla, A. and P. S. Licker (2005). "E-commerce adoption in developing countries: a model and instrument." *Information & Management* 42: 877-899.

Moore, G. C. and I. Benbaset (1991). "Development of an instrument to measure the perceptions of adoption an information technology." *Information Systems Research* 2(3): 173-191.

O'Connell, B (1996) "*Australian banking on internet –fact or fiction Australia Bankers* pp212-214

Polatoglu, V. N. and S. Ekin (2001). "An empirical investigation of the Turkish consumers' acceptance of internet banking services." *International Journal of Bank Marketing* 19(4): 156-165.

Poole, M. S. and A. H. Van de Ven (1989). "Toward a general theory of innovation." *Research on the management of innovation* New York, NY: HarperCollins, Ballinger Division: 637-662.

Porteous, David (2006) *Enabling environment for mobile banking in Africa. Report commissioned by Development for International Development*.

Rahman, M. M. (2007). "Innovative Technology and Bank Profitability: The Bangladesh Experience." *Policy Analysis Unit* (PAU), Bangladesh Bank WP 0803.

Rogers, E. M. (1962, 1983, 1995). "*Diffusion of Innovations*, 1st, 2nd and 3rd edition" Free Press, New York Times 4.

Rotchanakitumnuai, S. and M. Speece (2003). "Barriers to Internet banking adoption: a qualitative study among corporate customers in Thailand." *International Journal of Bank Marketing* 21(6/7): 321-23.

Sathye, (1999). " The Internet Banking in Australia: Factors which drive or inhibit Internet Banking" International Journal of Bank Services

Sato, S. and J. Hawkins (2001). "Electronic finance: an overview of the issues." BIS Papers 7: 1-12.

Saunders, M. Lewis, P. & Thornhill, A (2009)"*Research methods for Business Students.*.

Scott, W. R. (2001). "Institutions and Organizations." *Thousand Oaks*, CA 2nd Ed..

Scupola, A. (2003). "The adoption of Internet commerce by SMEs in the south of Italy: An Environmental, Technological and Organizational Perspective." *Journal of Global Information Technology Management* 6(1): 52-71.

Shi, W., and N. Shambare, (2008). "The adoption of internet banking:

An institutional theory perspective." *Journal of Financial Services Marketing* 12(4): 272-286.

Smith, A. D. and William T. Rupp (2003). "E-banking: Foundations of Financial and Consumer Marketing in an Information Intensive Society." *Journal of e-Business and Information Technology* 3 (1): 5-19.

Swan, J. and S. Newell (1995). "The role of professional associations in technology diffusion." *Organization Studies* 16: 847-874. 24

Tan, M. and T. S. H. Teo (2000). "Factors influencing the adoption of Internet banking." *Journal of the AIS* 1(5): 1-42.

Teo, H. H., and K. K. Wei, (2003). "Predicting intentions to adopt inter organizational linkages: An institutional perspective." *MIS Quarterly* 27(1): 19-49.

Thomas, D. S., and K. A. Forcht, (1998). "Legal considerations of Internet use-issues to be addressed." *Internet Research: Electronic Networking Applications and Policy* 8(1): 70-4.

Tornatzky, L. G. and M. Fleischer (1990). "The Processes of Technological Innovation."

Venkatesh, V. M. G. Morris (2003). "User acceptance of information technology: towards a unified view." *MIS Quarterly* 27(2): 425-478.

Wan, W. W. N., and C. L. Luk, (2005). "Customers' adoption of banking channels in Honk Kong." *The International Journal of Bank Marketing* 23(2/3): 255-272.

Wang, Y. S. and Y. M. Wang (2003). "Determinants of user acceptance of InternetBanking: An empirical study." *International Journal of Service Industry Management* 14(5): 501-519.

Wolfe, R. A. (1994). "Organizational innovation: review, critique and suggested research directions." *Journal of Management Studies* 31: 405-431).

Xu, S and K. Zhu, (2004). "Global Technology, Local Adoption: A Cross-Country Investigation of Internet Adoption by Companies in the United States and China."*Electronic Market* 14 (1): 13-24.

Zekos, G. I. (2004). "Cyberspace and E-Finance"

Hertfordshire Law Journal, 2(1): 31-44.

Zhu, K., and K. Kraemer, (2003). "Electronic business adoption by European firms: a cross-country assessment of the facilitators and inhibitors." *European Journal of Information System* 12: 251-268.

Zhu, K. and K. L. Kraemer (2005). "Post-adoption variations in usage and value of e-business by organizations: Cross-country evidence from the retail industry." *Information Systems Research* 16(1): 61-84.

Zhu, K. and K. L. Kraemer, (2004). "Information technology payoff in e-business environments: An international perspective on value creation of e-business in the financial services industry." *Journal of Management Information Systems* 21(1): 17-54.

Zhu, K. and K. L. (2006). "The Process of Innovation Assimilation by Firms in

Different Countries: A Technology Diffusion Perspective on *E-Business."* *Management Science* 52 (10): 1557-1576.

A. QUESTIONNAIRE: CUSTOMER

RESPONDENT NO: ……..

Dear Respondent,

I am conducting a research to learn about the adoption of E-banking in Tanzania Banking Industry, the case of Banks allocated in Dar es Salaam Region (NBC, CRDB, NMB, and DCB) being Partial fulfillment of master in Business Administration Degree (MBA) with open university of Tanzania (OUT) Please take a bit of your time to give your opinion about the adoption of E-banking in Tanzania Banking Industry. Thanking you in anticipation.

Yours:

Illuminatus Jones Mkoka

Researcher (OUT Student)

You may indicate your preferences by ticking in the boxes provided or just fill in the blank space.

(A) ROUND INFORMATION

I). Individuals

a. Age ……..

b. Sex/Gender: i) Male ☐ ii) Female ☐

c. Martial status i) Single ☐ ii) Married ☐ iii) Divorced ☐

d. Education level

i) Primary ☐ ii) Secondary ☐ iii) Graduate ☐ iv) ☐ Postgraduate

II) Corporate Customers Category

a) Limited Company ☐ ii) Club sand association ☐ iii) others ☐ specify……

Including NGO_S+CBO_S

(b) Which business sector

i) Bank/ finance ☐ ii) Insurance ☐ iii) Wholesale/Retail ☐

iv) Manufacturing ☐ v) IT ☐ vi) Others ☐ specify ……..

(a) Age from the date of establishment /Registration ……..

B. Internet and E-banking services

3. Do you have Internet? i) Yes ☐ ii) No ☐

1. What type of Bank accounts do you use?

i) Savings ☐ ii) current accounts ☐ iii) others ☐ specify ……

2. How long have you been using bank services?

i) less than a year ☐ ii) 1-3 years ☐ iii)3-5 years ☐

iv) Over five years ☐ please specify……

3. What is the internet for?

i) Money transfer ☐ ii) Loan application ☐ iii) Information ☐ search

iv) Bill payment ☐ v) Basic communication ☐ vi) Advertisement, ☐

Marketing products/services ☐ viii) others ☐ please specify ……

4. Do you own website? i) Yes ii) No

5. If the answer for (4) is Yes what is the usage of the website?

i) Money transfer ☐ ii) Loan application ☐ iii) Information search ☐

iv) Bill payment ☐ v) Basic communication ☐ vi) Advertisement, ☐

vii) Others please specify

6. We understand the bank offers ATM bank services. Do you use these services?

i) Yes ☐ ii) No ☐

7. For how long have you been using ATM services?

i) less than a year ☐ ii) 1-3 years ☐ iii) 3-5 years ☐

iv) Over 5 years ☐ Others please specify……..

8. What services do you get from the ATM?

i) Depositing money ☐ ii) Encashment ☐ iii) Balance of the account ☐

iv) Min statement ☐ v) others please specify …….

9. Have you ever experienced difficulties or problems with ATM services?

i) Very frequently ☐ ii) Frequently ☐ iii) Sometimes ☐

iv) Occasionally ☐ v) Not at all ☐

10. Have you ever heard or seen other people experiencing problem with ATM services?

i) Yes ☐ ii) No ☐

11. How many people have you seen complaining?

i) 1-5 people ☐ ii) 6-10 people ☐ iii)11-20 people ☐

iv) Over 20 people ☐ Others please specify ……

12. What could you think have been the cause of the difficulties or problems in using ATM services please scale and tick √ the appropriate box from strongly disagree to strongly agree.

Causes	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Failure of the system					
Slow response time					
Low customer knowledge on ATM					

12. How often the problems happen? Please scale and tick √ the appropriate box.

i) very frequently ☐ ii) frequently ☐ iii) occasionally ☐

iv) Somewhat ☐ v) never happen ☐

13. Generally, what are your views about ATM services?

i) Excellent ☐ ii) Very good ☐ iii) Good ☐

iv) Satisfaction ☐ v) Poor ☐

14. The bank also gives services of lending money. Have you applied for a Loan?

i) Yes ☐ ii) No ☐

15. What mode of instructions did you use to negotiate loan?

i) Telephone calls or sms banking ☐ ii) E-mail ☐

iii) Personally visit to the bank and fill the necessary forms ☐

iv) Others ☐ Please specify ……

16. In returning to the Loan. What mode of instruction did you use

i) Telephone calls and sms banking ☐

ii) E-mail to instruct bank debit your account ☐

iii) Personally visit the bank and sign banker instruction/order to debit your account ☐

iv) Others: ☐ Please specify …….

17) Have you received or applied for documentary letters credit?

i) Yes ☐ ii) No ☐

18) Which mode used to receive or sent documents?

i) Electronically ☐ ii) Courier ☐ iii) Others: Please specify ……..

19. E-banking is providing banking services electronically via internet. It is also concerning transferring or exchange services and/or information via computer networks. Are you aware of E- banking? i) Yes ☐ ii) No ☐

20. If yes, which of the following services offered by your bank are you using? (Tick multiples)

i) Direct debit ☐ ii) ATM ☐ iii) Point of sales (Pos): Debit cards, credit ☐ cards

iv) Personal computer banking ☐ v) wireless banking ☐

vi) Telephone banking ☐ vii) others: Please specify ……

21. It is argued that less developing countries (LDC) fail to fully adoption of E-banking what do you think could be the reason?

No	Reasons	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i.	Legal issues /support					
i.	Regulatory issues/ support					
i.	Government					
v.	Donors					
v.	Security of the system					
i.	Reliability of the system					
i.	Privacy and trust					
i.	Risk involved					
x.	Lack of knowledge					
x.	Organizational capability					

Good Luck

A QUESTIONNARE: BANK STAFF AND MANAGEMENT.

RESPONDENT NO. ……..

Dear Respondent

I am conducting a research to learn about the adoption of E-banking in Tanzania Banking Industry. Case of banks allocated in Dar es Salaam Region (NBC, CRDB, NMB and DCB). Being Partial fulfillment of Masters in Business Administration Degree (MBA) with Open University of Tanzania .Please take a bit of your time to give your opinion about the adoption of e –banking in Tanzania.

Thanking you anticipation.

Yours:

lluminatus Jones Mkoka

Researcher (Out student)

You may indicate you're your preferences by ticking in the boxes provided or just fill in the blank space.

A. RESPONDENT PROFILE

(a) Sex /Gender: i) Male ☐ ii) Female ☐

(b) Education level:

i) Secondary ☐ ii) Certificate/Diploma ☐

iii) Graduate ☐ iv) Postgraduate ☐

(c) Your position in the bank:

i) Director ☐ ii) Manager ☐ iii) Officer ☐

iv) Ordinary Staff ☐ v) others: ☐ Please specify ……..…

(d)Department you are working:

i) Accounting ☐ ii) IT ☐ iii) Credit and Risk ☐

iv) Trade finance ☐ v) Corporate ☐ vi) Retail ☐

vii) Customers services ☐ viii) others: ☐ Please specify

……

(e)Experience you have concerning your position.

i) Less than a year ☐ ii) 1-3 years ☐ iii) 4-5 years ☐

iv) Over years ☐ Please specify …….

B. INTERNET AND E-BANKING USAGE

(1) Does your bank have an IT Department?

i) Yes ii) No

(2) Does your bank do business internationally?

i) Yes ii) No

(3) Do your bank have Internet services?

i) Yes ii) No

(4) If your answer to question no. 2 Yes, what is the internet for?

i) Money transfer ☐ ii) Loan applications ☐ iii) Information search ☐

iv) Accounts information ☐ v) Basic communication eg E-mails ☐

(5) Does the bank own a website?

i) Yes ☐ ii) No ☐

(6) If your answer to question (5) is yes. What is the usage of the bank Website?

i) Advertisement and marketing of Products and services ☐

ii) Communication with Customers. ☐

iii) Conducting Customers bank operations ☐

iv) Others ☐ Please specify …….

(7) E-banking is providing banking services electronically Via Internet. It is also concerning transferring or exchanging services and /or information Via Computer networks. Is the bank use –E-banking?

i) Yes ☐ ii) No ☐

(8) If your answer to questions (6) is yes, for how long has your bank been using E-banking?

i) Less than a year ☐ ii) 1-3 years ☐ iii) 4-5 years ☐

iv) Above 5 years ☐ Please specify……..

(9) What does the bank use e- banking mainly for?

i) Advertisement / Marketing and selling of service products ☐

ii) On live banking operations and customers services ☐

iii) Loan application and processing including Mortgage ☐

iv) Bill payments ☐

v) Transfer of funds ☐

vi) Other ☐ Please specify …….

10. What services do customers get from the bank through internet technology? Tick one or more below

Account information ☐

Loan application and processing ☐

Bills payments ☐

Balance and account activity ☐

Transfer of funds between linked accounts

i) Other translations: please specify ……. ☐.

11. Do your bank offer E-banking through the following and how often the customers

use the services?

No	Services	Very frequently	frequently	occasionally	Not in use
i.	Direct Debits				
i.	ATM				
i.	Point of sale				
	Debit cards				
	Credit cards				
v.	Personal computer				
v.	Wireless banking				
i.	Telephone banking				
i.	Others : specify				

12. It is argued that banks in less developing countries (LDC) have not adopted E-banking fully. What do you think could be the reasons? Please tick each reasons by scaling from strongly disagree to strongly agree ☐

No	Factor/Reasons	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
i.	Perceived benefits					
i.	Perceived credibility (risk, trust, privacy, security)					
i.	Organizational capabilities					
v.	ICT service provider industry readiness					
v.	Legal support					
i.	Regulatory support					
i.	Financial Institution readiness (partnership : Switches)					
i.	Government					
x.	Donors (international					
x.	Resource centre (training institution and universities)					

C: <u>FOR DECISION MAKERS ONLY (Executive, director and managers)</u>

13. How many customers do you have in your branch?

i) Below 50,000 customers ☐

ii) 50,000 – 100,000 customers ☐

iii) 100,000 – 500,000 customers ☐

iv) 500,000 – 1,000,000 customers ☐

v) Above 1,000,000 ☐

vi) Please specify ……

14. Debit cards are issued by banks. How many customers do they have debit cards? ☐

i) below 50,000 customers

ii) 50,000 – 100,000 customers ☐

iii) 100,000 – 500,000 customers ☐

iv) 500,000 – 1,000,000 customers ☐

v) Above 1,000,000

vi) Please specify ……

15. Visa Cards is a debit card lets customers to access the bank accounts anywhere in the world. How many customers do they have visa cards?

i) below 10,000 customers ☐

ii) 10,000 – 50,000 customers ☐

iii) 50,000 – 100,000 customers ☐

iv) above 100,000 customers ☐

v) Please specify ……

16. Does the bank have privacy policy concerning the security of information rendered over Internet?

i) Yes ☐ ii) No ☐

17. Which type of system used to secure the bank transaction done on live?

i) Firewall ☐ ii) secure socket layer (SSL) encryption ☐

iii) Transport layer security ☐ iv) others ☐ please specify ……..

18. Does the central bank ad others regulatory bodies issued regulations policies or guidelines on adoption of E-banking in Tanzania?

i) Yes ☐ ii) No ☐

19. Does legal bodies issued laws governing the adoption of E-banking in Tanzania?

i) Yes ☐ ii) No ☐

20. How many crimes are committed using Internet Banking in your Bank?

In terms of number of outcomes…….In terms of amount TZS……..

21. Are laws of Tanzania capable to regulate Cyber crimes such as e-financial crimes, e-fraud and other related offences created under cyberspace?

i) Yes ii) No

22. Comment to your answer in (21) above

……..……

……

……