OPPORTUNITY AND CHALLENGES OF ELECTRONIC BANKING IN NIB INTERNATIONAL BANK (A CASE STUDY ON WOLKITE BRANCH)

A research paper submitted to Department of Accounting and Finance for the partial fulfillment of the requirement of Bachelor of Art Degree in Accounting and Finance

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ABSTRACT

Despite the growth of e-banking adoption worldwide, Ethiopian banks continue to conduct most of their banking transactions using traditional methods. The general objective of the study was opportunity and challenges of electronic banking in Nib International Bank (a case study on wolkite branch). Descriptive research design was employed to conduct this study. Primary data were collected for the purpose of this study from the employee of the branch. The collected data was analyzed by using descriptive analysis such as tables and percentages. The study identified benefits of E-banking services that the banks get as a result of providing e-banking services as well as the benefits the customers gets as a result of using e-banking services. The response of Questioners and interview shows that there are certain issues that become a challenge for the electronic banking services in Nib international bank of wolkite branch. In this regard, the result of the study indicated that the major challenges for the electronic banking services as of risk related challenges, infrastructural related challenges, legal and regulatory issue related challenges, and illiteracy related challenges. The study suggests a series of measures which could be taken by the government as well as Nib international bank of wolkite branch to address various challenges identified in the study.

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ACRONYMS

ATM - Automated Teller Machines

E-banking- Electronic Banking

EC-Electronic commerce

EFT-Electronic Fund Transfer

E-Payment-Electronic Payment

ICT - Information Communication Technology

NIB – Nib international bank

POS - Point of Sale

SMS–ShortMessageService

SWIFT-SocietyforWorldwideInter-BankFinancialTelecommunication

Contents

ABSTRACT ……i

Acknowledgement ……ii

ACRONYMS ……iii

List of Tables ……viii

CHAPTER ONE 1

Introduction 1

1.1 Background of the Study ……1

1.2 Statement of the Problem ……3

1.3 Research Questions ……5

1.4 Objective of the Study ……5

1.4.1. General objective 5

1.4.2. Specific objectives 5

1.5. Scope of the Study ……5

1.6 Limitation of the Study ……5

1.7 Significance of the Study ……6

CHAPTER TWO 7

Literature Review 7

2.1 Theoretical Review ……7

2.1.1 Introduction to E-banking 7

2.1.2 Definition of E-Banking 8

2.1.3 Evolution of E-Banking 9

2.1.4 E-Banking Channels: 10
2.1.4.1 Internet banking 10
2.1.4.2 Types, Benefits and Features of Electronic Payment Methods 12
2.1.4.2.1 Types 12
2.1.4.2.2 Benefits of E-Cards 13
2.1.4.3 Mobile Banking 13
2.1.4.4 Tele Banking 14
2.1.4.5 Home Banking 14
2.1.4.6 Point of Sale Terminal 14
2.1.4.7 Society for Worldwide Inter-Bank Financial Telecommunication (SWIFT) 14
2.1.5 Importance of E-Banking 14
2.1.5.1From the Banks Point of View 14
2.1.5.2 Benefits from the Customers' Point of View 17
2.1.6 E-Banking Risks 18
2.1.7 Typical Security Technologies Applicable to Control System Networks 20
2.2 Empirical Evidence 22
2.2.1 Challenges and prospects of E-Banking Adoption 22
Challenges 22
2.2.2 Perceived advantages that Initiate Banks to Adopt E-Banking 24
2.2.3 Drivers and Barriers of E-Banking Adoption 25
2.2.4 Constraints and Drive Forces for the Adoption of E-Banking in Africa 25
2.3 CONCLUSION AND KNOWLEDGE GAP 26
CHAPTER THREE 27
Research Methodology 27
3.1 Introduction 27

3.2. Research Design 27
3.3. Target population 27
3.4. Sampling techniques and Sampling size 28
3.5. Data Source and Method of data Collection 28
3.6. Method of Data Analysis 28
CHAPTER FOUR 29
RESULTS AND DISCUSSION 29
4.1 Introduction 29
Table 4.1: Personal Information of respondents 29
Table 4.2 educational background and work experience of employees 30
Benefits of E-banking to bank 31
Table 4.3 Benefits of E-banking to bank 31
Table 4.4 Benefit of E-banking to bank 32
Table 4.5 options (benefits) available to the customer once they have accessed e-banking 33
Table 4.6 benefits of e-banking to customers 35
The challenges related to e-banking service 37
Table 4.7 Infrastructural challenges 37
Table 4.8 Illiteracy related challenges 39
Table 4.9 Regulatory and legal challenges 41
Table 4.10 other challenges 42
Analysis of interview questions 43
CHAPTER 5 47
CONCLUSION AND RECOMMENDATION 47
5.1 Introduction 47

5.2 Conclusions ……47

5.3 Recommendation…… 49

REFERENCES…… 50

APPENDIX ……54

List of Tables

Table 4.1 Personal information of respondents

Table 4.2 Educational background and work experience of employees

Table 4.3 Benefit of e-banking to the bank

Table 4.4 Benefit of e-banking to the bank

Table 4.5 Benefit of e-banking to the customers

Table 4.6 Benefit of e-banking to the customers

Table 4.7 Infrastructural challenges of e-banking

Table 4.8 Illiteracy related challenges of e-banking

Table 4.9 Regulatory and legal issue related challenges of e-banking

Table 4.10 Other challenges of e-banking

CHAPTER ONE

Introduction

1.1 Background of the Study

Technological innovations play a crucial role in banking industry by creating value for banks and customers, that it enables customers to perform banking transactions without visiting a brick and mortar banking system. On the other hand, E-banking has enabled banking institutions to compete more effectively in the global environment by extending their products and services beyond the restriction of time and space (Turban, 2008).

Electronic Banking has been widely used in developed countries and is rapidly expanding in developing countries. In Ethiopia, however, cash is still the most dominant medium of exchange, and electronic payment systems are at an embryonic stage. In the face of rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia's financial sector cannot remain an exception in expanding the use of the system. (Alam, 2010).

The concepts of e-banking become popular when the banking activities and information technology are merged. When the internet facilities enter into the banking sector, the inter-bank activities are linked through internet, the concept of "Electronic Banking or Net Banking" is also introduced. Electronic banking enables a customer to do banking transactions through the bank's website in the internet. It is more or less like bringing the bank to customer's computer at the place and time of customer's choice. (Devamohan, 2002).

The application of this electronic banking service has become a subject of fundamental importance and concerns to banks and indeed a prerequisite for local and global competitiveness in the banking industry. This in turn motivates banks to spend more on information technology so as to achieve maximum returns and to attract large number

of clients (Husni and Noor 2011).

All banks in Ethiopia are too late to move with technological advancement and they should clearly chart out the time schedule for their integration and technological advancement. Some of the banks even today do not have their own websites which can help them to provide at least the information on financial services offered by them.

In order to improve the practice of E-banking in developing countries, a better understanding of the challenges and practices of e banking is critical (Zhao et al. 2008). By gaining an in-depth understanding of the factors and conditions that influence developing country's ability to fully adopt and realize its benefits, strategic implications can be generated for the researchers and practitioners regarding how to promote the growth of E-banking in the developing countries. Therefore, this study is designed to examine, understand and recommend some basic solution about challenge and practice of E-banking in Ethiopia and to address the current gap in the literature Turban (2002).

Currently, there is rising competitiveness in the financial service market which resulted in force to expand and exploit different delivery mechanisms to stay and sustain in the market. A strong banking sector is vital in every nation and can have an important consequence in supporting economic development through efficient financial services. The role of the banking sector is going with the globalization movement at the practical level. This change will comprise moving from conventional service to electronic service delivery of banking services. E-Banking scheme has paved the way of opportunity to the existing banks and financial sector. This technology allows business process re-engineering, serving borderless market, to attain zero latency leading to development in customer service levels and better risk administration because of real-time settlement. Since its evolution in 90thdecades, it is having unprecedented growth. The growth rate is higher in developed nations and lower in least developed nations (Chang, 2003; Gallup, 2008).

Most banks in developing parts of the world are now offering e-banking services with various levels of development (Garau, 2002). However, comparative to the development of e-commerce, the adoption of electronic banking (e-banking) system is not well

developed in Ethiopia and still cash is the most dominant medium of exchange (Gardachew, 2010).

The rapidly growing information and communication technology is knocking the front door of every bank in the world, where Ethiopian banks would never be exceptional. Electronic Banking has been widely used in developed countries and is rapidly expanding in developing countries. In Ethiopia, however, cash is still the most dominant medium of exchange, and electronic payment systems are at an evolving stage. In the face of rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia's financial sector cannot remain an exception in expanding the use of the electronic banking system. In this context, the study will attempt to trace the present status of e-banking system in Nib International Bank, visualizing the opportunities and looks at the challenges faced in providing the service.

1.2 Statement of the Problem

In this era of globalization, with increased competition around the globe in all sectors, a strong banking industry is important in every country and can have a significant effect in supporting economic development through efficient financial services; as a result, many banks in the world are modifying their strategies to reach customers worldwide more easily and cheaply.

Therefore, banks are developing the technologies that will help them deliver banking products and services by the most cost-effective channels and one of such channel is adoption of e-banking or internet banking. E-banking is a way to keep existing customers and attract new ones to the bank. The transaction costs of providing these services are lower than the traditional approach. The rapidly growing information and communication technology is knocking the front door of every organization in the world (Booz& Hamilton, 2011).

Despite this growth of IT worldwide, Ethiopian banks continue to conduct most of their banking transactions using traditional methods. In Ethiopia, however, cash is still the most dominant medium of exchange, and electronic payment systems are at an infant stage.

In the face of rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia's financial sector remain behind in expanding the use of the system. Certainly, the banking industry in Ethiopia is under developed with a growing number of import-export businesses, and increased international trades, increase the demand of the customer and international relations, the current banking system is short of providing efficient and dependable services Turban (2005)

The customers of Ethiopian commercial banks have missed to enjoy with the technological advancement in banking sector, which has been entertained elsewhere in African and the rest of the world. The modern e-banking methods like ATMs Debit cards, Credit cards, Tele banking, Internet banking, Mobile banking and others are new to the Ethiopian banking sector. E-banking which refers to the use of modern technology that allows customers to access banking services electronically whether it is to withdraw cash transfer funds, to pay bills, or to obtain commercial information and advices are little known in Ethiopia. In Ethiopia, it is difficult to withdraw money without presenting the passbook and money transfer is allowed only in between branches of the same bank. However, from the public and the economy there is a strong need for strengthening linkages among banks in order to allow healthy flow of financial resources among financial institutions and optimize the contributions of the entire financial system to the development processes as whole Daniel, (2009)

According to Zairi A (2003) all banks in Ethiopia are too late to move with technological advancement. Every bank customer is highly dissatisfied by the disappointing status of financial development in Ethiopia. Even the time wasted in traveling for search of bank branches and the long waiting time to access the account is disappointing. This is particularly because of the non-integration of branches of the same bank, i.e. even within individual banks, their branches are not linked to each other and it is necessary for the customer to physically visit the branch in which an account has been opened**.** In addition, even though there are opportunities for the adoption of e-banking service in the banking industry, lack of concern or lack of giving priority on the side of the government and the national bank of the country is the main cause for the low development of e-banking service in the banking sector.

Finally, even though there were researches conducted in other countries like Bangladesh and revealed that unavailability of a backbone network connecting the whole country; inadequacy of reliable and secure information infrastructure especially telecommunication infrastructure; inactive ICT penetration in banking sector; insufficient legal and regulatory support fore-banking system etc. were the major challenges for the efficient system of e-banking in the country (Mohammad, 2008). Therefore, the research gap that there was no more prior study conducted in Nib international bank especially on the case study area that was on Wolkite branch. Thus, the purpose of this paper was assessment of the prospects (opportunities) and challenges of e-banking system in Nib international bank Wolkite branch.

1.3 Research Questions

1. What are the opportunities of E- banking services to the bank?
2. What are the opportunities of E- banking services to the customers?
3. What are the major challenges in implementation of E-banking in nib international bank?

1.4 Objective of the Study

1.4.1. General objective

The general objective of the study was to assess the prospects (opportunities) and challenges of e-banking system in Nib international bank Wolkite branch.

1.4.2. Specific objectives

1. To assess the opportunities of E- banking services to the bank.
2. To investigate the opportunities of E- banking services to the customers.
3. To identify the challenges in implementation of E-banking in nib international bank.

1.5. Scope of the Study

The study was confined to assess the prospects (opportunities) and challenges of e-

banking system of Nib international bank Wolkite branch. For the sake of uniformity and due to their more involvement in retail banking, only data that was obtained from Nib international bank Wolkite branch was used in this study. Moreover, the study focused only on the assessment of the prospects (opportunities) and challenges of e-banking system in the viewpoint of Nib international bank Wolkite branch.

1.6 Limitation of the Study

The focus of this study was on the assessment of prospects (opportunities) and challenges of e-banking system in Nib international bank Wolkite branch. Owing to the initial stage of e-banking system available in Ethiopia, it was very difficult to get secondary data as well as literature in this area from Nib international bank perspective. In addition, time and financial constraints was also become the main limitation of the study. And also unwillingness of the respondents to give relevant information was also the major limitation which brings inaccurate information on the study.

1.7 Significance of the Study

Since E-banking system is in an infant stage in Ethiopia, by investigating the different opportunities and challenges for the adoption of this service delivery channel and by recommending solutions for the identified problems, this study was help banks to benefit from the adoption of this technology. In addition, it helps to fill significant knowledge gaps about e-banking landscape in Ethiopia; thereby it was give insight to researchers and students about the problem and stimulates further investigation of the issue.

CHAPTER TWO

Literature Review

This chapter contains both the theoretical and empirical review of the study. The theoretical framework includes: introduction to e-banking, definition of e-banking, evolution of e-banking, e-banking channels, importance of e-banking, e-banking risks and banking in Ethiopia respectively. In addition, it also includes empirical review of the study from different researchers in different countries.

2.1 Theoretical Review

2.1.1 Introduction to E-banking

According to Mohammed Shamsuddoha (2008), electronic Banking is transforming the

financial services industry through various innovations. The quantity of cross-border trading and other financial activities is increasing geometrically make possible by technology. It has been made possible by technology, particularly information technology to generate, collect and process information about bank operation and bank customers efficiently and effectively.

It provides the ability to create more effective systems of controls in individual institutions and in the market themselves. Compared to the paper based operation, Electronic Banking Systems, in its most proficient form, offer instant verification and transfer and reduces the flow of costly paper in the record keeping process.

According to Binyam T. (2009)Banks have developed electronic banking service for three main reasons: To protect and increase market share; To reduce operating cost by substituting physical capital and technology for labor; To generate new revenue Electronic banking allow banks to expand their markets for traditional deposit taking and credit extension activities, and to offer new products and services or strengthen their competitive position in offering existing payment services. In addition, electronic banking could reduce operating costs for banks.

More broadly, the continued development of electronic banking and electronic money may contribute to improving the efficiency of the banking and payment system and to reducing the cost of retail transactions nationally and internationally.

Although many financial instrument and systems are now considered as “Electronic Banking” came into the terminology of the financial world in the late 1980s, with the possibility of emergence of true electronic money. All sorts of back-office information management technology and financial services using electronic devices can be included intothe term “Electronic Banking”. The development in information technology has contributedpositively to economic growth through several channels. ICT has led to a productivity growththrough the impact on activity processes. Banks have been increasing their own size and financial strength and expanding the scope of their products lines to meet the growing demand of their customers .Aladwani, Adel (2001).

2.1.2 Definition of E-Banking

E-banking is the modern delivery channel for banking services. Banks have used electronic channels for years to communicate and transact business with both domestic and international corporate customers. With the development of the Internet and the World Wide Web (WWW) in the latter half of the 1990s, banks are increasingly using electronic channels for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as e-banking or Internet banking, although the range of products and services provided by banks over the electronic channel vary widely in content, capability and sophistication.

E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. The definition of e-banking varies amongst researches partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Mols, 1998; Sathye, 1999). For example, Burr (1996) describes it as an electronic connection between bank and customer in order to prepare, manage and control financial transactions.

According to Singh & Malhotra (2004), E-banking can be defined as the deployment of banking services and products over electronic and communication networks directly tocustomers. These electronic and communication networks include Automated Teller Machines (ATMs), direct dial-up connections, private and public networks, the Internet, televisions, mobile devices and telephones. Among these technologies, the increasing penetration of personal computers, relatively easier access to the internet and particularly the wider diffusion of mobile phones has drawn the attention of most banks to e-banking. E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet or mobile phone.C.S.V. Murthy (2004).

Customers access e-banking services using an intelligent electronic device, such as a

personal computer (PC), personal digital assistant, automated teller machine (ATM), kiosk, or Touch Tone telephone. Or 'e-banking refers to the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money. Gurau Catalin (2002).

2.1.3 Evolution of E-Banking

Since the late 1990s E-Banking has developed from virtual insignificance to tens of millions of users worldwide (OECD, 2001). However, E-Banking is the product of different generations of electronic transactions. The current web-based internet is the latest of several generations of systems: Automated Teller machine (ATMs), Phone Banking, PC or House Banking. Automated teller machines (ATMs) were the first well-known machines to provide electronic access to customers where as in phone banking, users call their bank's computer system on their ordinary phone and use the phone keypad to perform banking transactions. PC banking superseded phone banking and allowed users to interact with their bank by means of a computer with a dial-up modem connection to the phone network. Phone and PC banking entailed maintenance costs associated with keeping up to date with diverse modems and with avoiding prohibitively complex installation procedures.

After those generations Deutsche Bank launched the very first Internet banking project in Latin America in 1996 and Citibank has developed a special "e-toolkit" across all its branches worldwide (UNCTAD, 2002).

E-Banking uses the web browser for the user interface and the Internet for data transfer and download of software, and so has a potential for reducing maintenance costs. For users, E-Banking provides current information, 24-hours-a-day access to banking services. The primary services provided by e-banks are transferring money among one's own accounts, paying bills, and checking account balances. Loans, brokering, share trading, service bundling, and hosts of other financial services are being added to these primary services). E–Bankingis widely used in, among other places (Dewan&Seidmann,

2001).

2.1.4 E-Banking Channels:

2.1.4.1 Internet banking

According to Booz, Allen & Hamilton (1999), “Internet banking” refers to systems that enable bank customers to access accounts and general information on bank products and services through a personal computer (PC) or other intelligent device. Internet banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers. Ultimately, the products and services obtained through Internet banking may mirror products and services offered through other bank delivery channels. Some examples of wholesale products and services include: Cash management, wire transfer, automated clearinghouse transactions, Bill presentment and payment. Examples of retail and fiduciary products and services include Balance inquiry, Funds transfer, down loading transaction information, Bill presentment and payment, Loan applications, investment activity, other value-added services Based on the levels of access granted, internet-banking products are divided into 3 types. They are:

I) Information Only System: General purpose information like interest rates, branch location, bank products and their features, loan and deposit calculations are provided in the banks website. There exist facilities for downloading various types of application forms. The communication is normally done through e-mail. There is no interaction between the customer and bank's application system. No identification of the customer is done.

In this system, there is no possibility of any unauthorized person getting into production systems of the bank through internet.

II) Electronic Information Transfer System: The system provides customer- specific information in the form of account balances, transaction details, and statement of accounts. The information is still largely of the 'read only' format.

Identification and authentication of the customer is through password. The information

is fetched from the bank's application system either in batch mode or off-line. The application systems cannot directly access through the internet.

III**) Fully Electronic Transactional System:** This system allows bi-directional capabilities. Transactions can be submitted by the customer for online update. This system requires high degree of security and control. In this environment, web server and application systems are linked over secure infrastructure. It comprises, technology covering computerization, networking and security, inter-bank payment gateway and legal infrastructure.

Growth in Internet Banking

Numerous factors including competitive cost, customer service, and demographic considerations are motivating banks to evaluate their technology and assess their electronic commerce and Internet banking strategies. Many researchers expect rapid growth in customers using online banking products and services.

Some of the market factors that may drive a bank ś strategy to use internet banking include the following:

Competition — Studies show that competitive pressure is the chief driving force behind increasing use of internet banking technology, ranking ahead of cost reduction and revenue enhancement, in second and third place respectively. Banks see internet banking as a way to keep existing customers and attract new ones to the bank.

Cost Efficiencies —banks can deliver banking services on the internet at transaction costs far lower than traditional brick-and-mortar branches. The actual costs to execute a transaction will vary depending on the delivery channel used.

For example, according to Booz, et.al, as of mid- 1999, the cost to deliver manual transactions at a branch was typically more than a dollar, ATM and call center transactions cost about 25 cents, and internet transactions cost about a penny. These costs are expected to continue to decline. Banks have significant reasons to develop the technologies that will help them deliver banking products and services by the most

cost-effective channels.

Geographical Reach — Internet banking allows expanded customer contact through increased geographical reach and lower cost delivery channels. In fact, some banks are doing business exclusively via the internet — they do not have traditional banking offices and only reach their customers online. Other financial institutions are using the internet as an alternative delivery channel to reach existing customers and attract new customers.

Branding — Relationship building is a strategic priority for many banks. Internet banking technology and products can provide a means for banks to develop and maintain an ongoing relationship with their customers by offering easy access to a broad array of products and services. By capitalizing on brand identification and by providing a broad array of financial services, banks hope to build customer loyalty, cross-sell, and enhance repeat business.

Customer Demographics — Internet banking allows banks to offer a wide array of options to their banking customers. Some customers will rely on traditional branches to conduct their banking business. For many, this is the most comfortable way for them to transact their banking business. Those customers place a premium on person-to-person contact. Other customers are early adopters of new technologies that arrive in the marketplace. These customers were the first to obtain PCs and the first to employ them in conducting their banking business. The demographics of banking customers will continue to change. The challenge to banks is to understand their customer base and find the right mix of delivery channels to deliver products and services profitably to their various market segments.

2.1.4.2 Types, Benefits and Features of Electronic Payment Methods

2.1.4.2.1 Types

Cheques and drafts have replaced the traditional payment system with money as a medium of settlement and further development in the field has been with the advent of electronic cards.

The most commonly used electronic cards include ATM cards, Debit cards, Credit cards and Smart cards. ATM card is a kind of plastic card, which allows a cardholder to withdraw money from his bank account through automated teller machine. This card can be used also for other banking services like deposit and transfer to any other account by using the ATM machine. Credit card is the modern electronic plastic card that may be used repeatedly to borrow money or buy products and services on credit. VISA, Master Card, American Express and Discover is commonly known and widely used credit cards throughout the world. The decision with which card to go depends on the comparison of the features of the specific card (not the brand). The most important features, of course, are Interest rate and Annual fees.

Debit cards are electronic plastic cards directly tied to bank account and the amount of money the cardholder can spend with it is limited to the amount of money he/she has in the bank. It is called debit card because when cardholder uses a debit card, the transaction debits(withdraws) the amount of the transaction from cardholders' account, usually on the same day(C.S.V Murthy, 2004).

2.1.4.2.2 Benefits of E-Cards

According to C.S.V Murthy, (2004), E-cards offer a number of benefits to the issuing banks and customers of the bank including: Dramatically reduce printing, mailing, and financial handling costs associated with processing transaction; Enhance payment security by minimizing theft or loss; Prevent fraud through automated controls; Increase customer satisfaction and enhance service to constituents; Ensure continuity of service to cardholders in emergency or disaster situation; Improve operational efficiency and profitability of the issuing banks.

2.1.4.3 Mobile Banking

Mobile banking (also known as M-banking or SMS banking) is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile banking is most often performed via SMS or the Mobile Internet but can also use special programs called clients downloaded to the mobile device. The standard package of activities that mobile banking covers are: mini-

statements and checking of account history alerts on account activity or passing of set thresholds; monitoring of term deposits; access to loan statements; access to card statements; mutual funds/equity statements; insurance policy management; pension plan management; status on cheques, stop payment on cheques; ordering check books; balance checking in the account; recent transactions; due date of payment(functionality for stop, change and deleting of payments); PIN provision, change of PIN and reminder over the internet; blocking of (lost/stolen) cards; domestic and international fund transfers; micro-payment handling; mobile recharging; commercial payment processing; bill payment processing; peer to peer payments; withdrawal at banking agent and deposit at banking agent (Rahman, 2006).

2.1.4.4 Tele Banking

Tele banking refers to the services provided through phone that requires the customers to dial particular telephone number to have access to an account, which provides several options of services (Rahman, 2006).

2.1.4.5 Home Banking

Home banking frees customers from visiting branches and most transactions will be automated to enable them to check their account activities, transfer funds and to open L/C sitting in their desk with the help of a personal computer and a telephone (Rahman, 2006).

2.1.4.6 Point of Sale Terminal

An advanced payment system, which enables customers to use an ATM card to pay for goods and services, electronically debiting the cardholders account and crediting the account of the merchant (Rahman, 2006).

2.1.4.7 Society for Worldwide Inter-Bank Financial Telecommunication (SWIFT)

It is a bank owned non-profit co-operative based in Belgium servicing the financial community worldwide. It is a highly secured messaging network enables banks to send and receive fund transfer, L/C related and other free formal messages to and from any banks active in the network. Having SWIFT facility, banks will be able to serve its customers more profitable by providing L/C, payment and other messages efficiently

and with at most security. Especially it will be of great help for clients dealing with imports and exports etc.(Mohammed shamsuddoha, 2008).

2.1.5 Importance of E-Banking

Understanding e-banking service is important for several stakeholders, since it helps them to derive benefits from it. Many banks and other organizations have already implemented or are planning to implement e-banking because of the numerous potential benefits associated with it. Some of these major benefits according to Shah & Clarke (1997) are briefly described below.

2.1.5.1From the Banks Point of View

Attracting High Value Customers: E-Banking often attracts high profit customers with higher than average an income and education level which helps to increase the size of revenue streams. For a retail bank, e-banking customers are therefore of particular interest, and such customers are likely to have a higher demand for banking products.

Most of them are using online channels regularly for a variety of purposes, and for some there is no need for regular personal contacts with the bank's branch network, which is an expensive channel for banks to run (Berger & Gensler, 2007). Some research suggests that adding the Internet delivery channel to an existing portfolio of service delivery channels results in nontrivial increases in bank profitability (Young, 2007). These extra revenues mainly come from increases in noninterest income from service charges on deposit/current accounts. These customers also tend to be of high-income earners with greater profit potential.

Enhanced Image: E-banking helps to enhance the image of the organization as a customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. Despite its common availability today, an attractive banking website with a large portfolio of innovative products still enhances a bank's image. This image also helps in becoming effective at e-marketing and attracting young/professional customer base.

Increased Revenues: Increased revenues as a result of offering e-channels are often

reported because of possible increases in the number of customers, retention of existing customers, and cross selling opportunities. Whether these revenues are enough for reasonable return on investment (ROI) from these channels is an ongoing debate. It has also allowed banks to diversify their value creation activities. E-banking has changed the traditional retail banking business model in many ways, for example by making it possible for banks to allow the production and delivery of financial services to be separated into different businesses. This means that banks can sell and manage services offered by other banks (often-foreign banks) to increase their revenues. This is an especially attractive possibility for smaller banks with a limited product range

. E-banking has also resulted in increased credit card lending as it is a sort of transactional loan that is most easily deliverable over the internet. Electronic bill payment is also on rapid rise (Young, 2007) which suggests that electronic bill payment and other related capabilities of e-banking have a real impact on retail banking practices and rapidly expanded revenue streams .Darley, W., K. (2001).

Easier Expansion: Traditionally, when a bank wanted to expand geographically it had to open new branches, thereby incurring high startup and maintenance costs. E-channels, such as the Internet, have made this unnecessary in many circumstances. Now banks with a traditional customer base in one part of the country or world can attract customers from other parts, as most of the financial transactions do not require a physical presence near customers living/working place.

Load Reduction on Other Channels: E-Channels are largely automatic, and most of the routine activity such as account checking or bill payment may be carried out using these channels. This usually results in load reduction on other delivery channels, such as branches this trend is likely to continue as more sophisticated services such as mortgages or asset finance are offered using e-Banking channels. In some countries, routine branch transactions such as cash/Cheque deposit related activities are also being automated, further reducing the workload of branch staff, and enabling the time to be used for providing better quality customer services. GoiC.L. (2005)

Cost Reduction: The main economic argument of e-banking so far has been reduction

of overhead costs of other channels such as branches, which require expensive buildings and a staff presence. It also seems that the cost per transaction of e-banking often falls more rapidly than that of traditional banks once a critical mass of customers is achieved. The research in this area is still inconclusive, and often-contradicting reports appear in different parts of the world. The general consensus is that fixed costs of e-banking are much greater than variable costs, so the larger the customer base of a bank, the lower the cost per transaction would Whilst this implies that cost per transaction for smaller banks would in most cases be greater than those of larger banks, even in small banks it is seen as likely that the cost per transaction will be below that of other banking channels.

Organizational Efficiency: To implement e-banking, organizations often have to re-engineer their business processes, integrate systems and promote agile working practices. These steps which are often pushed to the top of the agenda by the desire to achieve e-banking often result in greater efficiency and agility in organizations. However, radical organizational changes are also often linked to risks such as low employee morale, or the collapse of traditional services or the customer base. In addition, Electronic banking has also helped banks in proper documentation of their records and transactions. Kamel S. (2005).

2.1.5.2 Benefits from the Customers' Point of View

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of e-banking for corporate customers' as per (Bank Away! 2001; Gurău, 2002) are as follows: Reduced costs in accessing and using the banking services; Increased comfort and timesaving — transactions can be made 24 hours a day, without requiring the physical interaction with the bank; Quick and continuous access to information: Corporations will have easier access to information as, they can check on multiple accounts at the click of a button; Better cash management: E-banking facilities speed up cash cycle and increase sufficiency of business processes as large variety of cash management instruments are available on internet sites. For example, it is possible to manage

company's short term cash via internet banks (investments in over-night, short- and long term deposits in commercial papers, in bonds and equities, in money market funds). Private customers seek slightly different kind of benefits from e-banking. In the study on online banking drivers Aladwani (2001) has found, that providing faster, easier and more reliable services to customers were amongst the top drivers of e-banking development.

The main benefits from e-banking for private customers are as per Bank Away (2001) are as follows: Reduced costs: This is in terms of the cost of availing and using the various banking products and services. Convenience: All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to. Speed: The response of the medium is very fast; therefore, customers can actually wait till the last minute before concluding a fund transfer.

Funds management: Customers can download their history of different accounts and do a "what-if" analysis on their own PC before affecting any transaction on the web. This will lead to better funds management.

In addition, besides withdrawing cash customers can also have mini banks statements, balance inquiry at these ATMs; Through Internet Banking customer can operate his account while sitting in his office or home. There is no need to go to the bank in person for such matter; E- Banking has also greatly helped in payment of utility bill. Now there is no need to stand in long queues outside banks for his purpose; all services that are usually available from the local bank can be found on a single website. The Growth of credit card usage also owes greatly to E-banking. Now a customer can shop worldwide without any need of carrying paper money with him and Banks are available 24 hours a day, seven days a week and they are only a mouse click away Rahman, M.(2006).

2.1.5.3 Benefits to General Economy

Electronic Banking as already stated has greatly serviced both the public and the banking industry. This has resulted in creation of a better enabling environment that supports growth, productivity and prosperity. Besides many tangible benefits in the form of reduction of cost, reduced delivery time, increased efficiency, reduced wastage,

banking electronically controlled and thoroughly monitored environment and discourage many illegal and illegitimate practices associated with banking industry like money laundering, frauds and embezzlements. Further E-banking has helped banks in better monitoring of their customer base. This is a useful tool in the hand of the bank to device suitable commercial packages that are in conformity with customer needs. As e-banking provide opportunity to banking sector to enlarge their customer base, a consequence to increase the volume of credit creation which results in better economic condition. Besides, E-banking has also helped in documentation of the economic activity of the masses (Mahdi Salehi, 2004).

2.1.6 E-Banking Risks

Although e-banking has bright prospects, it involves some financial risks as well. The major e-banking risks according to FSA (2010) include:

Operational risks: of Banks faces three main types of operations risk: such as volume forecasts, management information systems and Outsourcing. Accurate volume forecasts have proved difficult - One of the key challenges encountered by banks is how to predict and manage the volume of customers that they will obtain. Many banks going on-line have significantly misjudged volumes. When a bank has inadequate systems to cope with demand it may suffer reputational and financial damage, and even compromises in security if extra systems that are inadequately configured or tested are brought on-line to deal with the capacity problems. The second type of operations risk concerns management information systems. Again, this is not unique to E-banking. Banks may have difficulties in obtaining adequate management information to monitor their eservice, as it can be difficult to establish/configure new systems to ensure that sufficient, meaningful and clear information is generated. Such information is particularly important in a new field like e-banking. Finally, a significant number of banks offering e-banking services outsource related business functions, e.g. security, either for reasons of cost reduction or, as is often the case in this field, because they do not have the relevant expertise in-house. Outsourcing a significant function can create material risks by potentially reducing a bank's control over that function Sathye M.(1999).

Security risk: Security issues are a major source of concern for everyone both inside and outside the banking industry. E-banking increases security risks, potentially exposing hitherto isolated systems to open and risky environments. Security breaches essentially fall into three categories; breaches with serious criminal intent (e.g. fraud, theft of commercially sensitive or financial information), breaches by 'casual hackers' (e.g. defacement of web sites or 'denial of service' - causing web sites to crash), and flaws in systems design and/or set up leading to security breaches (e.g. genuine users seeing / being able to transact on other users' accounts).

All of these threats have potentially serious financial, legal and reputational implications Nolle, D. L. (2007).

Reputational risk: This is considerably heightened for banks using the Internet. For example, the Internet allows for the rapid dissemination of information, which means that any incident, either good or bad, is common knowledge within a short space of time. Internet rumors can easily become self-fulfilling prophecies. The speed of the Internet considerably cuts the optimal response times for both banks and regulators to any incident. Banks must ensure their crisis management processes are able to cope with Internet related incidents (whether they be real or hoaxes).

Any problems encountered by one firm in this new environment may affect the business of another, as it may affect confidence in the Internet as a whole. There is therefore a risk that one rogue e-bank could cause significant problems for all banks providing services via the Internet. This is a new type of systemic risk and is causing concern to e-banking providers. Overall, the Internet puts an emphasis on reputational risks.

In addition, legal risks (e.g. without proper legal support, money laundering may be influenced); Strategic risks; credit risks; market risks; and liquidity risks are also e-banking risks. Therefore, identification of relevant risks, and formulation and implementation of proper risk mitigation policies and strategies are important for banks while performing e-banking. Among these security risk that affects the network system is the major one. FSA (2010).

2.1.7 Typical Security Technologies Applicable to Control System Networks

According to Juniper (2010), the following are among the major typical security technologies applicable to control System Networks:

Firewalls: A firewall is simply a program or hardware device that filters the information coming through the Internet connection into the private network or computer system. If an incoming packet of information is flagged by the filters, it is not allowed through. A firewall limits a control system's network access to specific ports and protocols from specified networks. It can also provide the ability to create distinct security zones using Network Address Translation (NAT), which enables multiple areas of a private network to access the Internet using a single public IP address and Virtual Private Networks).

The firewall's main task is to regulate traffic between network segments at different trust levels—for example, between the Internet, as a zone with no trust, and the internal control network, a zone of higher trust.

Intrusion Detection and Protection: its appliance provides a more advanced layer of defense. Such defense (known as intrusion prevention system) can be deployed to help prevent attacks, or simply to detect attacks using intrusion detection systems. Information is sent through the network in small blocks of data known as packets. It goes deeper than a firewall by assessing each packet based on the network protocols, the context of the communication, and its tracking of each session (the time the user spends communicating on the network). Akin to antivirus software on a desktop, it contains a large repository of signatures that help to identify potential attacks by matching attempts to exploit known vulnerabilities.

Authentication/Authorization Systems: Authentication and authorization systems protect applications by verifying user identity, providing access to devices based on that user's role and privilege level, and logging all access attempts in order to audit any infringement or misuse of critical plant functions. The use of passwords alone is not a secure enough mechanism, yet it is still the norm to find devices in the field that rely on the manufacturer's default password.

Most security standards require two-factor authentication, which requires the combination of two methods of identification, such as a password and a certificate.

Network Access Control: This might include ensuring those users and their laptops or other devices meet a minimum baseline of security in order to gain access. Such policies can be based on various criteria, such as user identity, device identity, device health, and device and/or network location. A solution including it ensures that both user and device properly make the appropriate connection to the appropriate network. It also ensures that users and their devices meet all authentication and security policies. Since network access control applies to users as well as devices, this can become a reliable method for rogue device mitigation over wireless or wired networks.

Encryption of Critical Data: Encryption is the process of transforming information, such as a document or important message, by using an algorithm or cipher to make it unreadable to anyone who does not have the key to the cipher.

It is a standard method for protecting highly confidential information. However, as heavily encrypted messages can slow network performance unless managed effectively, its use is often restricted to non-real-time messaging and data.

Monitoring for Administration and the Audit Trail: An increasingly important aspect of today's security solutions is the ability to monitor and administer the entire network to keep it at optimum performance, identify weaknesses, maintain consistent security policies, track a constant history of activity, and assure the complete safety of information.

Secure Remote Access: on top of these security capabilities, contractors, engineers and managers may remotely communicate via remote access virtual networks enabled by the secure socket layer (SSL) based security protocols. Found in all standard web browsers, SSL provides a more secure, efficient and effective way to access control networks from an outside location or even outside the organization. This set of protocols allows secure communications via the Internet for gathering sensor data, sending instructions to field devices, performing remote maintenance and

administrative data transfer task

Configuration Management: A final aspect of security is helping to assure high network performance to avoid problems of availability, access and lack of service. A good security solution provides support for configuration management and control, a model that focuses on establishing and maintaining knowledge of the system and network configuration, including security. Based on this approach, operations personnel have the ability to manage security features and assurances through control of changes made to hardware, software, firmware, testing and documentation throughout the lifecycle of the systems Juniper (2010).

2.2 Empirical Evidence

2.2.1 Challenges and prospects of E-Banking Adoption

Challenges

According to M. M. Rahman (2008) in Bangladesh despite huge demand from the business community as well as the retail customers particularly the urban customers, electronic banking (e-banking) is still at a budding state due mainly to a number of constraints such as unavailability of a backbone network connecting the whole country; inadequacy of reliable and secure information infrastructure especially telecommunication infrastructure; sluggish ICT penetration in banking sector; insufficient legal and regulatory support for adopting e-banking and so on. The concept of e-banking includes all types of banking activities performed through electronic networks. It is the most recent delivery channel of banking services, which is used for both business-to-business and business-to-customer transactions.

However, in true sense, e-banking includes activities like payment of bills and invoices, transfer of funds between accounts, applying for a loan, payment of loan installments, sending funds to third parties via emails or internet connections regardless of where the client is located. Leow, Hock Bee (1999) state that the terms PC banking, online banking, Internet banking, telephone banking or mobile banking refers to a number of ways in which customer can access their banks without having to be physically present at the

bank branch. Therefore, e-banking covers all these ways of banking business electronically. Since e-banking offers some smart services benefiting both banks and customers compared with traditional banking system, it has become imperative to make necessary room for banks to flourish e- banking.

Among others, attractiveness of e-banking includes: it lowers transaction cost; provide 24- hour services; ensure increased security and control over transactions; reduces fraud risk; performs higher volume of transactions with less time; increases number and volume of value payment through banks; allows remote transactions facilities that replace physical presence of a customer in a bank branch and; increases transaction speed and accuracy. On the other hand, traditional banking is time-consuming and costlier and therefore, e-banking is replacing traditional banking all over the world.

In addition, an exploratory study that was conducted in Zimbabwe by ChituraTofara (2008) indicated that incompatibility with the existing system, cost of implementation, security concerns, lack of expertise, inadequate legislation and consumer acceptance are the major challenges for the adoption of e-banking in the country's banking industry.

Prospects of e-Banking

According to M., M Rahman (2008) in Bangladesh e-banking is now a global phenomenon. Apart from the developed countries, the developing countries are experiencing strong growth in e-banking.

The government's emphasis on setting up ICT park, raising allocation for developing ICT infrastructure, waiving taxes on computer peripherals and other measures including the automation program of banking sector and competition among the scheduled banks in improving customer services have accelerated the prospects of e-banking.

In addition, as investigated by Alhaji Ibrahim H. (2009) using exploratory study, the following are among the critical challenges for the adoption of e-banking in Nigeria: Lack of Technological Infrastructure – the implementation of e-payment is being impeded by unavailability of ICT infrastructure. Most rural areas where majority of small and medium scale industries are concentrated have no access to internet facilities; ICT

Equipment Costs – where available, the cost of ICT is a critical factor relative to per capital income. This makes the cost of entry higher compared to developed countries.

Regulatory and Legal Issues; inexistence of proper legal and regulatory framework; Non-readiness of banks and other stake holders (acceptability) even though some have shown impressive willingness, some banks are still not fully ready to for this new payment regime; Resistance to changes in technology among customers and staff due to: Lack of awareness on the benefits of new technologies, Fear of risk among banks Lack of trained personnel in key organizations and Tendency to be content with the existing structures; People are resistant to new payment mechanisms; Security – where disclosure of private information, counterfeiting and illegal alteration of payment data may be rampant; Frequent connectivity failure in telephone lines; Frequent power interruption

2.2.2 Perceived advantages that Initiate Banks to Adopt E-Banking

The study that was conducted in Omani banks by Al-Sabbagh, I., &Molla, A. (2004) using exploratory research found that bank manager' perceptions of four concepts: perceived relative advantage, perceived organizational performance, perceived customer/organizational relationship and perceived ease of use provided a broader understanding of e-banking adoption in the banking industry. The first construct: Perceived Relative Advantage construct relates to the degree to which bank managers think that Internet technology might help their bank gain advantages in the industry. From the literature, three major issues emerged relating to the perception of relative advantage: convenience of services; innovative use of IT; and management of banking services.

The second construct: Perceived Organizational Performance is associated with how much a bank manager thinks Internet technology could improve their organizational performance. Three issues: profitability; market environment and employee productivity were utilized to explore this construct in depth. From the broad question related to profitability, two impediments are indicated: high technology investment cost and the need for economies of scale for Internet technology use are inhibiting the rate of E-

banking adoption.

Productivity of employees was another issue of interest. Most respondents expected that their business efficiency could be improved on the Internet. The third construct: Perceived Customer/Organizational Relationship relates to how a bank manager perceives Internet technology adoption in terms of improving the relationship with their customers. In the literature, three major issues emerge related to the perception of customer/organizational relationship: customer trust, customer commitment, and customer satisfaction.

The final construct: Perceived Ease of Use measures how easy a bank manager believes that Internet technology is to use. The literature suggests that if technology is perceived to be easy to use then the rate of adoption will increase. The research threw up three major issues related to perceived ease of use: easy to navigate, easy to learn and easy to manage. The last issue related to management of financial transactions on the Internet.

2.2.3 Drivers and Barriers of E-Banking Adoption

An exploratory research conducted by Mahdi Salehi (2004) in Iran indicate that the adoption status of e-banking is the transition of pre-development to development phase and the main drivers for adopting e-banking are downsizing, gaining competitive advantage, increasing market share and improving bank's image. The analysis further reveals that inefficient ICT infrastructure, political challenges and traditional organizational culture are barriers for adoption of e-banking.

In addition to the above factors, the case study that was conducted in china by SherahKurnia, FeiPeng, Yi Ruo Liu (2005) suggests that the government support is also a strong driver for e-banking adoption. The government support is manifested in two ways. Firstly, the Government is establishing an electronic commerce (EC)-friendly environment in the country.

The government in recent years to revamp the national ICT and logistic infrastructures has committed heavy investments. New EC laws and regulations have also been passed

and adjusted to provide legal protections for EC activities in general. Secondly, the government also directly offers financial incentives to promote e-banking adoption.

2.2.4 Constraints and Drive Forces for the Adoption of E-Banking in Africa

The study that was conducted by Isaac Awuondo (2005) indicated that the Constraints and drive forces for the adoption of e-banking in Africa respectively are presented below.

Constraints

Security: Majority of the shy away from e-Banking services due to security concerns; Human face: According to some analysts, customers still value personalized and responsive services from their bankers; Poor and lack of technological infrastructure especially in the rural areas; lack of proper legislation governing e-transactions; Preference to paper money, as opposed to “virtual” cash in transactions etc.

Drive forces towards e-Banking adoption in Africa

Rapidly changing customers’ needs and preferences**;** Competitive forces and product differentiation strategies**;** Pressure to reduce transactional and operation costs.

2.3 CONCLUSION AND KNOWLEDGE GAP

Even though there are researches conducted in other countries like Bangladesh and revealed that unavailability of a backbone network connecting the whole country; inadequacy of reliable and secure information infrastructure especially telecommunication infrastructure; inactive ICT penetration in banking sector; insufficient legal and regulatory support for-banking system etc. are the major challenges for the efficient system of e-banking in the country (Mohammad, 2008). Therefore ,the research gap that there is no more prior study conducted in Nib international bank especially on the case study area that is on Wolkite branch.

Thus, the purpose of this paper is assessment of the prospects (opportunities) and challenges of e-banking system in Nib international bank Wolkite branch.

CHAPTER THREE

Research Methodology

3.1 Introduction

Designing appropriate research methodology is a prerequisite in order to conduct a good research work. Accordingly, this chapter discusses about the methodology which the researcher used to conduct this study. Thus, research design, Target population, sampling techniques and Sampling size, data source and method of data collection and method of data analysis were presented below respectively.

3.2. Research Design

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The design includes types of research. This study was used descriptive types of research. Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group. Descriptive research “is designed to provide a picture of a situation as it naturally happens”. It is also used to justify current practice and make judgment and also to develop theories. Creswell and Plano Clark (2007).The reason for using descriptive types of research was because the study describes the state E-banking system as it exists without altering the exist reality which means the researchers has no effect on the variable of the study.

3.3. Target population

The target populations, which representative samples taken were clerical staffs which were about 9 employees. These staff includes manager, two senior customer service officer, three junior customer service officer, two loan officer, and accountants. Totally, Nib International Bank Wolkite branch has about 9 employees.

3.4. Sampling techniques and Sampling size

To determine the sample size, it is necessary to determine the total population of Nib International Bank Wolkite branch which is 9. From this total population in this study researcher was select all (9) of the employees using census method of surveying.

3.5. Data Source and Method of data Collection

The study conducted by collecting data from primary sources. Primary data were collected from the respondents based on a structurally designed questionnaire. It was included both closed ended and open-ended questions. In addition, unstructured interview with the manager of Nib international bank Wolkite branch was used to collect supporting data. In order to get sufficient and reliable data that represents the branch primary data was collected from the employees of the branch.

3.6. Method of Data Analysis

In order to meet the stated research objectives, the collected data was analyzed based on the nature of the objective, accordingly since all the information that collected were qualitative in nature, descriptive type of analysis by using tables and percentages was employed to analyze each objective.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

To find the major out puts of the study and to give important recommendations, the collected data should be analyzed and discussed, accordingly the analysis and important findings from the collected data are discussed below.

Table 4.1: Personal Information of respondents

	Category	Frequency	Percent
Sex	Male	6	67%
	Female	3	33%
Age	18-25 year	1	11%
	26-30year	5	56%
	31-35 year	2	22%
	36-45years	1	11%
	Above45years	-	-

Sources: own data survey, 2019

According to the Table 1, from the total of 9 respondents, 6(67%) of respondents were male and 3(33%) of respondents were female. It is concluded that the majority of employees of NIB Wolkite branch were male.

As depicted on table 1, from the total of 9 respondents, 1(11%) of respondents were belongs between 18-25 years, 5(56%) of respondents were belongs between 26-30 years, 2(22%) of respondents were belongs between 31-35 years and the left 1(11%) of respondent's age were between 36-45 years. This implies that the majority of NIB Wolkite branch employee's age was belongs between 26 to 30 years.

Table 4.2 educational background and work experience of employees

	Category	Frequency	Percent
Educational background	Diploma	-	-
	Bachelor degree	8	89%
	Master degree	1	11%
	PHD	-	-
Work experience	Less than 2 years	1	11.11%
	3-5 years	4	44.44%
	6-10 years	4	44.44%
	>10 years	-	-

Sources: own data survey, 2019

The survey on the educational background of the respondents shownon table 2 that, 8(89%)of respondent were Bachelor degree;1(11%)of respondent were Master degree.

The descriptive statistics on table 2, from the total of 9(100%), 1(11.11% of respondents work experience were Less than 2 years 4(44.44%)of respondents work experience were3-5 years;4(44.44%)of respondents work experience were6-10 years. This infers that the majority of NIB Wolkite branch employees were degree holders and their work experience were between 3 to 5 years and between 6 to 10 years. Therefore, they were able to provide sufficient information on e-banking which was the main finding of this study.

Benefits of E-banking to bank

Table 4.3 Benefits of E-banking to bank

	SA	A	N	D	SD
Attracting high value customers	4(44%)	5(56%)	-	-	-
Enhanced image	3(33%)	6(67%)	-	-	-
Increased revenue	6(67%)	2(22%)	-	1(11%)	-
Larger customer coverage	6(67%)	2(22%)		1(11%)	
Cost reduction	5(56%)	3(33%)		1(11%)	
Improvement of organizational	2(22.22%)	4(44.44%	3(33.33%)		

efficiency		)			

Sources: own data survey, 2019

From the above table, 5(56%) of respondents' reply were Agree high value customers as benefits of E-banking, 4(44%) of respondents were reply strongly agree on Attracting high value customers as benefits of E-banking

As depicted on the above table, 6(67%) of respondents' reply were Agree on e- banking Enhanced image of bank, 3(33%) of respondents were reply strongly agree on e-banking Enhanced image of bank. From the above table 3, 2(22%) of respondents' reply were Agree on Increased revenue as benefits of E-banking, 6(67%) of respondents were reply strongly agree on Increased revenue as benefits of E-banking, 1(11%) of respondents were reply Disagree on increased revenue as benefits of E-banking.

As depicted on the table 3, 2(22%) of respondents' reply were Agree on Larger customer coverage as benefits of E-banking, 6(67%) of respondents were reply strongly agree on Larger customer coverage as benefits of E-banking, 1(11%) of respondents were reply Disagree on Larger customer coverage as benefits of E-banking.

According to descriptive statistics on the above table 3,3(33%)of respondents' reply were Agree on Cost reduction as benefits of E-banking, 5(56%) of respondents were reply strongly agree on Cost reduction as benefits of E-banking, and 1(11%) of respondents were reply Disagree on Cost reduction as benefits of E-banking.

According to descriptive statistics on the above table 3, 4(44.44%) of respondents' reply were Agree on Improvement of organizational efficiency as benefits of E-banking, 2(22.22%) of respondents were reply strongly agree on Improvement of organizational efficiency as benefits of E-banking, and 3(33.33%) of respondents were reply neutral on Improvement of organizational efficiency as benefits of E-banking.

Table 4.4 Benefit of E-banking to bank

	SA	A	N	D	SD

Better monitoring of their customer base	6(67%)	2(22%)	1(11%)		
Enables the bank to provide or render services in sophisticated way.	8(89%)		1(11%)		
Reduces paper work(manual system)	6(67%)	2(22%)	1(11%)		
Reduces times in rendering services.	8(89%)		1(11%)		
E-banking enables 24 hour accessibility to the bank service.	7(78%)	1(11%)	1(11%)		

Sources: own data survey, 2019

As depicted on the above table, 2(22%) of respondents' reply were Agree on Better monitoring of their customer base as benefits of E-banking, 6(67%) of respondents were reply strongly agree on Better monitoring of their customer base as benefits of E-banking, and 1(11%) of respondents were reply neutral on Better monitoring of their customer base as benefits of E-banking.

From the above table , 8(89%) of respondents were reply strongly agree on Enables the bank to provide or render services in sophisticated way as benefits of E-banking, and 1(11%) of respondents were reply neutral on Enables the bank to provide or render services in sophisticated way as benefits of E-banking.

According to descriptive statistics on the above table, 2(22%) of respondents' reply were Agree on Reduces paper work (manual system) as benefits of E-banking, 6(67%) of respondents were reply strongly agree on Reduces paper work (manual system) as benefits of E-banking, and 1(11%) of respondents were reply neutral on Reduces paper work(manual system) as benefits of E-banking.

As depicted on the table, 8(89%) of respondents were reply strongly agree on Reduces times in rendering services as benefits of E-banking, and 1(11%) of respondents were reply neutral on Reduces times in rendering services as benefits of E-banking.

According to descriptive statistics on the above table , 1(11%) of respondents' reply were Agree on E-banking enables 24hour accessibility to the bank service, 7(78%) of respondents were reply strongly agree on E-banking enables 24hour accessibility to the bank service, and 1(11%) of respondents were reply neutral on E-banking enables 24hour accessibility to the bank service.

What options (benefits) is available to the customer once they have accessed e-banking?

Table 4.5 options (benefits) available to the customer once they have accessed e-banking

No	SA	A	N	D	SD
Fund transfer	3(33.33%)	3(33.33%)	3(33.33%)		
Overdraft facility	3(33.33%)	3(33.33%)	2(22.22%)	1(11.11%)	
Insurance premium payment	1(11%)	3(33%)	5(56%)		
24-hours of banking service	6(67%)	3(33%)			
Employee salary payment service	5(56%)	3(33%)	1(11%)		
Cost reduction	8(89%)	1(11%)			

Sources: own data survey, 2019

As depicted on the table 4, 3(33.33%) of respondents' reply were Agree on Fund transfer as options (benefits) available to the customer once they have accessed e-banking, 3(33.33%) of respondents were reply strongly agree on Overdraft facility as options (benefits) available to the customer once they have accessed e-banking, and 3(33.33%) of respondents were reply neutral on Fund transfer as options (benefits) available to the customer once they have accessed e-banking.

As depicted on the table 4, 3(33.33%) of respondents reply were Agree on Overdraft facility as options (benefits) available to the customer once they have accessed e-banking, 3(33.33%) of respondents were reply strongly agree on Overdraft facility as options (benefits) available to the customer once they have accessed e-banking, 2(22.22%) of respondents were reply neutral and 1(11.11%) of respondents were reply disagree on Overdraft facility as options (benefits) available to the customer once they have accessed e-banking.

According to descriptive statistics on the above table 4, 3(33%) of respondents reply were Agree on Insurance premium payment as options (benefits) available to the customer once they have accessed e-banking, 1(11%) of respondents were reply strongly agree on Insurance premium payment as options (benefits) available to the customer once they have accessed e-banking, and 5(56%) of respondents were reply neutral on Insurance premium payment as options (benefits) available to the customer once they have accessed e-banking.

According to descriptive statistics on the above table 4, 3(33%) of respondents' reply were Agree on 24-hours of banking service as options (benefits) available to the customer once they have accessed e-banking, and 6(67%) of respondents were reply strongly agree on 24-hours of banking service as options (benefits) available to the customer once they have accessed e-banking.

According to the table 4 above, from total of 3(33%) of respondents reply were Agree on Employee salary payment service as options (benefits) available to the customer once they have accessed e-banking, 5(56%) of respondents were reply strongly agree on Employee salary payment service as options (benefits) available to the customer once

they have accessed e-banking, and 1(11%) of respondents were reply neutral on Employee salary payment service as options (benefits) available to the customer once they have accessed e-banking. As depicted on the table 4, 1(11%) of respondents' reply were Agree on Cost reduction as options (benefits) available to the customer once they have accessed e-banking and8(89%) of respondents were reply strongly agree on Cost reduction as options (benefits) available to the customer once they have accessed e-banking.

Table 4.6 benefits of e-banking to customers

	SA	A	N	D	SD
Balance inquiry	9(100%)				
24-hours ATM Service	5(56%)	3(33%)	1(11%)		
Cash withdrawal	4(44.44%)	4(44.44%)	1(11.11%)		
Purchase of goods and services	3(33.33%)	4(44.44%)	2(22.22%)		
Utility payment	1(11%)	7(78%)	1(11%)		
24-hours Mobile banking service	4(44.44%)	3(33.33%)	1(11.11%)	1(11.11%)	

Sources: own data survey, 2019

According to descriptive statistics on the above table 4, 9(100%) of respondents' reply were strongly agree on Balance inquiry as options (benefits) available to the customer once they have accessed e-banking.

According to the table 4, 3(33%) of respondents' reply were Agree on 24-hours ATM

Service as options (benefits) available to the customer once they have accessed e-banking, 5(56%) of respondents were reply strongly agree on 24-hours ATM Service as options (benefits) available to the customer once they have accessed e-banking,and1(11%) of respondents were reply neutral on 24-hours ATM Service as options (benefits) available to the customer once they have accessed e-banking.

As depicted on the table 4, 4(44.44%) of respondents' reply were Agree on Cash withdrawal as options (benefits) available to the customer once they have accessed e-banking, 4(44.44%) of respondents were reply strongly agree on Cash withdrawal as options (benefits) available to the customer once they have accessed e-banking and 1(11.11%) of respondents were reply neutral on Cash withdrawal as options (benefits) available to the customer once they have accessed e-banking.

According to descriptive statistics on the above table 4, 4(44.44%) of respondents reply were Agree on Purchase of goods and services as options (benefits) available to the customer once they have accessed e-banking, 3(33.33%) of respondents were reply strongly agree on Purchase of goods and services as options (benefits) available to the customer once they have accessed e-banking and 2(22.22%) of respondents were reply neutral on Purchase of goods and services as options (benefits) available to the customer once they have accessed e-banking.

According to the table 4 7(78%) of respondents' reply were Agree on Utility payment as options (benefits) available to the customer once they have accessed e-banking, 1(11%) of respondents were reply strongly agree on Utility payment as options (benefits) available to the customer once they have accessed e-banking and 1(11%) of respondents were reply neutral on Utility payment as options (benefits) available to the customer once they have accessed e-banking.

As depicted on the table 4, 3(33.33%) of respondents reply were Agree on 24-hours Mobile banking service as options (benefits) available to the customer once they have accessed e-banking, 3(33.33%) of respondents were reply strongly agree on 24-hours Mobile banking service as options (benefits) available to the customer once they have accessed e-banking and 1(11.11%) of respondents were reply neutral and 1(11.11%) of

respondents were reply disagree on 24-hours Mobile banking service as options (benefits) available to the customer once they have accessed e-banking.

The challenges related to e-banking service

Table 4.7 Infrastructural challenges

Challenges		Please indicate the extent you agree or disagree of the Potential challenges that affect to adoption or development use of E-banking technologies.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
INFRASTRUCTURAL CHALLENGES		Absence of financial networks that links different banks	3(33.33%)	3(33.33%)		2(22.22%)	1(11.11%)
		Up and down of electricity power and networks	3(33.33%)	3(33.33%)	1(11.11%)	2(22.22%)	
		High installation cost	3(33.33%)	3(33.33%)		2(22.22%)	1(11.11%)

		Low level of internet penetration and poorly developed telecommunication infrastructure.	3(33.33%)	4(44.44%)	2(22.22%)		
		Insufficient of technological equipment	2(22%)	6(67%)			1(11%)
		High cost of internet	1(11%)	5(56%)		2(22%)	1(11%)

Sources: own data survey, 2019

According to the table 5; 3(33.33%) of respondents reply were Agree on Absence of financial networks that links different banks as infrastructural challenges related to e-banking service, 3(33.33%) of respondents were reply strongly agree on Absence of financial networks that links different banks as infrastructural challenges related to e-banking service, 2(22.22%) of respondents were reply Disagree and 1(11.11%) of respondents were reply strongly disagree on Absence of financial networks that links different banks as infrastructural challenges related to e-banking service.3(33.33%) of respondents reply were Agree on Up and down of electricity power and networks as infrastructural challenges related to e-banking service, 3(33.33%) of respondents were reply strongly agree on Up and down of electricity power and networks as infrastructural challenges related to e-banking service, 2(22.22%) of respondents were reply Disagree and 1(11.11%) of respondents were reply neutral on Up and down of electricity power and networks as infrastructural challenges related to e-banking service.

According to descriptive statistics on the above table 5, 3(33.33%) of respondents reply were Agree on High installation cost as infrastructural challenges related to e-banking service, 3(33.33%) of respondents were reply strongly agree on High installation cost as infrastructural challenges related to e-banking service, 2(22.22%) of respondents were reply Disagree and 1(11.11%) of respondents were reply strongly disagree on High installation cost as infrastructural challenges related to e-banking service. 4(44.44%) of

respondents reply were Agree on Low level of internet penetration and poorly developed telecommunication infrastructure as infrastructural challenges related to e-banking service, 3(% of respondents were reply strongly agree on Low level of internet penetration and poorly developed telecommunication infrastructure as infrastructural challenges related to e-banking service and2(22.22%) of respondents were reply neutral on Low level of internet penetration and poorly developed telecommunication infrastructure as infrastructural challenges related to e-banking service.

According to the table 5, 6(67%) of respondents' reply were Agree on Insufficient of technological equipment as infrastructural challenges related to e-banking service, 2(22%) of respondents were reply strongly agree on Insufficient of technological equipment as infrastructural challenges related to e-banking service and 1(% of respondents were reply strongly disagree on Insufficient of technological equipment as infrastructural challenges related to e-banking service.5(56%) of respondents' reply were Agree on High cost of internet as infrastructural challenges related to e-banking service, 1(11%) of respondents were reply strongly agree on High cost of internet as infrastructural challenges related to e-banking service, 2(22%) of respondents were reply Disagree and 1(11%) of respondents were reply strongly disagree on High cost of internet as infrastructural challenges related to e-banking service.

Table 4.8 Illiteracy related challenges

			SA	A	N	D	SD
ILLITRACY RELATED CHALLENGES	1.	Lack of demand from the customers side	5(56%)	2(22%)		2(22%)	
	2.	Low work performanc	3(33.33%)	4(44.44%)		2(22.22%)	

		e of employees					
	3.	lack of educated and efficient staff in e-banking context	1(11.11%)	3(33.33%)		3(33.33%)	2(22.22%)
	4.	Customers disability to access e-banking services	1(11.11%)	4(44.44%)	1(11.11%)	3(33.33%^)	
	5.	Customer low levels of computer literacy.	1(11 %)	5(56%)	2(22%)	1(11%)	

Source: Questioner

According to descriptive statistics on the above table 5, 2(22%) of respondents reply were Agree on Lack of demand from the customers side as illiteracy related challenges related to e-banking service, 5(56%) of respondents were reply strongly agree on Lack of demand from the customers side as illiteracy related challenges related to e-banking service and2(22%) of respondents were reply Disagree on Lack of demand from the customers side as illiteracy related challenges related to e-banking service; 4(44.44%) of respondents reply were Agree on Low work performance of employees as illiteracy related challenges related to e-banking service, 3(33.33%) of respondents were reply strongly agree on Low work performance of employees as illiteracy related challenges

related to e-banking service and 2(22.22%) of respondents were reply strongly disagree on Low work performance of employees as illiteracy related challenges related to e-banking service.

As depicted on the table 5, 3(33.33%) of respondents reply were Agree on lack of educated and efficient staff in e-banking context as illiteracy related challenges related to e-banking service, 1(11.11%) of respondents were reply strongly agree on lack of educated and efficient staff in e-banking context as illiteracy related challenges related to e-banking service and2(22.22%) of respondents were reply Disagree on lack of educated and efficient staff in e-banking context as illiteracy related challenges related to e-banking service; 4(44.44%) of respondents reply were Agree on Customers disability to access e-banking services as illiteracy related challenges related to e-banking service, 1(11.11%) of respondents were reply strongly agree on Customers disability to access e-banking services as illiteracy related challenges related to e-banking service, 1(11.11%) of respondents were reply neutral and 3(33.33%) of respondents were reply disagree on Customers disability to access e-banking services as illiteracy related challenges related to e-banking service and5(56%) of respondents reply were Agree on Customer low levels of computer literacy as illiteracy related challenges related to e-banking service, 1(11%) of respondents were reply strongly agree on Customer low levels of computer literacy as illiteracy related challenges related to e-banking service, 1(11%) of respondents were reply Disagree and 2(22%) of respondents were reply neutral on Customer low levels of computer literacy as illiteracy related challenges related to e-banking service.

Table 4.9 Regulatory and legal challenges

			SA	A	N	D	SD
REGULATORY AND LEGAL ISSUE.	1.	Lack of suitable legal and regulatory framework	2(22.22%)	4(44.44%)	2(22.22%)		1(11.11%)
	2.	Lack of government initiation or lack of government prioritization	2(22.22%)	4(44.44%)	2(22.22%)		1(11.11%)
	3.	Cross-country legal and regulatory differences.	2(22%)	5(56%)	1(11%)		1(11%)

Source: Questioner

According to descriptive statistics on the above table 5, 4(44.44%) of respondents reply were Agree on Lack of suitable legal and regulatory framework as regulatory and legal issue challenges related to e-banking service, 2(22.22%) of respondents were reply strongly agree on Lack of suitable legal and regulatory framework as regulatory and legal issue challenges related to e-banking service, 1(11.11%) of respondents were reply Strongly disagree and 2(22.22%) of respondents were reply neutral on Lack of suitable legal and regulatory framework as regulatory and legal issue challenges related to e-banking service; 4(44.44%) of respondents reply were Agree on Lack of government initiation or lack of government prioritization as regulatory and legal issue challenges related to e-banking service, 2(22.22%) of respondents were reply strongly agree on Lack of government initiation or lack of government prioritization as regulatory and legal issue challenges related to e-banking service, 1(11.11%) of respondents were reply Strongly disagree and 2(22.22%) of respondents were reply neutral on Lack of

government initiation or lack of government prioritization as regulatory and legal issue challenges related to e-banking service and 5(56%) of respondents reply were Agree on Cross-country legal and regulatory differences as regulatory and legal issue challenges related to e-banking service, 2(22%) of respondents were reply strongly agree on Cross-country legal and regulatory differences as regulatory and legal issue challenges related to e-banking serviced,1(11%) of respondents were reply neutral and 1(11%) of respondents were reply strongly disagree on Cross-country legal and regulatory differences as regulatory and legal issue challenges related to e-banking service.

Table 4.10 other challenges

			SA	A	N	D	SD
OTHER CHALLENGES	1	Chances of risk from the banks side	3(33.33%)	4(44.44%)	2(22.22%)		
	2.	Non-readiness of banks to adopt the system	2(22.22%)	3(33.33%)	4(44.44%)		
	3.	Low level of initiation on the side of the shareholders to adopt the system	3(33.33%)	2(22.22%)	2(22.22%)	2(22.22%)	
	4.	Lack of coordination	3(33.33%)	3(33.33%)		2(22.22%)	1(11.11%)

		and cooperation with the other banks in e-banking context					

Sources: own data survey, 2019

According to descriptive statistics on the above table 5, 4(44.44%) of respondents reply were Agree on Chances of risk from the banks side as other challenges related to e-banking service, 3(33.33%) of respondents were reply strongly agree on Chances of risk from the banks side as other challenges related to e-banking service and 2(22.22%) of respondents were reply neutral on Chances of risk from the banks side as other challenges related to e-banking service; 3(33.33%) of respondents reply were Agree on Non-readiness of banks to adopt the system as other challenges related to e-banking service, 2(22.22%) of respondents were reply strongly agree on Non-readiness of banks to adopt the system as illiteracy related challenges related to e-banking service and4(44.44% of respondents were reply neutral on Non-readiness of banks to adopt the system as other challenges related to e-banking service.

According to descriptive statistics on the above table 5, 2(22.22%) of respondents reply were Agree on Low level of initiation on the side of the shareholders to adopt the system as other challenges related to e-banking service, 3(33.33%) of respondents were reply strongly agree on Low level of initiation on the side of the shareholders to adopt the system as other challenges related to e-banking service, 2(22.22%) of respondents were reply neutral and 2(22.22%) of respondents were reply strongly disagree on Low level of initiation on the side of the shareholders to adopt the system as other challenges related to e-banking service; 3(33.33%) of respondents reply were Agree on Lack of coordination and cooperation with the other banks in e-banking context as other challenges related to e-banking service, 3(33.33%) of respondents were reply strongly agree on Lack of coordination and cooperation with the other banks in e-banking

context as other challenges related to e-banking service, 2(22.22% of respondents were reply disagree and 1(11.11%) of respondents were reply strongly disagree on Lack of coordination and cooperation with the other banks in e-banking context as other challenges related to e-banking service.

Analysis of interview questions

What is the benefit of adopting e-banking service in the nib international bank?

They viewed that providing banking products to the customer by using electronic channels have the benefit of building good image, load reduction that enables bank employees to focus on strategic issues instead of focusing on traditional activities and improvement of organizational performance through cost reduction (by avoiding paper work and by reducing the number of employees required). In addition, adopting e-banking service as a means of service delivery have also the benefits. In general, according to the respondents' response, it is possible to conclude that delivering banking products through electronic channels made the bank benefited.

Even though, those banks that are currently providing e-banking service to their customer can get the different benefits the assumption of perceived relative advantage, perceived organizational performance, perceived customer relationship and perceived ease of use are the major perceived advantages of e-banking adoption among those banks which are not yet adopted the technology but are planned to adopt the system in the near future.

What are the challenges for the adoption of e-banking service in the country?

As viewed by manager of NIB Wolkite branch, there is some sort of difference among the challenges in bank, chances of risk (such as **operation, security and reputation risk**), Lack of suitable legal and regulatory framework that govern and regulate e-banking transaction in the country, high cost of internet, Low level of internet penetration and poorly developed telecommunication infrastructure are the major common challenges for the adoption of e-banking service in the country's banking industry. These major challenges are true for both the initial adoption of e-banking service among those banks which are not yet adopted the system and for the sufficient provision of the service

among those banks that are currently providing the service to their customers. Especially with respect to ICT infrastructure, even though ETC is expanding its internet and mobile network services, it is unable to attract adequate number of customers. The corporation's mobile network will soon be able to accommodate 15 million customers. However, it now has only five million mobile subscribers. Ethiopia's mobile penetration rate stands at five percent while sub-Saharan African penetration rate is 39 percent.

Since the Ethiopian banking system is heavily dependent on the state-owned ETC to perform transactions and connect branches to their main office, Ethiopia Telecommunications Corporation's (ETC) failure to offer efficient services, especially broadband internet, is limiting banking services. The recurrent problem of system downfall has meant banks without the broadband service having to work manually, limiting services to customers (Binyam, 2009).

Finally, even though it may be temporary, frequent power interruption is another challenge that affects the provision of e-banking service among those banks that are currently providing the service. Therefore, from the above discussion it is possible to conclude that there are challenges for the adoption of e-banking service among banks that are not yet adopted the system and for the sufficient adoption of the service from the viewpoint of NIB Wolkite branch manager which are currently providing the service in the country.

What are the opportunities for the adoption of e-banking service for the customers?

The manager viewed that the existence of some difference among the respondent of each bank regarding the different existing opportunities in the country for the adoption of e-banking.

But late adopter opportunities, improvement in the banking habit of the society, sustainable economic growth in the country, increment of tourist inflow to Ethiopia, commitment of the government to facilitate the expansion of ICT infrastructure and willingness among banks to cooperate in building infrastructure are common to all banks.

With respect to cooperation among banks, the memorandum of understanding signed

by three private commercial banks to launch an Automated Teller Machine (ATM) and Point of Sale terminal (POS) network in February 2009 is welcoming strategy to improve electronic payment system in Ethiopia. Three private commercial banks - Awash Bank S.C., Nib International Bank S.C and United Bank S.C. – have agreed in principle to establish an ATM network called Fettan ATM network. If everything goes as planned, Fettan ATM will install over 140 ATM machines and over 340 POSs across Ethiopia. There will be one ATM at every branch of the consortium banks, all domestic airports serviced by commercial service, shopping complexes and merchants.

The agreement is the first significant cooperation between competing banks in Ethiopia, which others should be encouraged to follow as there is no single bank in Ethiopia that can afford to provide extensive geographical coverage and access. In addition, the commitment of the government to strengthen the banking industry is a good opportunity for the adoption of e-banking service in the country because currently the national bank of the country is developing a project in cooperation with the World Bank in order to modernize the payment system of the country.

What are the driving forces towards the adoption of e-banking service?

As viewed by manager even though there are some sort of difference regarding the driving forces that initiate for the adoption of e-banking service in bank, the existence of high competition in the banking sector, rapidly changing customers' needs and preferences, desire to improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to build organizational reputation and desire to satisfy customers are the major common driving forces that initiate banks for the adoption of e-banking as a means of service delivery to their customers.

Therefore, from this it is possible to conclude that it is due to the existence of some driving forces in which banks are initiated to provide modern banking services to the customer.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Introduction

Information technology is considered as the key driver for the changes taking place around the world. Due to a pervasive and steadily growth of information and communication technology, the world banking industry is entering into new phenomena of unprecedented form of competition supported by modern information and communication infrastructure. The rate at which e-banking technology is adopted by banks constitutes an important part of technological change. With this regard currently, our banks are in an infant stage.

This chapter as a whole presents the concluding remarks for the main findings in chapter four and important recommendations as per the main problems investigated in this research study.

5.2 Conclusions

Based on the analysis made in chapter four the following conclusions are made on the assessment of the opportunities and challenges for the adoption of e-banking in Nib International Bank with reference to Wolkite branch.

ATM, Credit Card and debit card services, internet banking, mobile banking and other electronic payment systems are at infant stage. The most dominant e-banking channel among those banks, which are currently providing the service is ATM card, which is the first generation of electronic banking channel, so from this it is possible to conclude that even banks that are providing the service did not sufficiently adopt the latest e-banking channel such as internet and mobile banking.

In view of the extent of e-banking adoption, NIB has not adopted this technology and is using traditional services to reach and serve their clients. In general, NIB is trailing behind in acquiring the required quality of banking services to effectively compete in the global market.

The main practice of e-banking among NIB that are provided the service have been for,

balance inquiry, cash withdrawal, statement printing, PIN change, purchase goods or services, accessing his/her accounts 24*7 and funds transfers among others.

Adoption of e-banking service have the benefit of attracting high value customers, enhanced image, larger customer coverage, improvement of organizational efficiency, and load reduction etc from the view point of the respondents.

As per the findings, the major driving forces that initiate banks to deliver banking services to the customer using electronic channels are existence of high competition in the banking industry, rapidly changing customers' needs and preferences, desire to improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to cover wide geographical area, desire to build organizational reputation, desire to satisfy customers and to keep the international banking standard among others.

Chances of risk, lack of trained and efficient staff in e-banking context, lack of suitable legal and regulatory framework, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure, high cost of internet and security issues are the main challenges for adoption of e-banking in Ethiopia. In addition, lack of customer awareness regarding the service is another challenge in order to provide the service. Therefore, from this, it is possible to conclude that there are challenges for the adoption of e-banking service among those banks that are not yet adopted the system and for the sufficient adoption of the service from the viewpoint of NIB Wolkite branch manager and other respondents.

Finally, late adopter opportunities, commitment of the government to facilitate the expansion of ICT infrastructure, improvement in the banking habit of the society, sustainable economic growth in the country, increment of tourist inflow to Ethiopia and willingness among banks to cooperate in building infrastructure are among the major opportunities for the adoption of e-banking in the country. Therefore, from this, it is possible to conclude that there are good opportunities for the adoption of e-banking service.

5.3 Recommendation

As per the findings from the analysis of the collected data; the following recommendations are forwarded in order to promote and develop viable e-banking service.

- Ongoing efforts by the Ethiopia telecommunication corporation to expand ICT infrastructure should be encouraged by the government and gradually the corporation should try to reduce the service charge.
- The lack of legal and regulatory framework for e-banking services has discouraged banks from introducing these innovative payment instruments or where they have introduced, has put them at legal risk. Electronic payments are not recognized in Ethiopia legal system. Thus, government should issue laws that govern electronic payment. This helps financial service providers introduce innovative products currently in use around the world which are cost effective, efficient and safe.
- In recent years, due to its convenience, mobile banking is the latest electronic banking channel, so in this context, it is important to NIB to formulate relevant acts, policies, and adopt operative guidelines.
- The National Bank of the country should prepare various capacity building activities for banks regarding e-banking operation and provide incentives for banks to invest rigorously on ICT and use of e-banking.
- NIB should strengthen its ICT department through providing training to IT personnel and procuring required hardware and software. Create separate unit in each branch for rendering ICT related operational activities under the supervision of the ICT department. Train all staff in basic ICT related matters in phases.
- NIB that currently providing the service should promote the system in order to raise public awareness on the use of e-banking service.

- Since sufficient power supply is mandatory for the uninterrupted and efficient provision of e-banking service, therefore, ongoing effort by the government to address adequate power supply to the country should be encouraged.

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APPENDIX

WOLKITE UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

Dear Sir/Madam,

Subject: Research questionnaire prepared to collect data from the respondents in order to assess the opportunities and challenges of e-banking in Nib International Bank Wolkite branch. My name is Chaltu Misgana. I am undertaking a research project on the "***assessment of the opportunities and challenges of e-banking in Nib International Bank,"*** with reference to in Nib International Bank Wolkite branch. Knowing the benefits, driving forces, opportunities and challenges for the adoption of e-banking service in the banking industry will have a paramount important to the institution, to owners, to clients, to government and others. To this end, I have prepared a self – administered questioner to help me gather the pertinent information from the

purposely-selected employees of the branch. The quality of the result of this research will be based on the accuracy of the information you provided. Eventually, I promise you, the information you will provide me is going to be reported and communicated in aggregate and utmost care will be taken for its confidentiality.

INSTRUCTION;

- ✓ *In all cases, where answers to options are available, please tick (✓) in the appropriate box.*
- ✓ *For questions that demand your opinion, please try to honestly describe your responses on the space provided.*
- ✓ *Don't write your name*.

Thank you for your cooperation!

I. Personal Information

1) Sex male ☐ female ☐

2) Age 18-25ye☐ 26☐0year 3☐5 year ☐ 36-45ye☐ above45years

3) Your educational background Diploma☐

Bachelor degree☐ Master degre☐ PHD☐ Other ☐

4) Work experience Less than 2 yea☐ 3-5 ye☐ 6-10 y☐s >1☐ years

Part II research related questions

1. Benefits of E-banking to bank

	SA	A	N	D	SD

Attracting high value customers					
Enhanced image					
Increased revenue					
Larger customer coverage					
Cost reduction					
Improvement of organizational efficiency					
Better monitoring of their customer base					
Enables the bank to provide or render services in sophisticated way.					
Reduces paper work(manual system)					
Reduces times in rendering services.					
E-banking enables 24 hour accessibility to the bank service.					

If any others (explain) please describe¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬______________________________

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2. What options (benefits) is available to the customer once they have accessed e-banking? (SA for strongly agree, A for Agree, N for Neutral, DA for Disagree, SD for Strongly Disagree).

No	SA	A	N	D	SD
1. Fund transfer					
2. Overdraft facility					
3. Insurance premium payment					
4. 24-hours of banking service					
5. Employee salary payment service					
6. Cost reduction					
7. Balance inquiry					
8. 24-hours ATM Service					
9. Cash withdrawal					
10. Purchase of goods and services					
11. Utility payment					

12. 24-hours Mobile banking service					

If any other please describe----------

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3. What are the challenges related to e-banking service?

Challenges	**No**	**Please indicate the extent you agree or disagree of the Potential challenges that affect to adoption or development use of E-banking technologies.**	Strongly agree	agree	Neutral	Disagree	Strongly disagree
INFRASTRUCTURAL CHALLENGES	1.	Absence of financial networks that links different banks					
	2.	Up and down of electricity power and networks					
	3.	High installation cost					
	4.	Low level of internet penetration and poorly developed telecommunication infrastructure.					
	5.	Insufficient of technological equipment					
	6.	High cost of internet					
ILLITRACY RELATED	1.	Lack of demand from the customers side					

CHALLENGES	2.	Low work performance of employees					
	3.	lack of educated and efficient staff in e-banking context					
	4.	Customers disability to access e-banking services					
	5.	Customer low levels of computer literacy.					
REGULATORY AND LEGAL ISSUE.	1.	Lack of suitable legal and regulatory framework					
	2.	Lack of government initiation or lack of government prioritization					
	3.	Cross-country legal and regulatory differences.					
OTHER CHALLENGES	1	Chances of risk from the banks side					
	2.	Non-readiness of banks to adopt the system					
	3.	Low level of initiation on the side of the shareholders to adopt the system					
	4.	Lack of coordination and cooperation with the other banks in e-banking context					

If any other challenges, please specify_____

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INTERVIEW QUESTIONS

Thank you very much for volunteering to participate in this one-on-one personal interview. The main objective of this interview is to assess the opportunities and challenges of e-banking positively or negatively as well as optimizing the service provision with respect to Nib International Bank Wolkite branch. Your responses will be treated with utmost confidentiality and will not be used for any purpose other than the objective of the research. Moreover, the results of the research will be reported in manner that could not identify you or your organization. The outcome of the study is anticipated to assist the understanding of the basic opportunities and challenges of adopting E- banking innovation in delivering quality service to customers of in Nib International Bank.

Thank you in advance for your participation.

General Unstructured Interview Schedule

a. What is the benefit of adopting e-banking service in the nib international bank?

b. What are the challenges for the adoption of e-banking service in the country?

c. What are the opportunities for the adoption of e-banking service for the customers?

d. What are the driving forces towards the adoption of e-banking service?