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**THE NEXUS BETWEEN ORGANIZATIONAL ICT-STRATEGIES AND
PERFORMANCE OF DASHEN BANK S.C**

BY

YARED ASEFA ALEMAYEHU

SGS/0290/2011A

JUNE, 2020

ADDIS ABABA, ETHIOPIA

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SGS/0290/2011

**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF
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ADDIS ABEBA, ETHIOPIA

ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES FACULTY OF
BUSINESS

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DECLARATION

I, the under signed, declare that this thesis is my original work, prepared under the guidance of Habtamu Mekonen (PhD.). All sources of material used while working on this thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any type of degree.

Name

Signature and Date

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor

Signature

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LIST OF ABBREVIATIONS AND ACRONYMS

ICT	Information and Communication Technology
IT	Information Technology
DB	Dashen Bank
ATM	Automated Teller Machines
BSC	Balance Score Card
CAMELS	Capital Asset Management Earnings Liquidity Sensitivity
CEO	Chief Executive Officer
EFT	Electronic Fund Transfer
GNPA	Gross Non Performing Asset
ALLL	Allowance for Loan and Lease Losses
LQD	Liquidity
NBE	National Bank of Ethiopia
PC	Personal computer
PDA	Personal Digital Assistant
PINS	Personal Identification Numbers
UPS	Uninterruptible Power Supply
POS	Point of Sales
SMS	Short Message Service
SPSS	Scientific Packages for Social Sciences
WWW	World Wide Web

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ABSTRACT

*The Information Communication Technology revolution in commerce is strongly affecting the overall performance of the economic system mainly in banking industry. This study examines the nexus between organizational ICT-Strategies and overall performance of Dashen Bank. An attempt was made to assess the contribution of ICT-Strategies toward the performance of bank and to identify challenges faced by the Dashen Bank while using ICT-Strategies. Quantitative research design was followed with specific descriptive approach. Stratified and purposive sampling techniques were used to select participants. A total of 44 participants took part in this study. Primary and secondary data collection tools such as questionnaire and documentary analysis were used in order to come up with required data. Quantitative data were analyzed by using descriptive statistics, and correlation while narration was followed to analyze qualitative data. Results showed ICT-Strategies like ATM, Pay direct, electronic check conversion, cellular phone banking and E transact has a first-rate influence on financial institution performance due to the fact they make bigger profitability, minimize financial institution cost of operations, and extend financial institution asset and financial institution efficiency. The notable contributions of ICT-Strategies on banking overall performance presents the relationship between ICT-Strategies and Performance of Dashen Bank in Ethiopia. It indicates that independent variable has a positive correlation to dependent variable equal to .656** and the p-value is zero which is less than 0.01. Hence, one can say that there is a relationship between ICT-Strategies and Dashen Bank performance in which ICT-Strategies contributes to positive overall performance of bank.*

Key words: Information Communication Technology (ICT), ICT-Strategies, Bank performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Today's business environment is very dynamic and intense as a result of technological advancement and introduction of information and communication technology as a competitive advantage of any organization. Information and communication technology (ICT) is the automation of processes, controls, and information production using computers, telecommunications, software and other gadgets that ensure smooth and efficient running of activities. It is a term that largely covers the coupling of electronic technology for the information needs of a business at all levels (Agbolade, 2011). The Banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and Communication Technology (ICT) is at the center of this global change curve of Electronic Banking System in Africa today (Stevens 2002). Assert that they have over the time, been using electronic and telecommunication networks for delivering a wide range of value added products and services, managers in Banking industry in Ethiopia can't ignore Information Systems because they play a critical impact in current Banking system, they point out that the entire cash flow of most fortune Banks are linked to Information System. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental importance and concerns to all banks and indeed a prerequisite for local and global competitiveness Banking.

The advancement in Technology has played an important role in improving service delivery standards in the Banking industry. In its simplest form, Automated Teller Machines (ATMs) and deposit machines now allow consumers carry out banking transactions beyond banking hours. With online banking, individuals can check their account balances and make payments without having to go to the bank hall. This is gradually creating a cashless society where consumers no longer have to pay for all their purchases with hard cash hence improving customer relationship management system. For example: bank customers can pay for airline tickets and subscribe to initial public

offerings by transferring the money directly from their accounts, or pay for various goods and services by electronic transfers of credit to the sellers account. As most people now own mobile phones, banks have also introduced mobile banking to cater for customers who are always on the move.

Mobile banking allows individuals to check their account balances and make fund transfers using their mobile phones. Banking in Ethiopia began in 1905 with the bank of Abyssinia, a private company controlled by the bank of Egypt (Asefa, 2011). However introduction of information technology into the banking industry is the last decade phenomena. Currently most of Ethiopian Banks have started providing Technology-based services/products like ATM (payment cards), Mobile banking, Internet Banking, SMS banking and Electronic fund transfer to their customers. Gemechu (2012), argued that technology innovation play a crucial role in Banking industry by creating value for banks and customers, that it enables customers to perform banking transaction without visiting a brick and mortar banking system. However, banks in Ethiopia still engaged in aggressive branch expansion and extended hour's office services. Indeed as Asefa (2011) contend, the electronic banking in Ethiopia is facing lot of challenges due to lack of software, awareness, fear of risk and lack of trained persons in the industry. Nevertheless, in order to surmount local and global competition, Ethiopian private banks need to appreciate the role of information and communication technology on their performance and properly ascertain the challenge thereon.

The study conducted on Dashen Bank S.C, which is privately owned company, established in 1995 with the aim of rendering quality commercial banking services. In August 2003 Dashen Bank became the first Ethiopian bank to interconnect its branch offices with WAN and in January 2005 it was the first bank to effectively implement a state-of-the-art core banking system. In May 2006, it launched Ethiopia's first payment card service and in September 2010 its first mobile banking service, Modbirr. For the past 20 years, Dashen Bank's overarching financial and operational performance has maintained its position as a leader among Ethiopian banks. The bank's mission stated as overcoming the challenges while providing efficient and customer focused domestic and international banking services via the application of appropriate technology. In the above bank's mission, it provided technology based Core Banking and ICT-Strategies like ATM (Automatic teller machine), POS (point of sale) and Mobile Banking. Public awareness of ICT-Strategies among

customer has been increased and thus people are ready to migrate to better technology applications service, the bank should give quality services in order to survive in the industry.

1.2 Statement of the Research Problem

In recent times, Ethiopia has shown encouraging strides in the expansion of utilizing Information and Communication Technology for multi-purposes. The country has recognized to play a meaningful role in the knowledge economy and is making significant efforts in the ICT arena. Information and communication technology (ICT) has in particular brought a complete paradigm shift on the bank's performance and on the customer service delivery in the banking industry (Aliyu and Tasmin, 2012). Nowadays the banking system is slowly shifting from traditional banking towards relationship banking. Traditionally the relationship between the bank and its customers handled by face to face interaction in a branch, whereas, in contemporary banking, customers are demanding more flexible and accessible services everywhere and anytime. Technology has made a lot of impact on banking services owing to its role in gathering and analyzing information. The 21st century has witnessed a lot of technological innovation in banking sector. Some of the services that technology is providing to the financial services are: ATMs, Mobile Banking, Branch network, Telephone Banking, Internet Banking just to mention a few (Yeboah et. al, 2013). In general ICT allows the present day banks to meet the expectation of their more demanding customers who are more techno-practicality compared with their counterparties of the olden times.

In today's fast changing world, banking environment has become highly competitive and banks are required to respond quickly to the dynamics of fast changing customers' expectations. To be able to survive and exceed in this changing market, banks are striving to improve their customer service delivery and productivity through adaptation of different ICT Strategies so called Electronic banking. Electronic banking is generally an extension of traditional banking, using the internet as an electric delivery channel for banking products and services. The banking today is redefined and re-engineered with the use of IT and banks start offering more sophisticated services to customers with continuous product and process innovation (Tiwari and Kumar, 2012). Today's dynamic and stiff market competition forced banks to spend all their resources on improvement of service delivery and value added activities in order to survive and become productive. Yeboah et al, (2013) believes that

total automation of banking is an imperative need for all banks to attract more customers, provide efficient and quality services, and survive in the emerging new competition, apart from the profit motive which is the primary objective of the banks.

Information technology has become inevitable and is seen as the only way for banks to survive in the increasingly competitive banking arena (Benerjea & Dawinji, 2011). Thus, it just doesn't make sense to put off investment in these most basic of technology that lay the foundation for the very future of banking. It is absolutely critical for future revenue and engagements of banks (King, 2013). In fact, many organizations have invested their time and resources for the betterment of their services and products. Yeboah et. al, (2013) argued that Banks, in particular have invested huge sums of money in IT, having their products and services basically supported by it. Identifying the IT investment and its role in the banking industry is very crucial point for the success of the modern banks and Yeboah et, al (2013) insisted that banks should properly understand the relationship of ICT-strategies on their efficient service delivery, customer satisfaction and employee's productivity in order to maximize the return on its investment. On the other hand, Agbolade (2011) claimed that the most significant shortcoming in the banking industry today is a wide failure on the part of senior management in banks to grasp the importance of technology and incorporate it into their strategic plans accordingly. In addition to this, the management is unaware to the current banking situation that requires their determination to fully address all the challenges related with ICT.

Despite the fact that numerous examinations have been directed on the effect of ICT-Strategies on banking execution, restricted examinations are accessible in Ethiopia that explore the relationship of ICT on execution of the Bank and the difficulties subsequently. Consequently, more investigations are as yet required to comprehend the importance of ICT in Ethiopian Private Banks and to give a superior knowledge for leaders of the business. According to National bank of Ethiopia (NBE Report, 2015) there is delay in payment of checks between banks; time wasted in banks as people line in queue waiting for service, errors as a result of manual work and fraud related cases was common. As a result some clients complain of the above, it is upon this that is why the researcher would like to examine the contribution of ICT- Strategies towards banking on performance of banking Institutions because researcher believes that adoption of different ICT-strategies will ease banking transactions and anguish customers basing on experience from other developed countries.

The motivation behind this investigation tries to take a look at the Nexus between ICT-Strategies and performance of Dashen Bank and to survey the snags they experience in giving Technology-based administrations to their clients. The examination concentrated on the Dashen bank S.C. which is claimed by private speculators in Ethiopia. the justification why the researcher need to select this area depends on the researchers broad work understanding inside the business and have great information on ICT sector.

1.3 Research Questions

This study is to be undertaken to assess the nexus between organizational ICT–Strategies and performance of Dashen Bank S.C. Based on the aforementioned gaps, this study very much focused on the following main research questions.

- i. What are the ICT-strategies being used by Dashen Bank?
- ii. How ICT-strategies affected performance of Dashen Bank?
- iii. What are the challenges faced by the Banks while using ICT-strategies?

1.4 Objectives of the Study

1.4.1 General Objective of the Study

The general objective of the study is to contribute to the general body of knowledge and to examine the nexus between organizational ICT-strategies and Performance of Dashen Bank S.C

1.4.2 Specific Objectives of the Study

To achieve the general objectives, the research aimed to address the following 3 specific objectives:

- i. To identify ICT-strategies being used by Dashen Bank.
- ii. To analyze the performance of Dashen Bank while implementing different ICT-Strategies.
- iii. To identify challenges faced by the Dashen Bank while using ICT-strategies.

1.5 Significance of the Study

It is hoped that the finding that would be obtained from this research assists management of bank to measure or evaluate the importance and use of ICT-Strategies to achieve overall efficiency and effectiveness in their operations in regard to the bank performance. Every organization is concerned with the best possible way of improving performance to guarantee sustainable growth that lead to the achievement of organizational goals. Additionally, Due to the increasing need to serve the growing needs of customers, this study would inform the benefits of adopting different ICT strategies as a tool to enhance efficiency and cost reduction. DB and other policy makers might use the findings of this study to set policies that promote adoption of ICT strategies by DB and boost performance. This study will be useful to DB, they will learn the benefits of different ICT strategies adoption and how this impacts on financial performance.

They would also know the challenges faced by other banks in implementing ICT strategies and how to deal with these challenges. This encourage the bank that are still reluctant in embracing ICT-strategies to implement it and gain the benefits. The topic makes it relevant from both the academic and practical point of view. The study would also be used as a source of reference material in addition to suggesting areas where future research may be conducted.

1.6 Scope of the Study

This research seeks to examine the Nexus between ICT-strategies and performance of DB in Ethiopia. The study had been conducted in DB headquarters in Addis Ababa City. The researcher analyzed Nexus between ICT-strategies and performance of DB for a period of five years (2015 - 2019), since when ICT-strategies became fully recognized in banking institutions in Ethiopia.

1.7 Organization of the Paper

The Research is equipped into five chapters. The first chapter provides quick introduction to the study, explains the Research problem, and discusses targets of the study, Research questions, and significance of the study. The 2nd chapter reviewed theories and preceding researches finished round the theme “The Nexus between of ICT-Strategies on the overall performance of Banking Industries” for this effort have been made to hyperlink with the study that was made on the Dashen Bank S.C contemporary practice.

Chapter three provides the design of the research-methodology adopted in the study which covers the research design, data source and data collection techniques and methods of data analysis techniques. Chapter four summarized the results/findings of the study, and discusses the findings linked with the literature review as properly as summary. Finally the last chapter which is Chapter five consists of the conclusions and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

This chapter gave overall view of earlier works and theories in areas of the contribution of ICT-strategies towards banking on performance of banking Institutions in Ethiopia. This section attempts to present a critical review of the available literature on the subject of research. It presents the historical element of ICT-strategies, it looks at different ICT-strategies used, and reviews ICT-strategies towards banking on performance of banking.

2.1. Theoretical Review

The concept of e-banking is a 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; Sathye, 1999). Salehi and Zhila, (2008), describes e-banking as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Electronic banking can also be defined as a variety of following platforms:

- (i) Internet banking (or online banking),
- (ii) Telephone banking,
- (iii) TV-based banking,
- (iv) Mobile phone banking, and e-banking (or offline 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. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or Touch Tone telephone. While some literature restricts the use of the term to internet banking (Daniel 1999), elsewhere the term is limited to retail banking or both retail and corporate banking (Simpson 2002). Banking Supervision (1998), “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”. Electronic banking has long been recognized to play an important role in economic development on the basis of their ability to create liquidity in the economy through financial intermediation between savers and borrowers. It also offers financial services and products that accelerate settlement of transactions and in the process reduce cash intensity in the financial system, encourage banking culture, and catalyses economic growth (Al-Gahtani, 2001).

However, for the effective functioning of the financial system, the payment systems must be safe and efficient; otherwise they can be a channel for the transmission of disturbances from one part of the economy or financial system to others. This is why central banks have been active in promoting sound and efficient payments system and in seeking the means to reduce risks associated with the system (Al-Gahtani, 2001). One important reason for financial liberalization and deregulation is the need to develop a good payment system which promotes an appropriate mechanism for efficiency in mobilizing and allocating financial resources in the economy. The payment system occupies an important place in the development of a country economy, in fact the level of development of a countries payment system is a reflection of the state or condition of the country’s economy (Aladwani 2001). Ethiopian payment system is paper-based and this accounts for the high level of cash in the economy (cash outside bank), the concept “payment system” has different meanings among writers the definition range from a more simple to a more complex definition.

Anyanwaokoro (1999), in theory and policy of money and banking, payment system is defined as a system where settlement of financial obligations are done by the use of credit cards or even pressing some buttons that transfer the amount in their bank to the account of another person through the computer. According to Orjih (1999) a payment system is defined as one which consists of different methods of payments which are checks, credit cards, Bankers drafts, standing order, documentary credits swift etc. for the settlement of transactions.

2.2 Application of Electronic Banking

For many consumers, electronic banking means 24-hour access to cash through an automated teller machine (ATM) or Direct Deposit of paychecks into checking or savings accounts. But electronic banking involves many different types of transactions (Simpson 2002, Fox and Beier, 2006). According to Simpson (2002), Fox and Beier (2006), Electronic fund transfer (EFT) is a component of electronic banking uses computer and electronic technology as a substitute for checks and other paper transactions. EFTs is initiated through devices like cards or codes that let you, or those you authorize, access your account (Fox and Beier, 2006). Many financial institutions use ATM or debit cards and Personal Identification Numbers (PINs) for this purpose. Some use other types of debit cards such as those that require, at the most, your signature or a scan. For example, some use radio frequency identification (RFID) or other forms of “contactless” technology that scan your information without direct contact. The federal Electronic Fund Transfer Act (EFT Act) covers some electronic consumer transactions (Simpson 2002, Fox and Beier, 2006).

ATMs are electronic terminals that let you bank almost any time. To withdraw cash, make deposits, or transfer funds between accounts, you generally insert an ATM card and enter your PIN. Some financial institutions and ATM owners charge a fee, particularly if you don't have accounts with them or if you engage in transactions at remote locations. Generally, ATMs must tell you they charge a fee and its amount on or at the terminal screen before you complete the transaction. Check the requirements with your institution and at ATMs you use for more information about these fees (Simpson 2002).

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

Be cautious before you pre-authorize direct recurring withdrawals to pay companies you aren't familiar with; funds from your bank account could be withdrawn improperly. Also monitor your bank account to ensure that direct recurring payments from your account to others are for the correct amount (Simpson 2002). Pay-by-Phone Systems let you call your financial institution with instructions to pay certain bills or to transfer funds between accounts. You must have an agreement with the institution to make such transfers (Simpson 2002). Personal Computer Banking lets you handle many banking transactions via your personal computer. For instance, you may use your computer to view your account balance request transfers between accounts, and pay bills electronically (Simpson 2002).

Debit Card Purchase or Payment Transaction let you make purchases or payments with a debit card, which also may be your ATM card. This could occur at a store or business, online, or by phone. The process is similar to using a credit card, with some important exceptions (Fox and Beier, 2006). While the process is fast and easy, a debit card purchase or payment transfer's money fairly quickly from your bank account to the company's account. So it's important that you have funds in your account to cover your purchase. This means you need to keep accurate records of the dates and amounts of your debit card purchases, payments, and ATM withdrawals. Also be sure you know the store or business before you provide your debit card information to avoid the possible loss of funds through fraud. Your liability for unauthorized use, and your rights for error resolution, may be different for a debit card than a credit card (Simpson 2002). Electronic Check Conversion converts a paper check into an electronic payment or when a company receives your check in the mail (Fox and Beier, 2006). When you give your check to a cashier, the check is run through an electronic system that captures your banking information and the amount of the check. You're asked to sign a receipt and you get a copy for your records. When your check is handed back to you, it should be voided or marked by the merchant so that it can't be used again. The merchant electronically sends information from the check (but not the check itself) to your bank or other financial institution, and

the funds are transferred into the merchant's account. When you mail-in a check for payment to a merchant or other company, they may electronically send information from your check (but not the check itself) through the system, and the funds are transferred from your account into their account. For a mailed check, you should still receive advance notice from a company that expects to send your check information through the system electronically. For example, the merchant or other company might include the notice on your monthly statement. The notice also should state if the merchant or company will electronically collect from your account a fee like a "bounced check" fee if you have insufficient funds to cover the transaction (Simpson 2002).

Internet

Most of the applications mentioned involved the use of internet, E-banking is more than just Internet banking in the still evolving e-climate in the economy; it involves using the net to exploit new opportunities by transforming products and markets and business processes (Fox and Beier, 2006). E-banking also means developing new relationship with customers, regulatory authorities', suppliers and banking partners with digital age tools, for example, it requires all understanding. Customer/bank relationships will be more personalized resulting in novel modes of transaction processing and services delivery. E-banking is essentially about banks using new age methods and tools to expand into new banking markets and grow. Creating a corporate online presence for your bank should be more than just building a website. It should be about building a web business for your bank, to do this effectively the people in charge, i.e. the CEOs not just IT directors and managers must have a deep knowledge of what E-banking culture demands (Clive, 2007).

E-business

IT or E-business or E-commerce is not about routine information management or automation, it is about using these unique tools to create opportunities, create new markets, new processes and growth or increase the creation of e- wealth (Hampton-Sosa et al. 2005). E-banking monitors the environment local and global with the aim of understanding and mastering its environment. ICT-strategies thus involves collaboration (local and international) on payments systems, cashless transactions, digital cash and other electronic based projects. It can be seen that other immense potentials can only be realized if bank management and staff, not just the systems staff are sufficiently literate and aware, and presently the banking industry still has a lot to do in terms of

training staff. The speed of change together with the need for proper orientation for the e-world makes training even more of a necessity (Usman, 1998).

For ICT-strategies to be effective, an area that must be addressed is security, for any IT based service associated with ICT-strategies increases the need for security, in ICT-strategies the core security areas should be addressed. A key concern is that of privacy. Business on the net cannot be undertaken without addressing the privacy concerns of people you do business with. It requires the existence of a privacy policy. No customer wants to click away to a negative balance. Security in online banking is typically provided through the use of an electronic Identity (ID) and password. These and other security measures must be effective to prevent not only the breach of privacy, but other security concerns like the alteration of data (Hampton-Sosa ...et al. 2005). In conclusion to be true ICT-strategies each bank must identify its own unique targets, focus and style. Banks needs to realize that ICT-strategies is more than simply banking on the internet, ICT-strategies is more than having a web-site, ICT-strategies is about building a web business for your banks.

2.3. Type of ICT-Strategies

ICT-Strategies consists of the following: mobile banking, internet banking, telephone banking, electronic card etc.

Mobile banking

Mobile banking involves the use of mobile phone for settlement of financial transactions. It supports person to person transfers with immediate availability of funds for the beneficiary. Mobile payments use the card infrastructure for movement of payment instructions as well as secure Short Message Service (SMS) messaging for confirmation of receipt to the beneficiary. Mobile banking is meant for low value transactions where speed of completing the transaction is a key. The services covered under this product include account enquiry, funds transfer, recharge phones, changing of passwords and bill payment which are offered by few institution (Sathye, 1999).

Internet banking

Internet banking involves conducting banking transactions such as account enquiry printing of statement of account; funds transfer payments for goods and services, etc on the internet (World Wide Web) using electronic tools such as the computer without visiting the banking hall. E-Commerce is greatly facilitated by internet banking and is mostly used to effect payment. Internet banking also uses the electronic card infrastructure for executing payment instructions and for final settlement of goods and service over the internet between the merchant and the customer, currently the most common internet payments are for consumer bills and purchase of air ticket through the websites of the merchants (Littler, 2006).

Telephone banking (Tele-banking)

These are banking services which a customer of a financial institution can access using a telephone line as a link to the financial institution's computer center. Services rendered through telephone banking include account balance funds transfer, change of pin, and recharge phones and bills payment (James, 2009). It is a virtual banking that provides financial services for bank customers to perform retail banking transactions by dialing a touch-tone telephone or mobile communication unit connected to automated system of the bank by utilizing Automated Voice Response (AVR) technology (Rose 1999). Tele-banking provides increased convenience, expanded access and significant time saving for bank customers. It has almost all the impact on productivity of ATMs, except that it lacks the productivity generated from cash dispensing by the ATMs. As a delivery conduit it provides retail banking services even after banking hours so that it accrues continual productivity for the bank

Electronic card

An electronic card is a physical plastic card that uniquely identifies the holder and can be used for financial transactions on the internet. For instance, Automated Teller Machine (ATM) and Point-of Sales (POS) terminal are used to authorize payment to the merchant or seller (James, 2009).

The various types of electronic cards include debt, credit cards; releasable cards require visiting banks for replenishment. Debit cards are linked to local bank accounts and offer immediate confirmation of payment. Credit cards can be used to link a customer to a credit line and can also be used for accessing local and international networks and are widely accepted in most countries. The

underlying infrastructure and operational rules are often provided by global trusted schemes (such as visa and master card) in addition to local lines (James, 2009).

2.4 Analysis of performance of financial Institutions

2.4.1. Performance Measurement

Performance measurement is the process of regular and systematic data collection, analysis and reporting to be used by a firm to follow up the resources it uses, the results it obtained with the produced goods and services (Bamberger, 2003). According Kaplan and Norton (2002), performance can be assessed by the use of the balanced score card (BSC), it addresses other aspects that do not incorporate financial measurements but rather intangible and intellectual assets such as high quality services or royal customers which are more critical to the success of the business.

According to Dixon (2000), Measuring performance aims at facilitating employee develop and for the following major purposes: to provide feedback and guidance, to set performance goals, to identify training needs and to provide input for management of pay administration, reward and promotion. The steps involved in effective performance include: identification of key performance areas and setting yearly objectives for each key performance indicator, identification of critical of attributes of effective performance, periodic review of performance, and discussion of performance with employees and identification of training and development needs. When you run your own business or have a vested interest in one through your investments, you need to know how to evaluate its performance based on facts and numbers. There are several parts in a business to watch. Here are some tips to measure the performance of a business and make appropriate changes to achieve your goals effectively (Mercy, 2001)

evaluate the assets and liabilities of the business from the balance sheet, review the cash flow to assess operating, financial and investing activities, the effects of these activities can be understood through income and expenses from the statement of income do internal comparison of cost and sales to understand if the amount of stock accumulated is increasing while sales remains stagnant, indicating poor utilization of stock. Compare the debtor and creditor values between past and present balance sheets to measure credit history, understand the customer satisfaction level through

complaints and reviews from the end users, having consistency and quality in performance and reliability improves Dixon (2000),

Likert (2008) opine that performance measure initiatives fail because of poor design and difficulties in its implementation. Organizational performance needs to be measured along both organizational level and work unit level requiring complementary dimensions and information for planning, tracking, analysis and improvement. Wahab (2000) argues that performance measures must focus attention on what makes, identifies and communicate the drivers of success, support organizational learning and provide a basis for assessment and reward. Dixon (2000) adds that appropriate performance measures are those which enable the firm to direct their actions towards achieving their strategic objectives. Performance measures used are those which support the business objectives, this is because the firm's performance is central to the future wellbeing and prosperity of an enterprise.

According to Ssejaka (1996), profitability has been the widely used measure of financial performance. Profitability is the excess of income over expenditure which can be expressed by the ratios like gross profit margin, net profit margin and return on equity. However, profit as a measure of performance has got a lot of limitations. Burns (1999) argued that profit is ambiguous as it can be looked at differently by different people for example Economists and Accountants. It also involves a lot of estimations like depreciation and stock valuation which end up giving different values according to methods used. Drucker (1990) points out that the common accounting performance measure of profit and cost rarely support changes in the organizational structure and size, thus non-financial measures like management and employee skills and their turnover must be used to fit within the strategic framework.

2.4.2. Business Performance dimensions

Business competitiveness, Herciu and Ogrean (2008) and Lopez et al.,(2005) describe competitiveness as comparison between a firm's performance and standard performance in the industry in terms of relative market share and position, sales growth and measure of customer base. Financial performance in terms of profitability, liquidity, capital structure and market ratio, quality of services in terms of reliability, responsiveness, appearance, cleanliness/tidiness, comfort, friendliness, communication, courtesy, access and availability of security, flexibility in terms of delivery speed and specification, resource utilization in terms of productivity and efficiency, innovation (Fitzgerald et al., 2006).

2.4.3. Analyzing Banks Using CAMELS Methodology

Camels approach is use to analyze bank risk and it was developed in US. This approach helps to evaluate banks with complete coverage of factors affecting banks creditworthiness (Maheshwari, 2009). this methodology is now industry standard. It came in India in early 1990's, in 1995, RBI had set up a working group. A rating system for domestic and foreign banks based on the international CAMELS model was introduced an international bank rating system where bank supervisory authorities rate institutions according to six factors. The six factors are represented by the acronym "CAMELS." C - Capital adequacy A - Asset quality M - Management quality E - Earnings L - Liquidity S - Sensitivity to Market Risk (Maheshwari, 2009).

Capital adequacy

Capital Adequacy Ratio (CAR), also known as Capital to Risk (Weighted) Assets Ratio (CRAR), is the ratio of a bank's capital to its risk. National regulators track a bank's CAR to ensure that it can absorb a reasonable amount of loss and complies with statutory Capital requirements. How much capital a bank should set aside as a proportion of risky assets, it helps to reduce the risk of default Capital adequacy is measured by the ratio of capital to risk-weighted assets (CRAR). A sound capital base strengthens confidence of depositors.

Asset quality

One of the indicators for asset quality is the ratio of nonperforming loans to total loans (GNPA). The gross non-performing loans to gross advances ratio is more indicative of the quality of credit decisions made by bankers. Higher GNPA is indicative of poor credit decision-making. Hence management must follow four steps

1. Adopt effective policies before loans are made
2. Enforce those policies as the loans are made
3. Monitor the portfolio after the loans are made
4. Maintain an adequate Allowance for Loan and Lease Losses (ALLL) (Maheshwari, 2009).

Management

To assess a bank's management quality, it requires professional judgments of banks compliance to policies and procedures, aptitude for risk-taking, development of strategic plans. The performance of the other five CAMELS components will depend on the management quality. The ratio of non-interest expenditures to total assets can be one of the measures to assess the working of the management. This variable, which includes a variety of expenses, such as payroll, workers compensation and training investment, reflects the management policy stance. Another ratio helpful to judge management quality is Cost per unit of money lent which is operating cost upon total money disbursed (Maheshwari, 2009).

Earnings

The quality and trend of earnings of an institution depends largely on how well the management manages the assets and liabilities of the institution. An FI must earn reasonable profit to support asset growth, build up adequate reserves and enhance shareholders' value. It can be measured as the return on asset ratio.

Liquidity

An FI must always be liquid to meet depositors' and creditors' demand to maintain public confidence. Cash maintained by the banks and balances with central bank, to total asset ratio (LQD) is an indicator of banks liquidity. In general, banks with a larger volume of liquid assets are perceived

safe, assets are perceived safe, since these assets would allow banks to meet unexpected withdrawals (Maheshwari, 2009).

2.5 Challenges faced by the banks while using E banking

The development of an efficient monetary transfer system is associated with so many factors. These problems are infrastructural deficiency such as erratic power supply and communication link especially in developing countries. In this case it requires government or organizations to provide stable and efficient power supply and telecommunication system (Oleka, 2009). Inadequate skilled managers and requisite tools on end users and client systems, here efforts should be done in provision of infrastructure and skilled man power, another problem is the large accumulation of cash in the economy and in this the government should compel legislation that would charge the dominance of cash usage to electronic payments. Also there is high charge or cost for the e-payment terminals (ATMs) so the banking legislation should set out standard charges for e-payment services (Littler, 2006). Non-provision of adequate security for fraud prevention, banks should endeavor to provide stand-by-camera in every ATMs machine for confirming identify of operators account and employ a good computer wizard in dictating and preventing frauds committed by computer hackers. Lack of government support for the improvement of e-banking, there should be an involvement of central banks in public awareness campaign and escalating infrastructural challenges to the relevant government agencies.

Power Failure and Communication Link

Constant electric failure leads to deficiencies in infrastructures such as ATMs computers etc. which slows down the rate of electronic transactions and also failure links from Nitel lines which are often as a result of spikes and surges caused consistent electronic power supply (Akinuli, 1999).

Lack of computer bank up

As a result of lack of computer backup when the bank system is corrupt there will be a loss of information about a customer, and this may lead to misappropriation of customers account, therefore the bank should have a manual backup (ledger) containing all data about the customers (Akinuli, 1999).

Lack of adequate investment capital

Funds that can be used to buy new information technologies and for modernizing existing systems is generally in short supply. While there are a number of modern banking applications in use, there is also integrated banking system, which continued to experience innovations in terms of product development specifically, and there has been tremendous improvement in the speed in which funds are transferred within and outside the domestic economy (international money transfer) (James, 2009).

Reduces employment in the country

Electronic banking in the country today has reduced the rate of employments in the country whereby most works that should be done by human are done by machines thereby lead to minimum rate of employment and high rate of unemployment in the country (Oleka, 2009).

High charges on machines

The rate of commission or charges imposed by banks is too high thereby discouraging customers from using the electronic machine for exchange of transactions example of such charges are charged on withdraw ATMs and online transfer from one bank branch to another (James, 2009).

Low public acceptance

Customers and public do not have trust in the machine in the sense that fraudulent personals uses the system in carryout fraudulent activities, even today banks uses the machine in looting customers money from their accounts. Some customer complains that sometimes when they go for withdraw with their ATM the machine will seize the card while their account will still be debited with un withdraw sum in course of ratification of this problem, the customer might be discouraged because it will take a longer time or end up unsolved (James, 2009).

Insecurities in banks

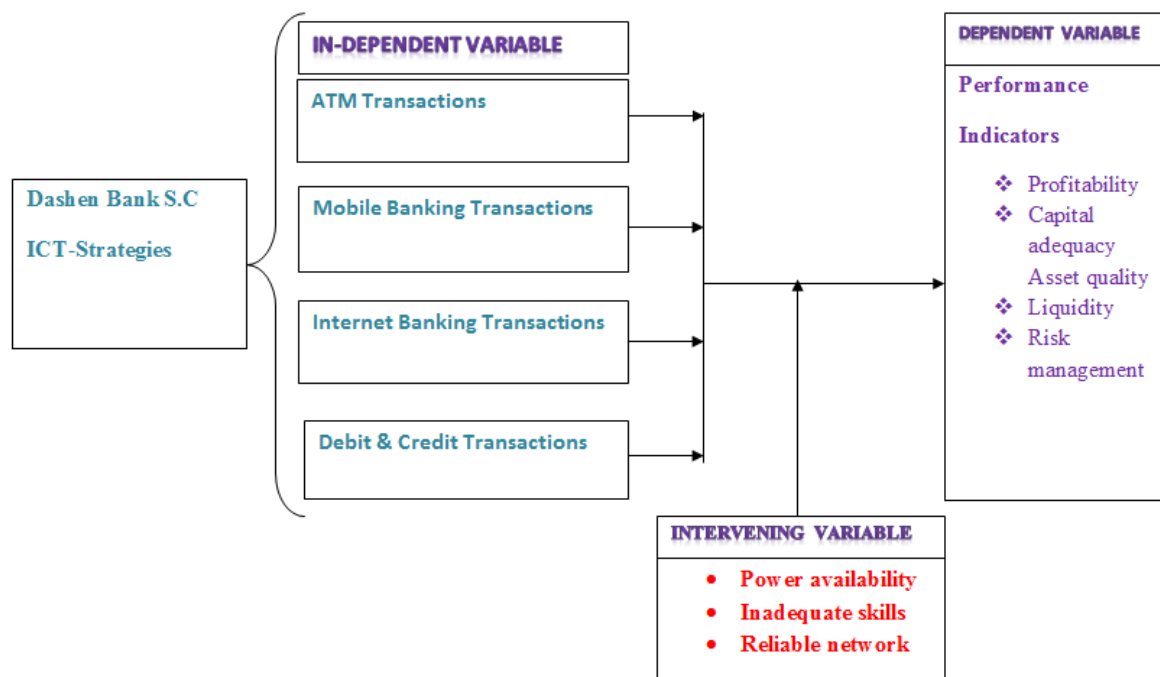
Most electronic machines today are not secure thereby making it easier for fraudulent personnel to carry out their fraudulent activities without been caught. Due to insecurity, banks cannot prevent stop or dictate any fraudulent activity. Computer hackers also use the system in stealing data or information by breaking of codes (Hodagho, 1996).

Encourages excessive withdrawal

Un-operational days like Saturdays when banks are not in operation customers can go and withdraw with their ATM cards, especially when there is a function like wedding ceremonies, customers with little or no money can rush to a nearby ATM machine to withdraw money for excessive spending, customers complained about this in an interview conducted by banks (James, 2009).

2.6 Conceptual Framework

Figure 2.6.1: Conceptual Framework



Source: Owen Drawing

The above concept implies that ICT-strategies types such as Mobile Banking, Internet Banking, Telephone Banking, and Electronic Card Banking improves banks profitability, liquidity, asset quality, earnings, and risk management especially if other factors remain constant and this factors include network coverage, reliable internet service provider, adequate skills on how to use the system, government policy on IT, power supply and many other connections.

2.7. Empirical Review

2.7.1 ATM's and Organization performance

Automated Teller Machine (ATM), also known as automated banking machine (ABM) is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip that contains a unique card number and some security information such as an expiration date. Authentication is provided by the customer entering a personal identification number (PIN). Using an ATM, customers can access their bank accounts in order to make cash withdrawals, credit card cash advances, and check their account balances as well as purchase prepaid cell phone credit. This improves convenience since customers can withdrawal money from their point of reach without necessarily visiting the bank. This increases efficiency and mitigates the costs of transactions leading to improved performance.

This is consistent with Fannie Mae Foundation report of that indicated that automated teller machine as used in banking sector serve approximately 420 million transactions annually for a total of \$3.3 billion in gross annual revenues. Ogbuji et al. (2012) observed the Automated Teller Machines (ATMs) is one of existing replacements of the cascading labor intensive transaction system effected through what is popularly referred to as paper-based payment instruments. An automatic teller machine allows a bank customer to conduct his/her banking transactions from almost every other ATM machine in the world. The ATM, therefore, performs the traditional functions of bank cashiers and other counter staff. It is electronically operated and as such response to a request by a customer is done instantly.

The combined services of both the Automated and human tellers imply more productivity for the bank during banking hours. Also, as it saves customers time in service delivery as alternative to queuing in bank halls, customers can invest such time saved into other productive activities. ATMs are a cost efficient way of yielding higher productivity as they achieve higher productivity per period of time than human tellers (an average of about 6,400 transactions per month for ATMs compared to 4,300 for human tellers Rose (2001).

Furthermore, as the ATMs continue when human tellers stop, there is continual productivity for the banks even after banking hours. The ATM transactions are done through over the phone line via internet connection (lease line). All the ATM machines are globally interconnected with each other with the financial institutions through the global ATM network like Master Card, Maestro, Cirrus, Visa, etc. In back side of every ATM card some logos are printed which refers to the ATM network. So the ATM machine connects to ATM network through processing center and the card holder's bank.

2.7.2. Mobile Banking and Performance

According to Nader, (2011) mobile banking is a service provided by financial institutions in cooperation with mobile phone operators. It allows customers with busy lives to conveniently do their banking using their phones anytime. It is about getting banking services to the unbanked, those who do not have bank access or bank accounts, and those who are at the bottom of the economic pyramid, often living in remote areas. They receive the benefits of banking services such as being able to save and borrow in a cost-efficient and secure way. The services include opening bank accounts, viewing account balances, making cash transfers between accounts, or paying bills via a mobile device. In recent time mobile banking is most often performed via SMS or the Mobile Internet but can also use special programs downloaded to the mobile device (Agboola 2006).

According to the German mobile operator Mobilcom, mobile devices, especially smart phones, are the most promising way to reach the masses and to create "stickiness" among current customers, due to their ability to provide services anytime, anywhere, high rate of penetration and potential to grow. According to Gartner, shipment of smart phones is growing fast, and should top 20 million units (of over 800 million sold) in 2006 alone. A study was conducted by Hernando and Nieto (2007) on the effect of mobile banking and performance of Spanish commercial banks. It was concluded that banks that implemented mobile banking were able to attract more customers and this led to increased access to customer deposits leading to improved performance.

2.7.3. Internet Banking and performance

Internet banking (e-banking) is the use of internet and telecommunication networks to deliver a wide range of value added products and services to bank customers. Malhotra and Singh (2009) argue that through the use of a system that allows individuals to perform banking activities at home or from their offices or over the internet. Some online banks are traditional banks which also offer online banking, while others are online only and have no physical presence (Bradley and Stewart, 2003). Online banking through traditional banks enables customers to perform all routine transactions, such as account transfers, balance inquiries, bill payments, and stop-payment requests, and some even offer online loan applications (Kannabira and Narayan, 2005).

Internet banking refers to a bank making its services accessible to clients using the internet as its delivery channel. Using internet banking, registered customers are able to log on to the bank's website and carry out banking dealings on their accounts. It is also referred to as online banking (Gerrard and Cunningham, 2003). Internet Banking is beneficial to banks as well as consumers, whereby there is an improvement of efficiency in services rendered to customers. Internet banking is convenient and cost-efficient. Moreover, the development of Internet banking has transformed the distribution channel structure in bank sector (DeYoung, Lang & Nolle (2007)

Customers can access account information at any time, day or night, and this can be done from anywhere. Internet banking has improved banking efficiency in rendering services to customers. Financial institutions in Kenya cannot ignore information systems since they play an important role in their operations because customers are conscious of technological advancements and demand higher quality services this leads to organization performance. In a study on the impact of mobile and internet banking on performance of financial institutions in Kenya, it was concluded that the adoption of internet banking has enhanced organization performance of the banking industry due to increased customers' deposits. This is attributable to improved efficiency, effectiveness and organization performance (Oruro & Ndungu, 2013).

2.8. ICT Strategies and Profitability

Simpson (2002) suggests that e-banking is driven largely by the prospects of operating costs minimization and operating revenues maximization. A comparison of online banking in developed and emerging markets revealed that in developed markets lower costs and higher revenues are more noticeable. While Sullivan (2000) finds no systematic evidence of a benefit of internet banking in US click and mortar banks. Furst, Lang and Nolle (2002) find that federally chartered US banks had higher Return on Equity (ROE) by using the click and mortar business model. Furst, Lang and Nolle (2002) also examined the determinants of internet banking adoption and observed that more profitable banks adopted internet banking after 1998 but yet they were not the first movers.

Jayawardhena and Foley (2000) show that internet banking results in cost and efficiency gains for banks yet very few banks were using it and only a little more than half a million customers were online in U.K. Nader (2011) analyzed the profit efficiency of the Saudi Arabia Commercial banks during the period 1998- 2007. The results of his study indicated that availability of phone banking, number of ATMs and number of branches had a positive effect on profit efficiency of Saudi banks. On the contrary he found that the number of point of sale terminals (POSSs), availability of PC banking and availability of mobile banking did not improve profit efficiency. Agboola (2006) in his study on Information and Communication Technology (ICT) in Banking operations in Nigeria using the nature and degree of adoption of innovative technologies; degree of utilization of the identified technologies; and the impact of the adoption of ICT devices on banks, found out that technology was the main driving force of competition in the banking industry. During his study he witnessed increase in the adoption of ATMs, EFT, smart cards, electronic home and office banking and telephone banking. He indicates that adoption of ICT improves the banks' image and leads to a wider, faster and more efficient market. He asserts that it is imperative for bank management to intensify investment in ICT products to facilitate speed, convenience, and accurate services, or otherwise lose out to their competitors.

Malhotra and Singh (2009) in their study on the impact of internet banking on bank performance and risk found out that on average internet banks are larger, more profitable and are more operationally efficient. They also found that internet banks have higher asset quality and are better managed to lower the expenses for building and equipment and that internet banks in India rely substantially on

deposits. They further found out that smaller banks that adopt internet banking have been negatively impacted on profitability. Mabrouk and Mamoghli (2010) in their study on Dynamics of Financial Innovation and Performance of Banking Firms: Context of an Emerging Banking Industry, analyzed the effect of the adoption of two types of financial innovations namely; product innovation (telephone banking and SMS banking etc) and process innovation (Magnetic strip card (debit, ATM and credit card), Automatic cash dispenser; (Automatic teller machine; Electronic payment terminal etc) on the performance of banks. Their analysis included two adoption behaviors, first mover in adoption of the financial innovation and imitator of the first movers

. They found out that first mover initiative in product innovation improves profitability while process initiative has a positive effect on profitability and efficiency. Banks that imitate are less profitable and less efficient than first mover's profitability and mostly in developed and emerging economies leaving a paucity of ICT strategies performance literature for Africa and Kenya specifically. This literature gap is addressed by this comprehensive study.

2.9. Research gaps

From the previous review of relevant literature, it is evident that research in the area of bank innovations has been done but not in a comprehensive approach. All the literature reviewed indicated that previous researchers only concentrated on customer satisfaction and behavior towards different ICT strategies but, this research focused to assess the financial performance of banks. This makes the study more comprehensive. From survey of relevant literature, it has been found that there are a few studies specific to Ethiopia on the link ICT-Strategies and its relation towards performance of the bank. This study therefore intends to fill these pertinent gaps in literature by studying the Nexus between organizational ICT-strategies and the performance of Dashen Bank.

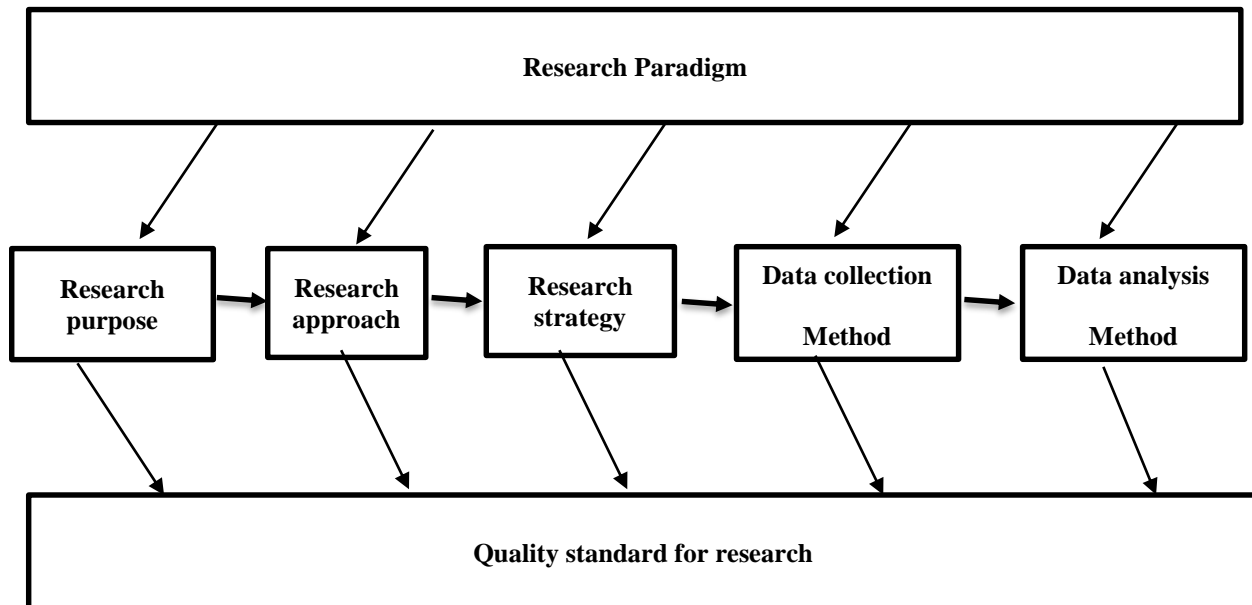
CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3. Overview of the Methodology

Many researchers have written extensively on research methodology. The underlying factor in most studies on research methodology is that the selection of methodology is based on the research problem and stated research questions. Methodologies cannot be true or false, only more or less useful (Silverman, 2001). Nachamias et al. (1996) for instance states that methodologies are considered to be systems of explicit rules and produced, upon which research is based, and against which claims for knowledge are evaluated. Conducting any type of research should be governed by a well-defined research methodology based on scientific principles. Eldabi (2002) suggested that a series of steps as a research paradigm to be followed in a methodology part of a research. Based on this suggestion researcher follows the basic framework of research paradigm developed by Foster.

Figure 3.1. Frame work for the research paradigm



Source: Foster (1998)

3.1. Research Purpose

There are three types of academic researches depending on the problem area and the nature of the phenomenon that it studies. The purpose of the research can be Exploratory which deals with unknown problem, Descriptive in which there is an awareness of the problem and Explanatory, where the problem is clearly defined (Ahmed 2011). The purpose of this thesis is to conduct descriptive research in order to gather as much information as possible concerning the nexus between organizational ICT-Strategies and performance of DB. This study adopted a descriptive research design this is because it highlights a characteristic behavior on one variable because of another variable (Kothari, 2005). This kind of design was appropriate in establishing the relationship between ICT and financial performance of DB. Therefore, Descriptive research was being used in to fulfill this approach.

3.2. Research Approach

Research approach is selected by researcher(s) based on the research purpose, the nature of the research, the problem area, and research questions (Alhamdani et al. 2006).The research approach in this study is chosen based on the purpose and the research questions set out to be addressed. According to Creswell (2003, p.13-15). In research there are three basic approaches, these are quantitative, qualitative, and Mixed approach. The quantitative research approach makes use of statistics and numbers which are mostly presented in figures while qualitative approach relies on describing an event with the use of words. The mixed approach inquirers draw liberally from both quantitative and qualitative assumptions. According to Yin (1994), a research approach chosen should be done according to the research questions in that particular situation since each approach has its own merit and demerit and how empirical data is collected and analyzed. Additionally, the degree of focus on either contemporary or historical event as well as the type of questions asked should be the main basis on which a research approach should be chosen. In conducting this study a comparison of both quantitative and qualitative research approaches was made and the quantitative research approach was used for the study.

3.3. Research Strategy

The most important condition for differentiating among the various research strategies is to identify the type of research question being asked (Creswell, 2003; Hair et al. 2006; Leedy, 1989; McNabb, 2004; and Yin, 1989). It is possible to identify some situations in which all research strategies might be relevant and other situations in which two strategies might be considered equally attractive. We can also use more than one strategy in any given study. To this extent, the various strategies are not mutually exclusive. But we can also identify some situations in which a specific strategy has a distinct advantage (Yin, 1989; p. 20).

According to Yin (1994), there are five strategies to collect data and get results: experiment, survey, archival analysis, history and case study. In addition, there are three criteria to determine the research strategy: types of research questions, control over behavioral events, and focus on present events. But it is important to notice that boundaries among the above methods are not completely clear, they may overlap each other. In this study, Survey approach is chosen, because the research questions are focused on: What are the ICT-strategies being used by Dashen Bank? , How ICT-strategies affected performance of Dashen Bank? What are the challenges faced by the Banks while using ICT-strategies? So the types of questions are in the form of “what” & “How”. This research does not require control over behavioral events but it focuses on current issues.

3.3.1 Population

All the items under consideration in any field of inquiry constitute a ‘universe’ or ‘population’. It can be presumed that in such an inquiry when all the items are covered no element of chance is left and highest accuracy is obtained (Kothari, 2004). The case study of this research is DB and the population 50 comprising of DB employees from head office especially from the department of Electronic Banking, Administration, Risk and Audit, Finance and accounting.

3.4. Research Method

This research paper intended to examine concerning the nexus between organizational ICT-Strategies and performance in DB in four (4) purposely sampled departments. To undertake this research, the specific methods of data collection used were survey, self-administered questionnaires and document sources. Survey for the quantitative strategy was used through distributing. Questionnaires were distributed to Electronic Banking, Administration, Risk and Audit, Finance and accounting professional staff of the selected departments. Those respondents were selected because, they are deemed to be knowledgeable about ICT-Strategies system and could provide important perspectives on its relation.

3.4.1 Survey Design

Since the research questions mainly focus on “what” questions; it is justifiable rationale for conducting an exploratory study and more likely to favor survey than others (Yin, 1989; pp.17-18). Survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. Its purpose is to generalize from a sample to a population so that inferences can be made and it is also economical and rapid turnaround in data collection (Creswell, 2003; pp.153-154); and this method is important for collecting large amounts of raw data using question and answer formats (Hair et al. 2006). Survey had conducted via self-administered questionnaire from the purposely sampled bank staff; because questionnaire is a common place instrument for observing data beyond the physical reach of the observer (Leedy, 1989; pp. 142). The main advantage of survey is its ability to accommodate large sample sizes at relatively low costs, ease of administration and ability to tap in to factors that are not directly observable (Hair et al.,2006).

As briefly discussed in the above, questionnaire was distributed to the purposely sampled DB staffs. The questionnaire was divided into four sections. Section I captured basic demographic information of the respondents such as sex, age, educational back ground and employee experience, Section II captured information about the ICT-Strategies used in DB. Section III also captured the financial performance of DB. Lastly in Section V captured the challenges faced by bank while being used ICT-strategies.

3.4.2 Sample Design and Sampling Technique

Sampling is the process of choosing, from a much large population, a group about which wish to make generalized statements so that the selected part represent the total group (Leedy, 1989; pp. 158). A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample (Kothari, 2004). Stratified sampling technique was used to choose department to be investigated and this followed Census and purposive whereby the researcher took the whole population which is 44 out of 50 staff members: administration, Information technology, internal audit, risk management, staff from finance department of the institution was chosen to take part in the research; this information can be illustrated as follows:

Table 3.1: Justification of the target population and Sample design to be used

Department	Population	Sample size	Sampling design
Electronic Banking	8	8	Census
Administration	14	8	Census
Risk and Audit	8	8	Census
Finance and accounting	22	20	Purposive
Total	50	44	

Source: DB (2019)

The procedure in Stratified Sampling the researcher divides, the population into separate groups, called strata. Then, a probability sample (often a simple random sample) is drawn from each group. Stratified sampling improves representativeness of the sample by reducing sampling error and having fair distribution on the population (Mokhlis, 2009). Due to time and data limitations four department sections were selected in order to collect the necessary data regarding ICT-strategies services and its performance on DB. The purposive or judgmental samplings involves selecting cases when the researcher's prior knowledge and judgment suggests will best serve the purposes of the study and provide the best information (T. Sulvan, 2001). Purposive sampling technique has been employed to select respondent from each of these departments. In order to get accurate information with regard to ICT strategies services delivery, business efficiency, income generation, and profitability Customer Service Managers or DB officers of these banks who has exposure in this

regard were selected to respond the structured questioner. The researcher chooses to take 4 departments on DB as a sample, because it is often impossible or too much expensive to collect data from all the potential units. Hence samples are chosen to represent the relevant attributes of the whole population. In this respect I note the caution by Graziano and Raulin (1997) because the samples are not perfectly representative of the population from which they are drawn, therefore the researcher unlikely to be able to generalize the conclusions to the entire population.

With this kind of technique, the researcher included elements that are presumed to be typical of a given population about which the researcher seeks information. According to Black (1976), census does not involve any random selection process. Further, according to Welman and Kruger (2001), the advantage of non-probability sampling is that it is economical and less complicated. Purposive sampling procedure was used because the researcher believes it is convenient and time saving. Purposive sampling techniques were used in the sample selection in order to enable the researcher pick respondents who meet the purposive of the study. The members were purposively selected depending on their ability to easily analyze and understand the problem of study. Also a fair representation from each office and the stakeholders were considered when sampling.

3.5.1. Sample Size Determination

When it is not possible to study an entire population but the population is known, a smaller sample is taken using a random sampling technique. Krejcie and Morgan (1970) formula allows a researcher to sample the population with a desired degree of accuracy (Krejcie and Morgan, 1970). The formula was used to calculate the sample size. “Table for determining needed size S of a randomly chosen sample from a given finite population of N cases such that the sample proportion p was within $\pm .05$ of the population proportion P with a 95 percent level of confidence” Krejcie, & Morgan (1970). For this case the sample size of a population of 50 was 44 as seen in table below.

Table 3.2: Sample selection and Size

Total	Sample	Total	Sample	Total	Sample
10 ⇒	10	220 ⇒	140	1200 ⇒	291
15 ⇒	14	230 ⇒	144	1300 ⇒	297
20 ⇒	19	240 ⇒	148	1400 ⇒	302
25 ⇒	24	250 ⇒	152	1500 ⇒	306
30 ⇒	28	260 ⇒	155	1600 ⇒	310
35 ⇒	32	270 ⇒	159	1700 ⇒	313
40 ⇒	36	280 ⇒	162	1800 ⇒	317
45 ⇒	40	290 ⇒	165	1900 ⇒	320
50 ⇒	44	300 ⇒	169	2000 ⇒	322
55 ⇒	48	320 ⇒	175	2200 ⇒	327
60 ⇒	52	340 ⇒	181	2400 ⇒	331
65 ⇒	56	360 ⇒	186	2600 ⇒	335
70 ⇒	59	380 ⇒	191	2800 ⇒	338
75 ⇒	63	400 ⇒	196	3000 ⇒	341
80 ⇒	66	420 ⇒	201	3500 ⇒	346
85 ⇒	70	440 ⇒	205	4000 ⇒	351
90 ⇒	73	460 ⇒	210	4500 ⇒	354
95 ⇒	76	480 ⇒	214	5000 ⇒	357
100 ⇒	80	500 ⇒	217	6000 ⇒	361
110 ⇒	86	550 ⇒	226	7000 ⇒	364
120 ⇒	92	600 ⇒	234	8000 ⇒	367
130 ⇒	97	650 ⇒	242	9000 ⇒	368
140 ⇒	103	700 ⇒	248	10000 ⇒	370
150 ⇒	108	750 ⇒	254	15000 ⇒	375
160 ⇒	113	800 ⇒	260	20000 ⇒	377
170 ⇒	118	850 ⇒	265	30000 ⇒	379
180 ⇒	123	900 ⇒	269	40000 ⇒	380
190 ⇒	127	950 ⇒	274	50000 ⇒	381
200 ⇒	132	1000 ⇒	278	75000 ⇒	382
210 ⇒	136	1100 ⇒	285	100000 ⇒	384

Krejcie and Morgan (1970) Sample size for a population of 50 is 44.

3.6. Data Collection Instrument

3.6.1. Questionnaires

This is an important method of data collection. Judd (1991) said that a questionnaire is justifiable in data collection mainly because; it enables the researcher to collect large amount of data within a short time period, it also provides opportunity for respondents to give frank, anonymous answers. One set of questionnaire was designed for the community members; it included both open and closed ended set of questions that to be answered. The questionnaire was written in a simple and clear language for the respondent to feel free while answering. In addition to that the use of questionnaire is considered vital to the research since it provides accurate information regarding the study. The first part of the questionnaire aimed at the collection of demographic information of the participants. The second part used five point Likert scale which developed to answer ICT-strategies used by the bank The third part used five point Likert scale & Multiple which measures the Financial performance of the bank, and the last part used multiple choice questions to answer the challenges faced by the DB being used ICT-Strategies.

3.6.2. Documentary Review

This research also reviewed reports obtained from the study organization. This report included bank financial statement, annual reports and other reports from the bank. This method was chosen because; it is vital in providing background information and facts about e banking on performance of the bank before primary data could be collected. Indeed, before field data is collected, a wide collection of data had been collected and this was used to cross check with the primary data that is to be obtained by the field. To investigate the DB Profitability performance trend, Performance of DB from 2015 to 2019, the instruments used to measure the working efficiency of the DB and DB Funding Structure the researcher were used secondary data.

3.7. Procedure of Data Collection

In order to conduct a successful research and, to answer the research questions raised, primary data were collected from respective employees and the instrument for data collection was a self - developed questionnaire. Quantitative data collected through distribution of a questionnaire which by believing on the respondents was given the reply genuinely. The questionnaires are delivered on hand and email to the respective employees. The reliability of the instruments was determined through piloting process to assess if developed items will give the consistent results at different times after they would be administered. The internal consistency of the instruments was determined by applying the Cronbach's alpha technique on Likert rating items. The results of the reliability test produced an overall Cronbach Alpha correlation coefficient of 0.887. The closer Cronbach's alpha coefficient is to 1, the higher the internal consistency reliability (Sekaran, 2003). A coefficient of 0.7 is recommended for a newly developed questionnaire and therefore 0.887 was adequate for this study.

3.8. Methods of Data Analysis

To analyze the data collected, explains that the researcher should find out the statistical data analysis tools. This includes descriptive statistics, inferential statistics and tests of significance. Data collected was cleaned, sorted and coded using Statistical Package for Social Sciences (V. 22.0) and MS Excel. The research findings were presented in form of tables and charts. Percentages, tabulations, mean and standard deviation were used to present the data. Percentages mean and standard deviation was used to determining the trend between the variables. Correlation analysis was used in establishing the relationship between the variables under investigation.

The Mean (\bar{X})

According to Aggesti (2009), Mean (\bar{x}): is the average value calculated by adding up the values of each case for a variable and dividing by the total number of cases.

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n xi$$

Where, \bar{X} = mean; n = number total of respondents;

Xi = scale value of respondent

Table 3.3: Evaluation of Mean

Mean	Evaluation
1.00 -2.49	Very weak
2.50 -3.49	Weak
3.50 -4.49	Strong
4.50 - 5.00	Very Strong

Source: Aggesti (2009)

Standard deviation (SD)

The standard deviation is a value which indicates the degree of variability of data. It indicates how close the data is to the mean. The formula of standard deviation is: $(S) = \sqrt{S^2}$ Where,

$$S^2 = \frac{1}{n-1} \sum_{i=1}^n (xi - \bar{X})^2$$

Table 3.4: Evaluation of standard deviation

Standard Deviation	Level spreading
SD<0.5	Homogeneity
SD>0.5	Heterogeneity

Source: Aggesti (2009)

Pearson Correlation test: The Pearson correlation coefficient is a very useful way to measure the statistical relationship that exists between independent and dependent variables.

Table 3.5: Evaluation of correlation

Correlation coefficient (positive or negative)	Label/positive or negative
r=1	Perfect linear correlation
0.9 < r < 1	Positive strong correlation
0.7 < r < 0.9	Positive high correlation
0.5 < r < 0.7	Positive moderate correlation
0 < r < 0.5	Weak correlation
r=0	No, relationship
-1 < r < 0	Negative relationship

Source: (Saunders, 2003)

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter presents empirical findings in reference to the research questions in chapter one. These findings were obtained from both primary and secondary sources. They were presented and analyzed using frequency tables and percentages to determine the contribution of ICT-strategies on performance of DB.

4.1 Demographic Characteristics of Respondents

In the first part of the data analysis the demographic characteristics of respondents are reflected. Age, sex, educational level and experiences of participants are presented below. The study participants on survey questionnaire have different personal information; besides these differences they introduce different responses towards ICT-strategies being used by DB, and the factors that influence the bank performance. The demographic profile of respondents, participated in this study was shown in table 4.1 as follow

Table 4.1: Respondents Demographic profile

Variable	Classification of variables	Frequency	Percentage
Sex	Male	26	59.1%
	Female	18	40.9%
Age	21-30	4	9.1%
	31-40	24	54.5%
	41-50	13	29.5%
	51 and Above	3	6.8%
Education	Diploma	4	9.1%
	Bachelor of art	29	65.9%
	Master degree	11	25%
	PHD	0	0%
Experience	2-3 years	5	11.4%
	4-5 years	15	34.1%
	5 years and Above	24	54.5%

Source: Primary Data, 2020

As it is shown on the above table, the highest percentage of participants in this study was males who represent 59.1% of respondents. This shows that respondents in the selected research site were more male participants. In the case of classification of respondents by age 54.5% of the respondents are young (31-40 years old). This implies that there was fair representation of the population as almost all age groups and the data provided reflected the views of the entire population.

Regarding the educational level of the study 65.9% of the respondents are BA degree holders. This implies that in the selected research site the majority are operating with their first degree while around one- third of them had master's degree. On the other hand, 54.5% of the respondents had served in DB for a period of 5 years and above. This implies that over half of the participants have reasonable work experiences that can be taken as an advantage to the current study. Even the remaining 44.5 % of them have good awareness of how the institution is operating.

4.2. ICT-Strategies used by Dashen Bank

ICT-Strategies being used by DB are the followings: mobile banking, internet banking, telephone banking, electronic card etc. Dashen Bank, introduce ATM and POS in 2004 by providing only debit card service for Visa cardholders and in 2008, the bank has got the membership license from MasterCard and has begun accepting MasterCard in addition to Visa card. DB clients are allowed to withdraw up to 3,000 birr in one transaction. Currently DB allowed to their customers to withdraw on ATM machine up to 8,000-64,000 birr in one transaction per day. Connecting its leadership with advanced banking technology, DB signed an agreement with iVeri, a South African electronic payment technology company, for the introduction of mobile commerce in April 21, 2009. According to the agreement, iVeri Payment Technologies has licensed its Gateway and MiCard e-payment processing solution to DB. This would make DB the first bank in Ethiopia to acquire e-commerce and mobile merchant transactions.

4.2.1. Application of ICT-Strategies by Dashen Bank

For many consumers, electronic banking means 24-hour access to cash through an automated teller machine (ATM), mobile banking, internet banking or Direct Deposit of paychecks into checking or savings accounts. But electronic banking involves many different types of transactions (Simpson 2002, Fox and Beier, 2006). According to Simpson (2002), table 4.2 below shows that the ICT- strategies applicable by DB.

Table 4.2: Application of ICT-Strategies by Dashen Bank

ICT-Strategies	Frequency	Percent	Valid	Cumulative
Valid Mobile banking	12	27.3	27.3	27.3
Internet banking	9	20.5	20.5	47.7
Telephone banking	11	25.0	25.0	72.7
ATM	12	27.3	27.3	100.0
Total	44	100.0	100.0	

Source: Primary data, 2020

Table 4.2 shows application of different ICT-Strategies in DB, 27.3% of the respondents say the bank applied ICT strategies through mobile banking, 20.5% internet banking, 25% telephone banking and 27.3% ATM. This implies that DB applies electronic banking in different ways ranging from mobile, internet telephone and ATM. The data shows there is a fair distribution on the use of bank services with mobile banking and banking constitute the lead. This is a good sign of service delivery to the customers and improves bank performance forthwith especially if well utilized.

4.2.2. Types of ICT-strategies Vs. Bank Profitability

According to Ssejaka (1996), profitability has been the widely used measure of financial performance. Profitability is the excess of income over expenditure which can be expressed by the ratios like gross profit margin, net profit margin and return on equity. However, profit as a measure of performance has got a lot of limitations. Burns (1999) argued that profit is ambiguous as it can be looked at differently by different people for example Economists and Accountants.

It also involves a lot of estimations like depreciation and stock valuation which end up giving different values according to methods used. Drucker (1990) points out that the common accounting performance measure of profit and cost rarely support changes in the organizational structure and size, thus non-financial measures like management and employee skills and their turnover must be used to fit within the strategic framework.

Table 4.3: Types of ICT-Strategies vs. Bank Profitability

Types of ICT-Strategies in Dashen Bank	Strongly Agreed		Agree		Disagree		Strongly Disagree		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
	ATM	20	45.5	24	54.5	-	-	-	-	44
Mobile banking(Mod Birr)	28	63.6	16	36.4	-	-	-	-	44	100
Internet banking	16	36.4	28	63.6	-	-	-	-	44	100
Telephone Banking	23	52.3	21	47.7	-	-	-	-	44	100
Visa or Debit card	19	43.2	25	56.8	-	-	-	-	44	100

Source: Primary data, 2020

4.2.2.1. ATMs and Bank Profitability

Table 4.3 displays the results of responses from respondents regarding the influence of ATMs on the profitability of DB. 45% strongly agreed of the respondents says DB more profitable through ATM transaction. Presentation on ATM shows that all the rest respondents 54.5% agreed that ATM is used by clients of DB and make DB profitable. This means that ATM is one of the ICT-Strategies commonly used by clients of DB as it is unanimously accepted by the respondents. ATMs are electronic terminals that let you bank almost any time. To withdraw cash, make deposits, or transfer funds between accounts, you generally insert an ATM card and enter your PIN & the bank charges 25 cents per 100 birr an results more profitable as more the ATM Used. Therefore it provides convenience in banking. These results concur with the findings of Nader (2011) in a study conducted among Saudi Arabia banks during the period 1998-2007 where the results of the study confirmed that availability of ATMs and branches

4.2.2.2. Mobile Banking (Mod Birr) and Bank Profitability

Responses on the influence of mobile banking on the profitability of DB are presented on Table 4.3. 63.6% strongly agreed of the respondents says DB more profitable through Mobile banking. Presentation on Mobile Banking shows that all the rest respondents 34.4% agreed that Mobile banking is used by clients of DB and make DB profitable. This means that mobile banking is one of the ICT-Strategies commonly used by clients of DB as it is unanimously accepted by the respondents. Similar to the findings on mobile banking and bank profitability, Porteus (2006) asserts that in Uganda mobile banking has increased access to banking services and subsequently income and profits for the banks. In Kenya, Ndung'u (2011) concurs that mobile banking has revolutionized the money transfer business and has created further innovations that have lowered the transaction costs for both the banks and customers. This transformation of money transfer business has translated to more incomes and profits to DB. This confirms why DB has appeared in the national in the front of mobile money transfer services. This improvement of the mobile money services has increase the velocity and circulation of money in the country and has resulted to more profits for the banks through commission incomes.

4.2.2.3. Internet Banking and Bank Profitability

Table 4.3 displays the results of responses from respondents regarding the influence of internet banking on the profitability of DB. 36.4% strongly agreed of the respondents says DB more profitable through internet banking. Presentation on internet banking shows that all the rest respondents 63.6% agreed that internet banking is used by clients of DB and make DB profitable. This means that internet banking is one of the ICT-Strategies commonly used by clients of DB as it is unanimously accepted by the respondents. These findings are inconsistent to those of Malhotra and Singh (2009) who found that, in India, larger internet banks were more profitable. However their study also found that smaller banks had their profitability impacted negatively by internet adoption. DeYoung, Lang and Nolle (2007) also had contrary findings in the USA which concluded that internet banking improved bank profitability. Another contrary finding was reported in India by Kagan, Acharya, Rao and Kodepaka (2005) that internet banking helped community banks to improve their earning ability. The findings show that DB does not invest in internet banking with a sole objective of making high incomes from the service. Internet banking in Ethiopia is mainly

used as a compliment of other service delivery channels in order to create convenience to the customers. Internet banking is also used as a competitiveness tool in order to attract and retain mainly the corporate clients. In Ethiopia, internet banking is mainly used by corporate clients who would be given the service at highly subsidized rates due to the fact that corporate customers have several ways of contributing to the banks' profitability like through loans, overdrafts, letters of credit and cheque processing.

4.2.2.4. Telephone Banking (Tele-Banking) and Bank Profitability

Table 4.3 displays the results of responses from respondents regarding the influence of telephone banking on the profitability of DB. 52.3% strongly agreed of the respondents says DB more profitable through ATM transaction. Presentation on telephone banking shows that all the rest respondents 47.7% agreed that telephone banking is used by clients of DB and make DB profitable. Telephone banking is a channel for delivering banking services. Banks use it as an alternative or a supplement to their traditional way of delivering services through branch networks. The main benefit to banks is a lower cost profile compared to the cost of providing services via branches. According to the US Bank Administration Institute, the cost of running a ``checking' 'account (an equivalent to current account in the UK) via a call center is about a third of the cost of running it via a branch (Chartered Institute of Bankers, 1998, p. 27). Booz, Allen& Hamilton cited in Hall et al. (1999) also claim that telephone banking transactions cost about half of branch banking transactions at US\$0.54 against \$107. Banks are encouraged to use alternative delivery channels other than branches partly because of the escalating costs of operating the latter and partly in response to customer demand. For example, there are an increasing number of small businesses and self-employed persons working from homes. The benefits to customers of using telephone banking are convenience and control. Customers are able to do banking 24hours a day and seven days a week, at places convenient and private to them such as their home. Customers also have added benefits in the form of lower charges on services and higher interest rates for their deposits, which result from the bank's lower cost of operation. It is, therefore, not surprising to know that the number of users of telephone banking services is growing. In 1999, about one in five customers of established financial institutions, which include banks, used call centers and this ratio is expected to increase to one in three by 2004 (Chartered Institute of Bankers, 1999, p. 22).Many

Ethiopian banks offer banking services through the telephone because of their customers' growing preference for using it.

4.2.2.5. Visa or Debit Card and Bank Profitability

Responses on the influence of mobile banking on the profitability of DB are presented on Table 4.3. 63.6% strongly agreed of the respondents says DB more profitable through Mobile banking. Presentation on Mobile Banking shows that all the rest respondents 34.4% agreed that Mobile banking is used by clients of DB and make DB profitable. This means that debit card is one of the ICT-Strategies commonly used by clients of DB as it is unanimously accepted by the respondents. Debit Card Purchase or Payment Transaction let you make purchases or payments with a debit card, which also may be your ATM card. This could occur at a store or business, online, or by phone. While the process is fast and easy, a debit card purchase or payment transfer's money fairly quickly from your bank account to the company's account. So it's important that you have funds in your account to cover your purchase. This implies when need to keep accurate records of the dates and amounts of your debit card purchases, payments, and ATM withdrawals. Also be sure you know the store or business before you provide your debit card information to avoid the possible loss of funds through fraud. Lastly, the respondents also stated that In general it can be concluded that DB have varieties of ICT-strategies for their clients in order to provide effective and efficient service delivery.

According to Ssejaka (1996), profitability has been the widely used measure of financial performance. Profitability is the excess of income over expenditure which can be expressed by the ratios like gross profit margin, net profit margin and return on equity. However, profit as a measure of performance has got a lot of limitations. Burns (1999) argued that profit is ambiguous as it can be looked at differently by different people for example Economists and Accountants. It also involves a lot of estimations like depreciation and stock valuation which end up giving different values according to methods used. Drucker (1990) points out that the common accounting performance measure of profit and cost rarely support changes in the organizational structure and size, thus non-financial measures like management and employee skills and their turnover must be used to fit within the strategic framework.

4.3. Roles of ICT-strategies in Dashen Bank

Table 4.4: Roles of ICT-strategies in Dashen Bank

Roles of ICT-Strategies in Dashen Bank	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
	Depositing	22	50.0	22	50.0	-	-	-	-	44
Withdrawals	44	100	-	-	-	-	-	-	44	100
Making payments	20	45.5	24	54.5	-	-	-	-	44	100
Checking account	24	54.5	20	45.5	-	-	-	-	44	100

Source: Primary data, 2020

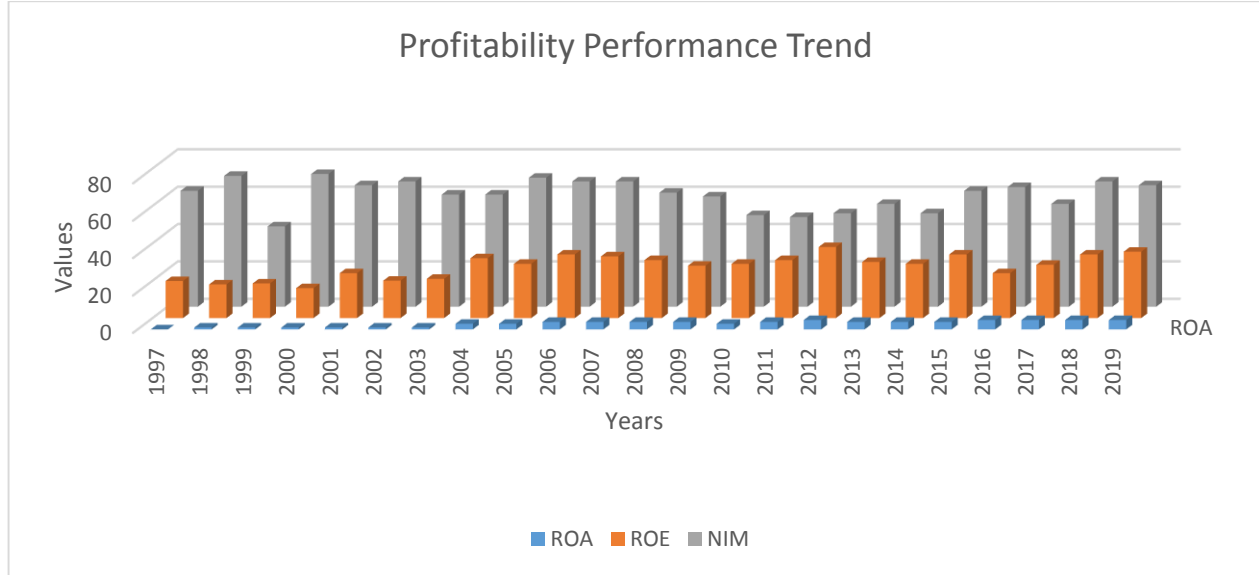
Table 4.4 shows that the respondents on roles of ICT-strategies in DB and their responses were as follows. Presentation shows all the respondents (100%) agreed that electronic banking is used for depositing of cash and check in the bank. This implies that the clients use electronic banking for payment of cash ATM machine, telephone banking, pay direct and visa or debit card transfer the respondents further stated that they also use electronic banking for withdrawal of money from accounts since it is more convenient because a client can transact a business where ever he or she is most especially with mobile banking services where mobile telephone is used. ICT-Strategies also help bank clients to authorize payments directly from the bank for example purchase from supermarket, payment of electricity and water bills. This makes it convenient for the bank, account owners and the supplier of goods. Checking balance another transaction performed by electronic banking where by clients can use ATM, mobile banking and internet banking to check for their balance direct from the bank and this can allow clients to make a decision on how much to deposit or withdraw.

Therefore it can be concluded that e banking promotes effectiveness and efficiency in service delivery since clients can be able to withdraw and deposit money, authorizes payment and check account balance at ease.

4.4. Financial Performance of Dashen Bank

Below figure shows the trend of Profitability (ROA, ROE and NIM) over the study period

Figure 4.3.1 DB Profitability performance trend



Sources: DB (2020)

Figure 4.3.1 present Profitability Performance trend of the bank over the study period (1997-2019) Profitability is measured in terms of ROA, ROE and NIM. As it indicated in the figure ROA increased from 1999 before slightly decreased in 2002. The figure showed an increased in 2004 to 2.10% before a decreased in 2005 to 2.08%. As can we see from the trend there are up and down on the ROA value during the study period. The downward trend is attributable to investing the fund on Technological Advancement of the Bank; installing core banking system and ATM across the Branches starting from 2005. Since the return of investment on the technology is long turn, ROA has been showed slightly increases starting from 2006. Up and down trend also reflected on profitability performance measured on ROE and NIM. In general the bank's profitability progress has shown an increase with a decreasing rate.

4.4.1. Consolidated Progressive Performance of Dashen Bank from 2015 to 2019

Table shows DB consolidated Progressive Performance in terms of its total assets, deposits, equity, loans, and net profit for the period 2015 to 2019.

Table 4.5: Consolidated Progressive Performance of Dashen Bank from 2015 to 2019

Items	Year: 2015	2016	2017	2018	2019
Assets	216.0	265.0	333.0	476.0	512.0
Deposits	129.0	135.0	170.0	204.0	294.0
Loans	168.0	192.0	228.0	293.0	331.0
Equity	28.0	32.0	54.0	102.0	100.0
Profit	10.0	9.0	10.0	14.0	19.0

Sources: DB (2015-2019)

As shown in table 4.5, DB consolidated Progressive Performance in terms of its total assets, deposits, equity, loans, and net profit for the period 2015 to 2019 has been steadily progressing. For example from 2015 to 2016 assets increased by 9 billion, 2016 to 2017 it increased by 68 billion, 2017 to 2018 it increased by 143 billion and 2018 to 2019 it increased by 36 billion. This implies that total asset increased steadily from 2008 to 2010 but however there was a sharp increase in 2011 which was believed to be due to sale of shares and loans obtained by the bank. The increased further normalized in 2019. Analysis of the consolidated total deposit shows that there is an increased in the total deposit from 2015 to 2016 by 6 billion, from 2016 to 2017 by 35 billion, 2017 to 2018 by 34 billion and 2018 to 2019 by 90 billion. This implies that they have steady increase in total deposit and through the years which is believed to be due to extensive marketing which led to opening of more branches and good customer relation services as well.

Total consolidated loans for the respective year's shows that from 2015 to 2016 increment were by 24 billion, from 2016 to 2017 by 36 billion, from 2017 to 2018 by 65 billion and from 2018 to 2019 by 38 billion. This implies that there was steady increase in total loan from 2015 to 2017 but however in 2018 experienced sharp increase which is believed to be due to shares sold and loans acquired by the bank.

Total equity increased from 2015 to 2016 by 4 billion, 2016 to 2017 by 22 billion, 2017 to 2018 by 48 billion and 2018 to 2019 it decreased by 2 billion. This implies equity increased in from 2005 to 2018 but had a decline of 2 billion in 2019, which is believed to be due to shares being sold to shareholders and loans. Therefore it can be summarized that generally the performance of DB was good for the respective years discussed above.

4.4.2. Instrument used to measure the working efficiency of the Dashen Bank

Table 4.6: Instruments used to measure the working efficiency of the Dashen Bank

Indicators	2015	2016	2017	2018	2019
Gross Loan Portfolio	56.6	78.8	80.9	105.5	115.9
Customer Deposits Growth	101.9	93.8	109.5	135.7	176.1
Net loans/Customer Deposits, %	54.8%	47.8%	76.8%	70.4%	63.2%
Number of loan Accounts	1,619	1,823	1,567	2,757	3,556
Number of Deposits Accounts	4,813	5,236	4,968	5,873	9,197
Profitability (Net interest Margin, %)	9.5%	9.2%	8.7%	8.4%	8.3%
Profitability (Cost /Income, %)	39.5%	39.8%	44.1%	47.5%	48.9%

Source: DB (2020)

As far as efficiency in DB operations are concerned table 4.6 shows that there were increase in all the required indicators for example there was steady increase gross loan portfolio, customer deposit growth, number of deposit accounts and profitability (Cost/income%) from 2015 to 2019. There was fluctuations in Net loan/customer deposit from 2015 to 2019 and sales of shares and external loans in 2018 and 2019, number of loan accounts increase steadily though there was little decline in 2015 which is believed to be due to loan management issues and lastly fluctuation in profitability (net interest margins) during the year especially from 2017 to 2019 is believed to be due the expansion program of opening new branches around the country.

4.4.3. Dashen Bank Funding Structure

Table 4.7: Dashen Bank funding structure

Funding structure	2015	2016	2017	2018	2019
Deposits	84%	78%	72%	69%	71%
Due to banks	3%	6%	10%	9%	7%
Shareholder's Equity	11%	13%	12%	16%	14%
Other	2%	3%	6%	6%	8%

Source: DB (2020)

The researcher found out that deposit is the primary source of funding with share of demand deposits exceeding 70% as of June 2015, followed by shareholder's equity and due to the bank. In further analysis of secondary data. As can be seen from the figure 4.8 shows the trend of the DB's performance has shown an erratic trend. In 2015 the average bank performance was 1.63, 18.20 and 6.15 as expressed by ROA, ROE and NIM respectively. In 2015 the above figures declined to 1.05, 7.18 and 5.34 respectively. One of the possible reasons for the decline in performance is the liquidation of a bank in the year. These figures, again increased in 2016, may be due to the significant reduction of non-performing loans from 5% to 3, 4%. Performance declined in 2016 may be because of the effect of global economic crisis and its effect on the domestic one. Again performance improved in 2017 after the recovery. Nevertheless, on average the performance of private banks in the country has been increasing. Compared to the financial performances of banks in the country, the overall financial performance of private banks in the country is good. This shows that investments in private banking in Ethiopia is very profitable and it is path to attract foreign direct investment (FDI) in the sector.

4.4.4. Contribution of ICT-Strategies on Performance of Dashen Bank

Table 4.8: Contribution of ICT-Strategies on Performance of Dashen Bank

Performance measures of Dashen Bank	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Increased Profit	36	81.8	8	18.2	-	-	-	-	44	100
Customers Satisfaction	32	72.7	12	27.3	-	-	-	-	44	100
Improved Management	31	70.5	13	29.5	-	-	-	-	44	100
Increased banks Asset	32	72.7	12	27.3	-	-	-	-	44	100

Source: Primary Data, 2020

Table 4.8 shows that the respondents on the contribution of ICT-Strategies on Performance of DB .All the respondents (100%) agreed that the bank profit has been increasing for the last five years. This means that the bank profit has been increasing as seen by secondary data in table 4.6 indicating the bank profit increment from 2015 to 2019. Customer’s satisfaction presentation indicates that all the respondents agreed that customers were satisfied with the bank service and this can be reflected in the bank return on investment profit they have accrued over years as shown in table 4.6.

All the respondents agreed that the management quality of the bank good and this was reflected in financial report as shown in table 4.6.To assess a bank’s management quality, it requires professional judgments of banks compliance to policies and procedures, capacity for risk-taking, development of strategic plans Lastly the response on bank asset indicated that bank asset increased and can be verified in the financial report in table 4.6.

4.5. Challenges of ICT-Strategies in Dashen Bank

Although there are many reasons which obstruct implementation of the system. In case of Ethiopian banking industries, many privates banks are using old banking system and don't have access to take advantage from electronic banking facilities. Challenges hindering the implementation of ICT-Strategies in DB are ranging from network reliability meaning that there is a network problem as a result clients face challenge to use ICT-Strategies facility. Internet coverage is also a problem because some locations and clients do not have internet facility. Some clients also have skills on how to operate the ICT-Strategies equipment's and this pose threat on performance of the bank. And lastly there is also security issues as the system can be accessed by hackers and this poses a threat to both customers and bank inform of losses and confidentiality of clients information.

Table 4.9: Challenges of ICT-Strategies in Dashen Bank

Challenges	Frequency	Percent	Valid Percent	Cumulative
Valid Power problem	12	27.3	27.3	27.3
Network reliability	15	34.1	34.1	61.4
Security issues	8	18.2	18.2	79.5
Inadequate skill	9	20.5	20.5	100.0
Total	44	100.0	100.0	

Source: Primary Data, 2020

Table 4.9 shows that Challenges of ICT-Strategies in DB, 27.3% of the respondents revealed that 27.3% is a power problem , 34.1% network reliability , 18.2% security issue and 20.5% inadequate skill. The outcome of respondents in the above table revealed that network reliability is considered as the most challenged ICT-strategies in DB. As most of the respondents agreed that the major challenge faced is that mobile and internet connection is low due to network problem. The least ranked as a challenge is also the security Issue this implies that DB applies different security measures ways ranging from security guards, hackers and cyber-attack. This result confirms with the finding of Sathye (1999) which suggests; the greatest challenge among the electronic banking sector is winning the trust of customers in the issue of security or perceived security risk as a key inhibitor in the day to day practice of ICT-strategies.

4.6. Relationship between ICT-strategies and performance of Dashen Bank

Table 4.10 Relationship between ICT-strategies and performance of Dashen Bank

Correlations of Independent and Dependent Variable		ICT-Strategies	Performance of Dashen Bank
ICT-Strategies	Pearson Correlation	1	.656**
	Sig. (2-tailed) N		.000
		44	44
Performance of Dashen Bank	Pearson Correlation	.656**	1
	Sig. (2-tailed) N	.000	
		44	44

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

The table 4.10 is giving the relationship between ICT-strategies and Performance of DB in Ethiopian private banks whereby the respondents N is 44 and the significant level is 0.01, the results indicate that independent variable has positive high correlation to dependent variable equal to .656** and the p-value is .000 which is less than 0.01. This means that there is a significant relationship between ICT-strategies and Performance of DB. As conclusion ICT-strategies contributes to positive performance of banks as witnessed by DB.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATION

5.1. Summary of Major Findings

5.1.1. ICT-strategies used by Dashen Bank

Presentation on shows that the bank had different ICT-strategies types namely ATM which one of the ICT-strategies services commonly used by ICT-strategies by the clients of DB. Others are Pay direct which lets you authorize specific deposits, (like paychecks and Social Security check and other benefits) to your account on a regular basis. The Phone banking which let you call your financial institution with instructions to pay certain bills or to transfer funds between accounts but you must have an agreement with the institution to make such transfers (Simpson 2002). Debit Card Purchase or Payment Transaction let you make purchases or payments with a debit card, which also may be your ATM card. This could occur at a store or business, online, or by phone. The process is similar to using a credit card, with some important exceptions (Fox and Beier, 2006). While the process is fast and easy, a debit card purchase or payment transfer's money fairly quickly from your bank account to the company's account. So it's important that you have funds in your account to cover your purchase. Lastly electronic check payments and this converts a paper check into an electronic payment or when a company receives your check in the mail. When you give your check to a cashier, the check is run through an electronic system that captures your banking information and the amount of the check.

In general it can be concluded that DB have varieties of ICT-strategies for their clients in order to provide effective and efficient service delivery. This different ICT-strategies promotes effectiveness and efficiency in service delivery since clients can be able to withdraw and deposit money, authorizes payment and check account balance at ease.

5.1.2. Performance of Dashen Bank

As far as efficiency efficient performance in DB is concerned table 4.6 shows that there were increase in all the required indicators for example there was steady increase gross loan portfolio, customer deposit growth, number of deposit accounts and profitability (Cost/income %) from 2015 to 2019. There was fluctuations in Net loan/customer deposit from 2015 to 2019 and sales of shares and external loans in 2018 and 2019, number of loan accounts increase steadily though there was little decline in 2015 which is believed to be due to loan management issues and lastly fluctuation in profitability (net interest margins) during the year especially from 2017 to 2018 is believed to be due the expansion program of opening new branches around the country.

5.1.3 Contribution of ICT-Strategies on Performance of Dashen Bank

The respondents agreed ICT-Strategies has promoted performance of DB in that profit increase has been increasing for the last five years. Customer's satisfaction of the bank were satisfied, management quality improved and bank asset increased over the last five years as seen in bank report in table 4.8

5.1.4 Challenges of ICT-Strategies in Dashen Bank

Challenges hindering the implementation of ICT-Strategies in DB are ranging from network reliability meaning that there is a network problem as a result clients face challenge to use e banking facility. Internet coverage is also a problem because some locations and clients do not have internet facility. Some clients also have skills on how to operate the e banking equipment's and this pose threat on performance of the bank. And lastly there is also security issues as the system can be accessed by hackers and this poses a threat to both customers and bank inform of losses and confidentiality of clients information.

5.2 Conclusions

It should be noted that ICT-Strategies plays a great role in financial performance of banks in Ethiopia. Different ICT-Strategies tools like ATM, Pay direct, mobile phone banking, debit/visa card payment and E electronic check payment has a great impact on bank performance because they increase profitability, return on invest return on equity and loans, improves bank management quality, increase bank asset and promotes bank growth and expansion. For the case of bank of DB, the great contributions has been shown in table 4.21 which provides the relationship between ICT-Strategies and Performance of DB in Ethiopia whereby the respondents N is 44 and the significant level is 0.01, the results indicate that independent variable has positive high correlation to dependent variable equal to .656^{**} and the p-value is .000 which is less than 0.01. When p-value is less than significant level, therefore researchers conclude that variables are correlated and null hypothesis is rejected and remains with alternative hypothesis. This means that there is a significant relationship between ICT-Strategies and Performance of DB in Ethiopia. As conclusion ICT-Strategies contributes to positive performance of banks in spite of few challenges like network failures inadequate skills and security issues poses a great threat to the confidentiality and integrity of banks information.

5.3 Recommendations

5.3.1. Recommendations for the bank

Based on the findings the researcher came up with the following possible recommendations to the bank, policy makers, and further research in order to overcome the challenges, exploit the relationship between ICT-Strategies and performance of DB.

- ❖ The Bank should put ATM in different locations easily accessible by customers, so that quick service and convenience is maintained hence improving bank operations. At the same time constantly serviced should be ensured in order to provide reliability of the services.
- ❖ The bank should hire skilled personnel with more experience on network management in order to ensure the reliability of network.
- ❖ The bank management should establish country wide training and training for clients on usage of various e business applications for efficient performance of the bank.

For example training on ATM and VISA usage, internet banking, and mobile banking and so on.

- ❖ The bank should keep on upgrading their ICT-Strategies technology in order to have an up to date system for effective service delivery.
- ❖ Constant power back up should be ensured in order to solve the problems of power interruptions and fluctuations. (E.g., UPS, Generator)

5.3.2 Policy Recommendations

Information and communication technology (ICT) professionals have to invest their time, effort and resources closer to ICT-strategies. This could suggest more profits for the specialists if the ICT-techniques become a hit. In Ethiopia there are a few citizens who are still unbanked because of bad access to financial services. ICT specialists need to explore ways of offering progressive solutions for accomplishing the unbanked. This may eventually result to greater monetary deepening and better economic improvement for the country and for this reason higher profitability for the banks. ICT strategies have their set of demanding situations specifically related to security hazard that can cause reputation danger amongst banks and loss of confidence with the aid of the clients. The primary users of such techniques are depositors. Without deposits and depositors the sustainability of banks could be at hazard. This consequently requires higher control of ICT-strategies in a manner that enhances depositors' confidence. System developers consequently want to create enhanced and effective security systems that may come across, control, prevent and manipulate fraud incidents on the various channels. This recommendation is derived from the growing threat of system intrusion by hackers that can erode the desired gains of ICT strategies in banks. Mobile telephones and internet have been located to have a primary impact in delivering technology pushed banking offerings. It is advocated that DB hold to create sustainable enterprise linkages and collaborations with mobile cellphone provider companies in addition to the internet carrier companies. Findings discovered that cellular phones had an excessive impact and this can be attributed to the extent of penetration and ease of access to cellular phones to the public. Banks have to leverage on cellular telephones a good way to grow their commercial enterprise and consumer base. The government should continue to provide greater incentives for technologies that use cellular phones as their delivery structures.

5.3.3 Recommendations for Further Research

This study did not include all ICT strategies in the banking sector hence a further study is recommended to include strategies like agency banking, securitization and credit guarantees and their influence on the performance of DB. An in-depth, boarder-based study, covering a wider geographical region and embracing greater demographic, ethic, political, economic and social diversity than what was achievable in this study would be valuable, to establish whether the conclusions can be generalized. A study should be carried out to find out how ICT strategies affect other aspects of businesses especially making management easier and internal customer satisfaction. A replica study is recommended for companies in other sectors in order to test whether the conclusions of this study will hold true. Future studies could also focus on a comparative study among various sectors. Future studies should apply different research instruments like focus group discussions only to involve respondents in discussions in order to generate detailed information, which would help improve ICT strategies of DB.

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APPENDIX

St. Mary's University

School of Graduate Studies

Department of General MBA

Questionnaire to be filled by respondents

Dear respondent,

This questionnaire is designed by a graduate student from St. Mary's University to conduct a study in partial fulfillment of a master's degree program in General Management. As part of the requirement for the award of the degree, I am expected to undertake a research study The Nexus between Organizational ICT-Strategies and Performance of Dashen Bank S.C. Therefore, seeking your support to fill the questionnaires attached. This questionnaire will take about 20 minutes to complete. Kindly reply all the questions.

The outcome of this study will determine the relationship that ICT-Strategies offer for the the bank industry for private banks in Ethiopia. After determine the relationship examine the challenges and find out the possible strategies that ICT offer for the banking industry for private banks in Ethiopia. Participation in this study is voluntary, and all who participate will remain anonymous. Your name is not required. All information offered will be treated confidentially, and the results will be presented in such a way that no individuals may be recognized.

Thank you in advance for the available information you are sharing and the precious time you are going to spend for this purpose.

If you have any enquiry please don't hesitate to contact the researcher on: Email-

yaredasefa4@gmail.com

Cell phone: +251 921039093(Yared Asefa)

Appendix 1: Questionnaire

Instructions

The questionnaire is divided two: Bio data of respondents and Specific objectives

Please tick the response that you think is most appropriate to each question and indicates your response in the space provided.

Tick whichever is applicable to you:

SECTION I: DASHEN BANK EMPLOYEE PERSONAL INFORMATION.

1. Are you Male or Female?
 - a. Male
 - b. Female
2. What is your age? (Tick appropriately)
 - a. 21- 30
 - b. 31- 40
 - c. 41- 50
 - d. 51 and above
3. Educational qualification:
 - a. Diploma
 - b. Undergraduate
 - c. Post graduate
 - d. Others specify
4. How long have you been working with Dashen Bank?
 - a. 1 - 2 years
 - b. 2 – 3 years
 - c. 3 – 4 years
 - d. 5 years and above

SECTION II: ICT-STRATEGIES USED BY DASHEN BANK

5. What are application of ICT-Strategies being used by DB?

Definition of the Scale for the assessing the application of ICT-Strategies being used by DB (1 = strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree

Application of ICT-Strategies	1	2	3	4	5
i. Mobile banking(Mod Birr)					
ii. Internet banking					
iii. Telephone banking					
v. Electronic card					

6. What are types of ICT-Strategies being used by DB which makes profitable?

Definition of the Scale for the assessing the types of ICT-Strategies being used by DB which makes profitable (1 = strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree

Types of ICT-Strategies	1	2	3	4	5
i . ATM					
ii. Internet banking					
iii. Mobile banking(Mod Birr)					
v. Telephone banking					
vi, Visa or Debit Card					

7. Does ICT-Strategies promotes banking performance?

- a. Strongly agree []
- b. Agree []
- c. Neither agree nor disagree []
- d. Disagree []
- e. Strongly disagree []

8. The role does it play in promoting banking performance?

- a. Depositing []
- b. Check account balances []
- c. Withdrawals []
- d. Making payments []
- e. Others specify.....

9. How effective are the above roles in promoting banking efficiency?

Roles of ICT-Strategies	Strongly agree	Agree	Disagree	Strongly disagree
Depositing				
Checking accounts				
Withdrawals				
Making payments				
Others				

SECTION III: FINANCIAL PERFORMANCE OF DASHEN BANK

10. How was the performance of the bank for the last from 2016 to 2018?

- c. Excellent []
- d. Very good []
- e. Good []
- f. Fair []
- g. Bad []

11. Do you know about CAMELS methodology of analyzing bank performance?

YES [] NO []

12. If Yes, Does the Bank use CAMELS analysis? YES [] NO []

13. What is the Capital Adequacy Ratio (CAR) of your Bank from 2016 to 2018? (i)

Below 10% []

(ii) 10% []

(iii) above 10% (Specify)

14. It is argued that the poor quality of a Bank’s Assets is one of the reasons for bank credit risk and failures. What is the Asset Quality Ratio (AQR) of your Bank according to the following criteria (tick appropriately) for the following Years.

2016				
Type of Asset Quality Ratio	≤ 7%	7%	8-15%	≥15%
(i) Non Performing Loans to Total Loans Ratio				
(ii) Non Performing Loans to Total Equity Ratio				
(iii) Allowance for Loan Loss Ratio				
(iv) Provision for Loan Loss Ratio				
2017				
Type of Asset Quality Ratio	≤ 7%	7%	8-15%	≥15%
(i) Non Performing Loans to Total Loans Ratio				

(ii) Non Performing Loans to Total Equity Ratio				
(iii) Allowance for Loan Loss Ratio				
(iv) Provision for Loan Loss Ratio				
2018				
Type of Asset Quality Ratio	≤ 7%	7%	8-15%	≥15%
(i) Non Performing Loans to Total Loans Ratio				
(ii) Non Performing Loans to Total Equity Ratio				
(iii) Allowance for Loan Loss Ratio				
(iv) Provision for Loan Loss Ratio				

15. The Quality of Management is a critical factor in determining the health of a Bank. (i)

Is the Bank government owned? YES [] NO []

(ii) How long has the Bank been in existence? 1-5 year [] 5-10 year [] ≥ 10 Years

16. Indicate the trends in quality of Management of the bank as reflected in growth rate according to the following aspects of the bank over the years 2016 -2018

Dimensions of Management Quality Ratios	2016	2017	2018
(i) Total Asset Growth Rate (Annual Average %)			
(ii) Loan Growth Rate (Annual Average in %)			
(iii) Earnings Growth Rate (Annual Average in %)			

17. Earnings or profitability of a Bank is critical for long term sustainability of the bank.

Provide the earnings Ability Ratios of Dashen Bank for the period 2016 – 2018 using the following

Ratios:

Types of Earning Ratios	2016	2017	2018
(i) Net Interest Income Margin (NIM)			
(ii) Cost to Income Ratio			

(iii)Return on Assets (ROA)			
(iv)Return on Equity (ROE)			

18. The current cash holding and assets that can be quickly converted into cash within the bank is:
 - (Please tick one appropriate answer);

- (i) Less than adequate []
- (ii) Adequate []
- (iii)More than adequate []

19. Indicate the liquidity levels of the Dashen Bank using the following liquidity ratios for the years 2016-2018

Types of Earning Ratios	2016	2017	2018
(i) Customers Deposits to Total assets			
(ii) Total Loan to Customers Deposits (LTD)			

20. The current level of cash holding within the bank plus the cash deposits with the central bank

- (i) Less than adequate []
- (ii) Adequate []
- (iii) More than adequate []

21. How was the performance of the bank before and after ICT-Strategies?

- a. Excellent []
- b. Very good []
- c. Good []
- d. Fair []
- e. Bad []

22. Do you think ICT-Strategies has promoted performance of the bank in the following ways?

Definition of the Scale for the assessing how ICT-Strategies has promoted performance of DB (1 = strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree

Performance measures	1	2	3	4	5
i. Increased Profit					
ii. Reduced Cost					
iii. Customers Satisfaction					
v. Improved Management Quality					
vi. Increased banks Asset					

SECTION V: CHALLENGES FACED BY BANK WHILE BEING USED ICT-STRATEGIES

23. What are the factors affecting the effectiveness of ICT-Strategies?

- a. Availability of internet
- b. Reliability of network
- c. Availability and reliability of ATM
- d. Security problems
- e. Power failure
- f. Lack of knowhow by customers
- g. Others, specify

24. What do you think could be solutions to the above problems?

.....

.....

.....

You have completed the survey. Thank you for your valuable time and opinions.

Appendix 2: Work Plan

ACTIVITY	PERIOD
Research proposal writing and submission	February– March 2020.
Data collection	April 2020.
Data analysis /report writing	May 2020.
Submission of the dissertation	June 2020.

DECLARATION

I, the under signed, declare that this thesis is my original work, prepared under the guidance of Habtamu Mekonen (PhD.). All sources of material used while working on this thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any type of degree.

Name

Signature and Date

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor

Signature