ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ASSESSMENT OF SUCCESS FACTORS IN CORE BANKING SOFTWARE PROJECT IMPLEMENTATION AT BANK OF ABYSSINIA

BY

MESKEREM MULUGETA

MAY, 2019

ADDIS ABABA, ETHIOPIA

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A THESIS SUBMITTED TO THE ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATES STUDIES IN THE PARTIAL FULFILMENT OF THE REQUEREMENTS FOR THE DEGREE OF MASTER OF ARTS (MA) IN PROJECT MANAGEMENT

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Internal Examiner   Signature

DECLARATION

I, the undersigned, declare that this thesis entitled "An assessment of success factors in core banking software project implementation at bank of Abyssinia." is my original work, prepared under the guidance of Dereje Teklemariam (Phd). All sources of material, used for the 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 degree.

Meskerem Mulugeta W/Michael   _____

    Name   Signature

St. Mary's University, Addis Ababa   May, 2019

ENDORSEMENT

I confirm that this thesis entitled "An assessment of success factors in core banking software project implementation at bank of Abyssinia" has been advised by me and submitted for examination.

Dereje T/Mariam (Phd)   _____

Advisor   Signature

St. Mary's University, Addis Ababa   May, 2019

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Meskerem Mulugeta W/Michael

ABBREVIATIONS AND ACRONYMS

CBS	Core Banking System
CORE	Centralized Online Real entire banks' branch
PMO	Project Management Office
RMO	Result Management Office
BOA	Bank of Abyssinia
NBE	National Bank of Ethiopia
ATM	Automated Teller Machine
CSF	Critical Success Factor
SPSS	Statistical Package for Social Sciences
IT	Information technology
ICT	Information communication technology
STP	Straight-Through-Processing
SMS	Short Text Message
CBSO	Core Banking Solution
E banking	Electronic banking
EUAT	End user acceptance
PMBOK	Project management book of knowledge
PMI	Project management institute
EFT	Electronic fund transfer
EDI	Electronic data interchange
IBM	International business machines
ERP	Enterprise resource planning

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ABSTRACT

This research aims to assess the major success factors in core banking software project implementation at Bank of Abyssinia. For the sake of achieving the objectives of this study, survey questionnaire was designed based on the literature and distributed to all 46 staff members of RMO who participate in CBS project at BOA, Out of the 46 respondents 38 of them responded, which represented a response rate of 83% .besides questionnaires telephone interview was conducted with RMO director, program manager and IT project manager .The data gathered were analyzed using statistical analysis such as descriptive and inferential analysis. Besides, the interview questions were analyzed using descriptive narrations through concurrent triangulation strategy. The empirical study elicited four major success factors which seem to affect success of core banking software project implementation at Bank of Abyssinia which include: top management support, risk management, vendor selection and user involvement. The statistical method of analysis applied for testing the association of the success factors and the success of CBS project implementation at BOA was Ordinal Logistic regression statistics. Based on findings, recommendations to top managers, risk compliance departments and end users of the bank and suggestions for other researchers are forwarded.

Key words: Success factors, CORE Banking, BOA

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The usage of information technology (IT), broadly referring to computers and peripheral Equipment has seen tremendous growth in service industries in the recent past. The most obvious example is perhaps the banking industry, where through the introduction of IT Related products in internet banking, electronic payments, security investments, information Exchanges. (Berger, 2003).

Abdali and Amirabadi, as cited in Ghafari & Ansari (2015) emphasizes Information technology in the electronic banking industry has reduced the geographical and temporal distance between the bank and the customer, as well as the reduction of the cost of providing banking services and transferring money and increasing competition between banks and improving the quality and optimization of the banking industry. Accordingly, the use of a CORE electronic banking system that has certain capabilities will lead to the superiority of a bank in competing with other banks.

"The nerve center of technology in a bank's information technology department is CORE banking system'' (Otieno, 2013, p.1). CORE Banking Solution (CBS) is networking of branches, which enables Customers to operate their accounts, and avail banking services from any branch of the Bank on CBS network, regardless of where he maintains his account. The customer is no more the customer of a Branch. He becomes the Bank's Customer (Geetha & Ramanarayanan, 2015). Nowadays, most banks use CORE banking applications for the smooth running of their service. This system allows the entire bank's branches to access applications from centralized data centers. This basically means that the deposits made are reflected immediately on the bank's servers and the customer can withdraw the deposited money from any of the bank's branches throughout the world (National bank of Ethiopia (NBE), 2011).

Though CORE banking has given unlimited advantages to the banks, many Core banking projects fail due to numerous reasons. Hexaware technologies (2012) acknowledges that the challenges of core banking systems implementation is related to; non availability of updated business requirements documents, lack of required business scenarios specific to the bank, incomplete traceability of the test scenarios to the business requirements, testing all the interfaces with respect

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to the business process to ensure test coverage, excessive local customization leading to risk in regression, lack of proper audit trial in manual testing and issues in data integrity. CORE Banking Software (CBS) implementation projects thus need joint effort of the bank and an implementation partner. The first and most important goal is to deliver the project on time and budget (Haller and Heuberger, 2009).

Alemayehu (as cited in Essayas.T,2016) emphasizes that for banks in Ethiopia to utilize the CORE banking system was a significant change, since centralized core banking solutions required banks to invest huge amounts of money towards building infrastructure. Once this infrastructure was in place, banks started venturing into newer opportunities in the area of ATMs, debit cards and internet banking, which in turn raised the expectations from core banking solutions .The core banking solution can enable the banks to process their activities quickly, shorter and speedy as per the customer expectation (International business machines(IBM), 2011).

However, due to the lack of proper understanding of factors which affect the implementation of CORE banking software, many projects have failed or implemented beyond originally scheduled time with high amount of cost. It is therefore very important that banks define project success criteria specific to their IT projects and identify factors that will contribute towards this success so as to ensure CBS projects deliver on the intended benefits and most importantly without any negative effects on the already existing banking products and services.

1.2 Statement of the problem

In recent years, the banking industry has changed dramatically due to major changes that have taken place in the areas of technology and communications. This has led to increased competition and the provision of e-banking services. Abdali and Amirabadi (as cited in Ghafari&Ansari , 2015). Electronic banking has enabled banks to use advanced technology to provide services (Muller, 2008) and allows the use of different kinds of electronic channels (Moghadasi, 2010; Rafizadeh and Shahsavari,2013). On the other hand, more and more e-banking growth has created banks with a large number of separate systems. The number, variety and complexity of information systems, the increasing number of data and banking transactions, has highlighted the existence of a CORE, high-reliability system to support the business of the bank (Mansouri,2015). Therefore, banks have turned to using CORE electronic banking (Abdali and Amirabadi, 2013). Today, the use of a CORE banking system for the world's banks and the banking business is inevitable.

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CBS of a bank is an engine of the e-banking, determines what a bank going to offer and how efficiently they can meet it. However, the successful implementation of the CORE banking system remains a theoretical and managerial challenge. These challenges have been caused by lack of proper mechanism for management of projects as most organizations concentrate on project formulation at the expense of implementation (Ochwoto and Ogolla, 2017). According to (Adamson, chan & handford, 2003), a CBS project implementation is, like all other large IT investment projects, costly time consuming and complex. Due to that 25% of the CBS projects were successfully implemented and rest 50% experienced cost and schedule overrun and others failed.

As have been argued by Kudav and Bhasin (as cited in Cognizant-software provider, 2013) the key reasons for failed core banking implementation are: lack of support from top management, vendors in ability to deliver, end users limited capability and lack of appropriate product selection methodology.

According to Otieno (2013) the core banking software implementation project which is very sensitive, complex and vulnerable to fraud. Risk, duration, project manager capability and vendor behavior requires high attention of top management. Therefore, before banks have to purchase the software, they must properly be analyzed the probable risk, project manager capability and the project success factor first. Banks must focus on the main factors that create a successful experience (Rahman, 2016).

A significant number of key factors are critical to the successful implementation of IT systems, especially the CORE banking system, and are vital for concluding the efforts made to successfully implement a core banking system. The main influential variables are selected from the research literature. Based on the studies of Kariuki (2015), Chege (2014), Musau (2015), these factors are top Management Support, risk management, vendor selection, and end user involvement.

Projects in commercial banks are directed towards serving customers more efficiently and effectively & reduce costs for the banking institution, delay or failure of such projects will therefore impact negatively on the customers as they do not get what they should from the institution. This customer inconvenience leads to business loss. Therefore this study seeks to assess the critical success factors in the implementation of CBS project that would enable BOA successfully streamline services to their customers.

Although previous studies have discussed about IT project implementation in banking industry, there is less evidence of research specifically on the critical success factors of CBS project implementation within the Ethiopian banking industry.

Moreover, most of the studies made so far are descriptive in their methodology. But in this study in addition to, descriptive methodology empirical method were also used to analyze the association between the factors and the success of CBS project implementation and their effect on the success.

1.3 Research Questions

The researcher attempted to explore the critical success factors for Core Banking software project implementation at Bank of Abyssinia. Through a review of literature, four potential critical success factors namely, top management support, end user involvement, vendor selection and risk management were identified. Therefore the following research questions addressed in the study.

1) To what extent does top management support affect the success of CBS project implementation at BOA?

2) What is the effect of end user involvement on the success of CBS project implementation at BOA?

3) How does vendor selection affect the success of CBS project implementation at BOA?

4) To what extent does risk management affects the success of CBS project implementation at BOA?

1.4 Research objective
1.4.1General objective

The general objective of the study is to investigate and analyze the major success factors and their effect in CORE Banking software project implementation, by focusing on Bank of Abyssinia.

1.4.2 Specific Objectives

1) To determine the extent to which top management support affects the success of CBS project implementation at BOA.

2) To examine the relationship between end user involvement and the success of CBS project implementation at BOA.

3) To investigate how vendor selection affects the success of CBS project implementation at BOA.

4) To establish the effect of risk management on the success CBS project implementation at BOA.

1.5 Research Hypothesis

H0. Top management support significantly affects the success of CBS project implementation at BOA.

H1.Top management support doesn't significantly affect the success of CBS project implementation at BOA.

H0. End user involvement significantly affects the success of CBS project implementation at BOA.

H1. End user involvement doesn't significantly affect the success of CBS project implementation at BOA.

H0. Vendor selection significantly affects the success of CBS project implementation at BOA.

H1. Vendor selection doesn't significantly affect the success of CBS project implementation at BOA.

H0. Risk management significantly affects the success of CBS project implementation at BOA.

H1. Risk management doesn't significantly affect the success of CBS project implementation at BOA.

1.6 Significance of the study

It is hoped that the study will be of significant to organizations by contributing to a better understanding and knowledge to influence the implementation of CORE banking system by commercial banks in Ethiopia. It will help them to understand the major success factor which reduces stakeholder dissatisfaction, project costs and delays. The study may not just help the banks themselves since the policy makers will be informed by its findings. This will help in forming guidelines in regard to CORE banking system implementation. The scholars and researchers may use the study to provide a framework for strengthening existing project implementation principles and also may use its' findings as a reference and to enrich project management literature.

1.7 Scope of the Study

The scope of the study in terms of subject is delimited to the assessment of major success factors in the CORE banking project implementation. This study was conducted only on Bank of Abyssinia due to limited financial resources, time and accessible information regarding other Banks with the given time period. Spatially the research was conducted only in Addis Ababa city focusing on Result Management Office (RMO) a head office organ of Bank of Abyssinia Further the survey population was those 49 BOA RMO staff members who had been involved in CBS project from the beginning to the end.

1.8 Limitation of the study

A significant number of key factors are critical to the successful implementation of the CORE banking system but due to time limitation only the four factors which are top Management Support, risk management, vendor selection, and end user involvement were selected for this study. Besides, there was limitation in obtaining some information critical for the research, which may be considered as sensitive or confidential by the bank.

1.9 Ethical considerations

Saunders, Lewis, and Thornhill (2009) noted that ethical issues in research refers to the appropriateness of one's behavior in relation to the rights of those who become the subject of one's work, or are affected by it. Thus, the ethical issues need to be studied in a scientific research weighed in this survey. The researcher ensures that guarantees to the participants concerning confidentiality was given and strictly observed. The researcher strive to maintain truthfulness in reporting data results by ensuring that there is no fabrication, falsehood, or any misrepresentation of data. Since the data collection is sensitive as it relates to people's confidential details such as bank sensitivity to their secrets, the study ensures that respondents in this study remain anonymous and that data gathered was not shared to the competition.

1.9 Organization of the study

The study organized into five chapters. Chapter one consisted of the background of the study, statement of the problem, research questions, research objectives, significance of the study, scope of the study, limitations, ethical considerations and organization of the study. Chapter Two will looked at available literature done by scholars who have studied the subject in other contexts. Chapter three presents the methodology which includes the research design; sampling technique, sample size and data collection instruments. Chapter four focuses on analysis and interpretations of data finally, chapter five provide summary of findings, conclusions of the study and recommendations.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

In this chapter the researcher sought to find out what scholars and other researchers have written in the area of the study.

2.1 Theoretical Review of the Literature

2.1.1 Concepts of Project and Project Management

Project can be defined in a various ways as there are different types of project such as IT projects, Construction projects, community development projects etc. According to (Project management institute (PMI),2013) 'A project is a temporary endeavor undertaken to create a unique product, service, or result'.(Wysocki ,2009,p.5) define a project as 'a sequence of unique, complex, and connected activities that have one goal or purpose and that must be completed by a specific time, within budget, and according to specification'. This definition tells quite a bit about a project.

Project management is defined by different scholars differently. However, the current study uses PMBOK concept of project management 'project management is the application of knowledge, skills, tools and techniques to project activities' (PMI, 2013, p.5). 'Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing'.

2.1.2 Emergence of ICT project management

The term project can be heard very often in the business community. Companies announce new projects almost every day. This is especially true of ICT businesses; whenever they have an idea about a product, hardware or software, they turn it into a project. Hence, there must be certain attributes that characterize the undertaking of a project. The definition provided by the Project Management Institute "a project as a temporary activity under taken to create a unique product, service or result. Temporary meaning the project has a beginning and an end not necessarily meaning short in duration. PMBOK further goes on to clarify this definition with temporary not being related to the product generated from a project, but on the contrary, products of projects have a long lasting outcome (PMI, 2008). Even if the same project is repeated one more time, it will differ from its predecessor in one or more commercial, administrative or physical aspects (Lock, 2007 p.5).

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ICT project management includes overseeing projects for software development, hardware installations, network up grades, cloud computing and virtualization rollouts, business analytics and data management projects and implementing ICT services.

The aim of implementing ICT project is not the technology itself, but achievement of certain business goals such as improved customer service or increased profitability (Dutta, Geiger & Lanvin, 2015).

As (Dutta, Geiger & Lanvin, 2015) indicates, ICT project management as a discipline has become even more worrisome in today's business environment; constant IT changes are taking place; stakeholders and management have expectations that have to be met instantaneously; and ad- hoc temporary teams are created constantly to complete different projects.

The IT area is very wide, therefore different types of IT projects may be under taken with in it. (Cadle&Yeates, 2008) has grouped them into nine broad categories:

1. Software development

2. Package implementation

3. System enhancement

4. Consultancy and business analysis assignments

5. Systems migration

6. Infrastructure implementation

7. Outsourcing (and in-sourcing)

8. Disaster recovery

9. Smaller IS project

2.1.3 The Importance of ICT in Banks

Technology has opened up new markets, new products, new services and efficient delivery channels for the banking industry over the last 10 years. Banks use technology to maintain transaction processing and provide better service to their clients through electronic delivery channels while being competitive within the industry. Information Technology has also facilitated the banking industry to deal with challenges from economic changes leading to higher demand of

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banking services. Information technology has been the cornerstone of recent financial sector reforms aimed at increasing the speed and reliability of financial operations and of initiatives to strengthen the banking sector (Dortsonet, 2008).

Further, the information technology enabled the banks to meet expectations of demanding customers. As a result, the banks have increasingly become more tech-savvy. Customers demand instant, anytime and anywhere banking facilities from the banking industry. Traditionally, IT industry has been providing solutions to banks to take care of their accounting and back-office requirements. However, this has now given way to large scale usage in services aimed at the customers of the banks. Further, IT deployment has assumed high levels that it is no longer possible for banks to manage their IT implementations on a standalone basis With the revolution and evolution of IT, banks are increasingly interconnecting their computer systems not only across branches in a city but also to other geographic locations with high speed network infrastructure, and setting up local area and wide area networks and connecting them to the Internet. As a result, information systems and networks are now exposed to growth to meet the requirements.

2.1.4 The Concept of CORE Banking

Core banking system is the platform where communication technology and information technology are merged to suit core needs of banking such as handling deposits and lending (Chairlone& Ghosh, 2009). Abbate (1999) defined a core banking system as a back-end system that processes daily banking transactions, and posts updates to accounts and other financial records. Core banking systems typically include deposit, loan and credit processing capabilities, with interfaces to general ledger systems and reporting tools. Strategic spending on these systems is based on a combination of service-oriented architecture and supporting technologies that create extensible and agile architectures (Chairlone& Ghosh, 2009).

Most financial institutions rely on some form of core banking systems to provide customers with retail and corporate banking products. In addition, core banking systems deliver enterprise-wide capabilities such as general customer information, branch services, input for the general ledger, and data on credit limits, payments, and transfers (Claessens& Luc, 2009). Like the institutions that depend on them, core banking systems are feeling the pressures of an increasingly global financial marketplace. Institutions face growing competition from new market entrants and established players. At the same time, these aging legacy systems are by and large unable to fulfill customer demands for a better financial services experience that includes competitively priced products, more attentive and faster service, and lower cost. As regulatory demands grow in

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intensity and financial institutions face a competitive and challenging environment, running a modern and efficient core banking system has become essential to continued success (Chairlone& Ghosh, 2009). Furthermore, as the number of core system replacements by commercial increases, banks are demonstrating not only an increased need but also a desire to replace antiquated systems. Unfortunately, the costs and time associated with taking on such a project have forced many institutions to fail to move forward with these projects or, if doing so, to proceed with caution.

New core banking systems are helping a growing number of banks achieve a longtime goal which is a comprehensive view of their customers. The credit crisis, new regulatory requirements and increasing demand for higher cross-sale revenue have all renewed banks' interest in improving their ability not only to see but also to have and use customer information in real time (Abbate, 1999). Developing these capabilities has challenged all but the most technologically adopt banks. Most banks use separate software programs from multiple vendors to manage their varied operations, creating a patchwork of disparate systems through which data doesn't easily flow. Various studies (e.g. Adamson et al, 2003; Boot, 2009; Zineldin, 2009) and experts say the new generation of core processing applications can resolve these issues, but many banks remain reluctant to take on core replacement projects. It's becoming more imperative for them to really understand who their profitable customers are, or at least be able to see the entire relationship the customers have with them, to be able to make sure they're taking care of their customer and making sure they're successfully acquiring new customers they want (Turnbull, 2007).

The CORE processing systems have a lot of information on them but there are many, many bank systems that are not necessarily on the CORE platform. The end goal for many banks is being able to see at once the status of their customers' deposit accounts, loans, credit card transactions, brokerage accounts and other details so they can get a more accurate view of just how profitable their patrons are, design for them the products that make the most sense and spot potential problem areas.

2.1.5 CORE banking Services and Products

CORE banking products and services are methods used by banking organizations to carry out their transactions at a center through centralized banking services. These services include Automatic Teller Machines (ATMs), Electronic Fund Transfer (EFT), mobile banking, online banking, Electronic Data Interchange (EDI) and telecommunication services.

2.1.6 CORE banking Services and Products: Benefits and Challenges

Some of the benefits that accrue to an organization from implementation of CORE banking are increased revenue since you will be able to reach more customers, improved customer satisfaction since services will be readily available and fast in their provision, cost reduction because it will not have to incur heavy wage bill, reduced space requirements and hence reduced rent or lease payments. Other benefits include increased efficiency since automation enables you to do more with less input, increased level of output and employee satisfaction and motivation since they will not have to toil really hard. Larger market share through attraction of new customers and customer loyalty may be gained (Czerniawska& Potter, 2000). In almost all instances, you cannot have any benefit without incurring cost or facing challenges.

Intangible benefits are benefits that do not directly contribute to increase in revenue but may give goodwill and customer loyalty to the banks. They include, enhancing well-being and education of customers. By providing information to customers online, they are enabled to learn more about the organization and also how to carry out their transaction effectively and efficiently at reduced time and cost (Kalakota&Whinston, 1997; Lee 2001).

The following are the challenges that are likely to face in the implementation of core banking. The potential customers do not trust the site: The Internet allows mom-and-pop websites to look just as good -maybe even better than the websites of large corporations. All potential customers are well aware of this and they will be unimpressed by a sophisticated layout and a professional logo. Potential customers do not trust the site they have just arrived at, and it must be conscious decision to do what it takes to make them change their minds (Mahadevan &Venkatesh, 2000).Security concerns, the site may be attacked by hackers who may use the organization's website to defraud you existing and other potential customers. Cost of acquisition installation and maintenance is also another issue that requires the commitment of huge resources to acquire the system, to continuously update it and repair in case of break down. You also have to invest in employee training or alternatively hire qualified employees who are usually expensive. Resistances by customers to adopt the new technology since most traditional customers are still shy of technology. They still don't want to deal with machines when carrying out their transactions instead they still want to deal with a physically present customer service employee; hence you may find that your system is not fully utilized (summer, 1971).

Technological challenges are related to the acquisition, installation and maintenance of the necessary hardware and software. These challenges are Security and Web site issues (Koved et al.

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2001); the organizations data may face threats from hackers and data loss occasioned by things like viruses. Hackers may also proliferate bank system to transfer money from one account to another and this may make both the bank customers and the bank itself to lose huge sums of money. This may prove costly to the organization i.e. in their prevention Czerniawska& Potter, 1998; Alexander, 1998).

Technology issues including costs, software and infrastructure; Core banking requires great expenditure in monetary terms. You need to acquire the hardware, software both initial and maintenance e.t.c. (Hoffman et al. 1999; Abeyesekera et al. 1999; Rahul et al. 2001)

2.1.7 CORE Banking Solution project implementation Success

Any typical project related to acquiring a software system involves two phases namely; software selection and implementation of the selected software. Selection of appropriate software matching the organizational goals and aspirations are an important aspect of the selection process, as failure in this phase alone could affect the success of the project. Evaluating the software to suit the organizational requirement is another key aspect in the selection phase. The implementation strategy is largely dependent on the Software selected and the capabilities of the vendor. A research on critical success factors in implementing Core Banking Systems Hettiarachchi(2009) identified the following CSF's related to CBS implementation process: Setting Direction, Project Sponsorship, Transparency, Prioritizing Deliveries, Creative Problem Solving, Competence Project Team, Professional Project Manager, Dedicated Resources, Vendor Commitment, and Knowledge Transfer.

Some of the CSF mentioned in literature by Somers and Nelson (2001) include: Top Management Support, Project Team Competence, Interdepartmental Co-operation, Clear Goals and Objectives, Project Management, Inter-departmental Communication, Management of Expectations, Project Champion, Vendor Support, Careful Package Selection, Data Analysis and Conversion, Dedicated Resources, Steering Committee, User Training, Education on New Bus. Processes, Business Process Re-engineering, Minimal Customization, Architecture Choices, Change Management, Vendor Partnership, Vendor Tools, Use of Consultants.

2.1.8 Challenges of CBS implementation

It is obvious that there are challenges in any type of project implementation. Banks need to focus on key factors, which make the CORE banking transformation a successful experience. Broadly

speaking, the key challenges in CORE banking transformation are: Vendor capabilities and credentials, dependence on legacy/vendor applications and impact on envisioned technology architecture, as well as Bank's business goals and alignment to leverage the new technology (Finacle ,2010).

2.2 Empirical review of the literature

2.2.1 Project success

Fundamentally, project success is the delivery of the required product, service, or result on time and within budget. To meet these objectives is to deliver a quality project. PMI illustrates project quality through the concept of the triple constraint project scope, time and cost. Project quality is affected by balancing these three interrelated factors. The relationship among these factors is such that if any one of the three factors changes, at least one other factor is likely to be affected (PMI, 2004, p.37).

In relation to ICT projects variety of authors have defined success for ICT projects using different ways. According to Hastie (2006), IT project success is defined as a measure of the effectiveness of the organizations processes for implementing new Information System projects, up to the point of deployment of the new system to the end user community. This incorporates all the project related activities to ensure: project delivery on time, on budget, of required features and functions and to the requisite quality standards.

2.2.2 Project success factors

Success factors are components of the project that have to be put in place to ensure the completion of the project. According to Rockart (1979), critical success factors are key areas in which satisfactory results would ensure the successful competitive performance for the organization. Also defined CSF as key areas where things must go right for the business to flourish.

The success of a project and the factors that affect this success are considered in various ways by different scholars. According to Mohamed (1999), good schedules and correctly utilized budget will not matter if the final expectations and goals are not met. Kerzner (1987) the success of project can be measured by managing excellence consistently. The project success factors in the area of project management clearly identified by Schultz, et al (1987).

The authors classified the factors as strategic and tactical. The strategic group consists of project mission, top management support and project scheduling and the tactical are client consulting, human resource selection and personnel training. Pinto and Slevin (as cited in Chege, 2012) had made an important research on the project success factors. These authors mention most important success factors like top management support, client consultation, personnel recruitment, technical tasks, client acceptance, monitoring and feedback, communication, trouble shouting, character of the project team leader, power and politics, environment events and urgency. On the other hand, according to Munns and Bjeirmi(1996) the project success or failure can be measured by inadequate basis for the project, wrong person as a project manager, top management unsupportive, inadequately defined tasks, lack of project management techniques, management techniques misused, project closedown not planned, lack of commitment to project. More importantly, Hastie (2006) sates that in order to be successful project there should be risk management from inception to execution of the project.

In relation to core banking project implementation success factors several studies has been done: Mosaev (2015) entitled "Factors Influencing the Implementation of Kenya Commercial Banking Projects: A Study of the Bank of Lomit" indicates that resource management factors, project scope management, risk management, top management support and vendor support mechanism are success factors on the implementation of core banking. Kariuki (2015) also referred to a study entitled "Strategic Factors Influencing the Implementation of the New Banking System in Kenya Banks". Indicates, Project Team Competency, Best Project Management Techniques, Collaboration Between Bank Offices, Seller Engagement and Support, User Training as a success factor. In another study by Ella and B. The ETHU (2017), entitled "A Framework for the Implementation of Core Banking in Ethiopia", selected product agents (core banking solution selection), product evaluation, senior management support, project management, and the seller / contractor's support and commitment as factors affecting implementation Have been selected. On the other hand, based on Karamo's findings (2007), it has been determined that senior management support, business process reengineering and end user training have been influential as key factors in the success of core banking implementation.

2.2.3 Project risk management as a success factor

Matta, and Ashkenas (2003) relate project failures to unplanned implementation process. They advise that there is need to change focus and put emphasis in the implementation of projects. Some of the implementation challenges observed relate to integration risks where one part of the

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project is not compatible to the other part hence leading to malfunction and lack of interoperability of the parts. In essence, despite the individual team members completing their tasks in good time and within budget, the main project might still fail due to incompatibility of the parts brought together.

Implementing a complex banking system may mean that the banks have to learn from the rest by making frequent trips to other banks who have implemented the same system so as not to reinvent the wheel. More often than not, one finds staff going for trips to evaluate systems but instead of concentrating on the system itself, they engage in ventures like tourism thereby losing the value of the trip (Hyvari, 2006).

Mensah and Przasnyski (1991) found that more than 65 of IT projects are abandoned in the development and implementation stages. The ability of an organization to execute and deliver on IT projects represents the implementation stage in the life cycle of IT projects, and success in this stage leads to the actualization of benefits from IT projects.

2.2.4 Top management support as a success factor

The outcomes of the project management are many. The most important one is top management support. According to IBM (2000) most failed projects are the result of lack of top management support. The importance of top management support has long been recognized in the Information system literature (Gattity, 1963). Nonetheless, practitioners and researchers alike, have focused their attention on factors they can more directly control (Schmidt, 2001). The importance of top management support are not well developed (Tzu, 1987). Some impose very demanding requirements for top management resources simply to improve technical quality or user satisfaction (Brandon, 1970), goals of little direct interest to top managers. Other good communication, interest, involvement and participation appear to be little impact on projects (Mahnig, 2002). Top management support is generally promoted as being inherently good but there is clear evidence that too much top management support can be dysfunctional and lead to failure (Collins and Bicknell, 1997). As a result, the advice for top managers lacks credibility. However, few would doubt the need for top management support (Markus, 1981) and top management support is consistently recognized as a critical success factor (Schmidt, 2001).

2.2.5 Vendor selection and implementation as a success factor
Supplier selection is the process by which organizations identify, evaluate and contract with suppliers.(Weber & Current, 1991). The supplier selection process deploys a tremendous amount

of an organization's financial resources (Shiati, 2014).Supplier selection in particular is crucial in management of a supply chain. The decision is one of the most fundamental and important decisions made by buyers and organizations. This is because supplier selection and management can be applied to a variety of suppliers throughout a products' life cycle from initial raw materials acquisition to end-of-life service providers (Bai and Sarkis, 2009).

Globally, supplier selection decisions are intricate due to the fact that multiple criteria must be considered in the decision making process. Multi-criteria approach is used in selecting suppliers, (Weber&Current,1991). Although there are numerous criteria used in selecting suppliers depending on organizations, literature suggests that the most important are price, delivery, and quality. Locally, the procurement procedures pretty much follow the international standards to a large extent. This means that even supplier selection determinants are more or less similar to those considered by purchasers everywhere else.

The main objective of supplier selection process is to reduce purchase risk, maximize overall value to the purchaser, and develop closeness and long-term relationships between buyers and suppliers Li et al, (as cited in Tahriri, Osman, Ali &Yusuff, 2008). Dickinson (1966) in his pioneering work on supplier selection identified and ranked 23 supplier selection criteria as collected from a questionnaire given to purchasing agents.

Quality, delivery, and performance history rank top with net price ranking a distant sixth. This seems to concur with previous studies, but one notable discrepancy is that price curiously ranks lower than quality. Again, net price is deceptive as other related costs such as packaging and freight cost could raise the total cost. Total cost covers everything hence should be the one listed and not net cost. Ellram (1990) proposed three criteria for supplier selection. These are: the financial statement of the supplier, organizational culture and strategy of supplier, and the technological state of supplier (Shiati, 2014).

Vendor selection mainly consists of four steps which are Requirement gathering, vendor profile creation, request for information/vendor review process and finally vendor selection and solution implementation. As business and IT requirements are gathered, they are incorporated into a scoring matrix you can use to rate vendors on factors critical to your sound selection decision. Factors can range from cost and quality to product support, how long the company has been in the business and how widely is the software used in the industry and level of customer satisfactory. There are numerous criteria used in selecting suppliers depending on organizations. Literatures suggest that the most important are price, delivery and quality (Shiati, 2014).

2.2.6 User involvement as a success factor

In the IS literature, the terms User Involvement and User Participation have frequently been used to mean the same thing (Casanovas, 2004). However, Barki& Hartwick (1994) claimed that the two concepts are different and thus need to be defined separately; User involvement is defined as a psychological state of the individual and also as the importance and personal relevance of a system to the user i.e. their attitude toward the development process and its end product. User participation on the other hand is defined as the observable behavior of users in the IS development and implementation i.e. the set of operations and activities performed by users or their representatives during the IS development process or activities of users during the system implementation. Barki& Hartwick (1994) define four dimensions of user participation; Responsibility, User-IS relationship, Hands-on Activity and Communication Activity. Kappelman and McLean (1991) on the other hand opted to use the term "User Engagement" in which they chose to include both user participation (the behavior) and user involvement (the attitude) and thus according to them User Engagement is used to refer to the total set of user relationships towards IS and their development. For the purposes of clarity and to remove any ambiguities, this study shall take the term User Involvement to represent all the above three variations.

Many reasons have been given to involve users in IS implementation projects. User involvement is predicted to increase user satisfaction and acceptance by: developing realistic expectations about system capabilities, providing an arena for bargaining and conflict resolution about design issues, leading to system ownership by users, decreasing user resistance to change and committing users to the system (Casanovas, 2004). By involving end-users in decisions relating to implementation, workers may become more invested in the success of the implementation and more satisfied with the system through the social-psychological mechanism of perceived control (Baronas and Louis,1988). However, characteristics such as user expertise, degree of organizational decentralization, project complexity and users previous experience with IS could determine the degree of their involvement (Casanovas , 2004). According to Briolat and Pogman (2000),"user participation is advocated in order to discover users" needs and points of view validate specifications and hence build better IS for the organization". The role of user participation in an organizational activity can be viewed from the perspective of two different behavioural theories (Ives and Olson, 1984). These theories are "planned organizational change" and "participative decision-making". The implementation of a new IS often implies a planned change in the way an organizational unit pursues its objectives whereas participative decision making emphasizes the role of individuals in working groups. Iven and Olson (1984) also outlined how user participation

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can improve system quality by providing a more and complete assessment of user information requirements, providing expertise about the organization the system is to support, avoiding development of unacceptable or unimportant features and improving user understanding of the system. Mckeen and Guimaraes (1994) subsequently showed that user participation has a positive relationship with user satisfaction. They also argued that four factors affect this relationship; task complexity, system complexity, user influence and user-developer communication. Based on a meta-analysis study, Pettingell (1988), concluded that the inclusion of users in definition and design stages is the best way to increase their perception of the value of the system and to motivate them in order to achieve project success. The Chaos report also clearly shows that projects that lack user involvement perform poorly (Standish Group International, 2010).

2.3 Conceptual Framework

A conceptual model shows the associations and interrelations that that have been found in the research material, it shows structure and coherence to the research by simplifying the research task (fisher,2007). The figure below shows the identified dependent and independent variables and the existing relationship.

Independent variables   **Dependent variable**

Top management support

End user involvement

Vendor selection

Risk management

Success of CBS project

- Achieved business objective
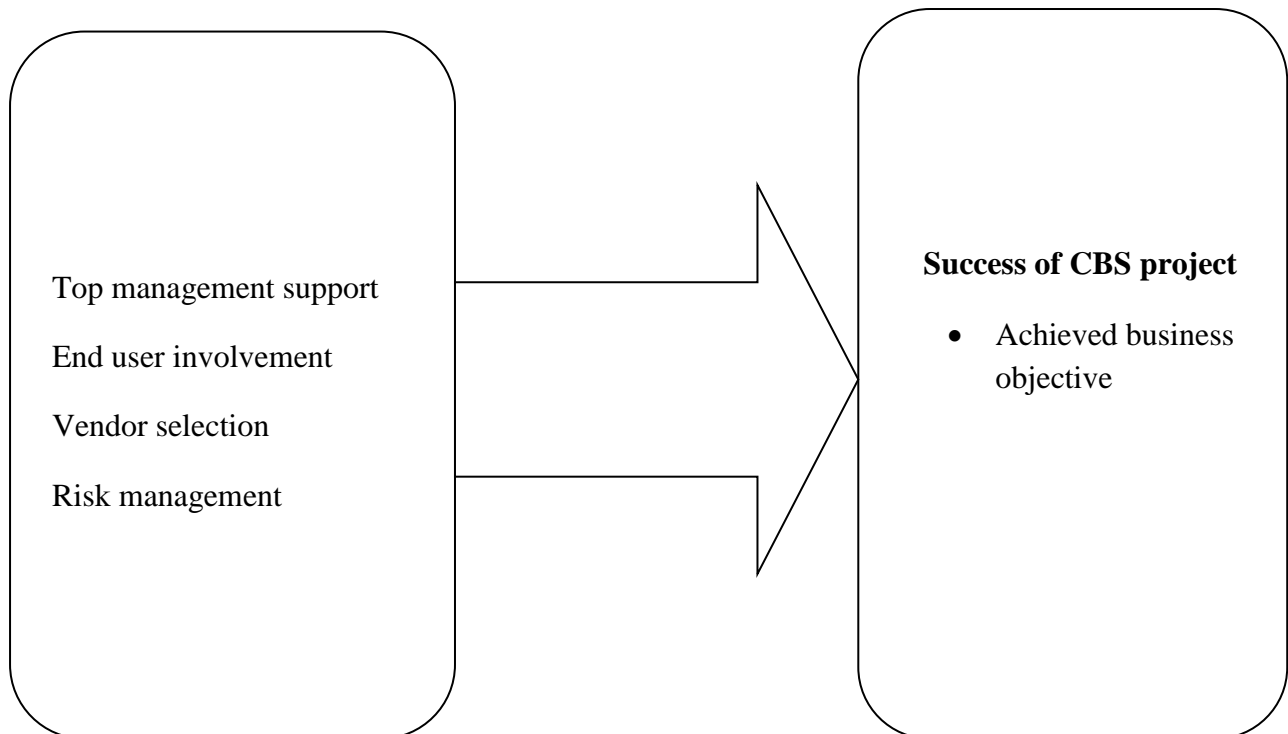
Figure 2.1 Conceptual framework of the study   Source: Author (2019)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an overview of the chosen research methodology and it also provides the reader with information about how the study was conducted and how data collected and analyzed in order to avoid critique to the chosen methodology.

3.2 Description of the study organization

Bank of Abyssinia is a private share company which was established in1996 and is one of the largest banks in Ethiopia. Currently the bank has reached over 300 branches networks of which 189 branches are in Addis Ababa and the remaining are established in bankable towns all over the country. All city and outlying branches are interconnected with state –of –the art ICT. All branches offer both domestic and international banking services.

3.3 Research approach and design

The research approach is a plan or procedure that consists of the steps of broad assumptions to detailed method of data collection analysis and interpretation. The research design refers to the overall strategy that the researcher choose to integrate the different components of the study in a coherent and logical way, thereby ensuring the researcher effectively addresses the research problems ,it constitutes the blueprint for the collection ,measurement and analysis of data.

3.3.1 Research design

To achieve the overall objective of the study, which is to investigate the major critical success factors in core banking software project implementation at Bank of Abyssinia, an explanatory and descriptive survey research design was carried out through the study.

The researcher adopted the descriptive survey approach to research design, a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. The main objective of the research being to assess the major factors affecting success of CBS projects at the Bank of Abyssinia, the researcher then used the project participants memory and

experiences of CBS projects they had been involved in to find answers as to what led to the particular outcome of each of their projects.

Besides descriptive research design the study used explanatory research design. Explanatory research design is conducted in order to identify the extent and nature of cause and effect relationships between variables. So in this study the researcher also used explanatory research design to identify the relationship between the critical success factors and the successful implementation of CBS projects. The research is cross sectional in a sense that data collected at one point in time.

3.3.2 Research approach

In order to answer the research questions, mixed research approach was used. Mixed method uses both quantitative and qualitative data and the integration of these data in a single study to answer a common research question (Teddlie &Tashakkori, 2009).

Using a mixed method design is particularly important for this study. Since, by applying different types of methods the researcher can neutralize or cancel the biases of other methods as all methods have limitations (Creswell, 2003). Therefore, by triangulating data sources – a way to seek convergence across qualitative and quantitative methods (Creswell, 2003) the researcher will be able to draw a comprehensive picture of CBS project implementation success factors.

3.4 Data type and source

3.4.1 Data type

The researcher used both primary and secondary data for the research. The primary data are those, which are collected for the first time and thus happened to be original in character. Such data are collected with specific set of objectives to assess the current status of any problem or situation. Since primary data is collected with specific purpose, it forms the most significant data of the entire thesis and it is ultimately used for the purpose of analysis.

Secondary data means data that are already available i.e., referring to the data which have already been collected and analyzed by someone else (Chisnall, 2007).

3.4.2 Data source

In order to obtain useful results and reliable data, both types of data sources which are primary and secondary data sources were used in this research. The primary data was collected from the responses of the sample and the secondary sources of data were obtained from available secondary sources of the information. In this study Primary data was obtained from RMO director, program manager, IT project manager, business and technical team leaders and members, team coordinators. Whereas secondary data was obtained from organization, guidelines, annual reports, Books, journals, research papers reports and websites.

3.5 Target population and sample

3.5.1 Target population

Target populations of the study were all members of RMO who are involved in Core Banking Solution projects from inception to execution.

3.5.2 Sample size determination

For this study the researcher used census survey method. Census is a survey conducted on the full set of observation objects belonging to a given population or universe. In this study the researcher targeted the 49 members of staff who were charged with core banking system project development and implementation.

Table 3.1: Target population

Name	No. of Population
RMO director	1
Program manager	1
IT project manager	1
Business team leaders	8
Business team members	26
Technical team leaders	1
Technical team members	9
Team coordinator	2
Total	49

3.5.3 Sampling selection procedures

The study used census survey method. Census refers to quantitative research method, in which all the members of the population are enumerated. The study targeted 49 members of staff who were charged with core banking system project development and implementation. This agrees with Mugenda and Mugenda (1998), who recommends that where the target population is small, a selected sample would be meaningless: the whole population should be studied.

3.6 Data collection methods and tools

The researcher use questionnaires with close ended questions to collect primary data from the respondents. The questionnaires are filled by business and technical team leaders/members, team coordinators and have different sections aimed at the collection of demographic information of the respondents and to measure the four major success factors. Besides Structured questionnaires key informant interview method were used to gather data from RMO director, program manager and IT project manager. So interview was conducted using semi-structured interview questions. The rationale for choosing this approach is the researcher seeking knowledge about CBS project which participants would provide by virtue of their knowledge. Subjectively considers that the selectee give first-hand information without any problem. The interview administered via telephone (Telephone interview).

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Secondary data was collected through desk research to clarify most of the issues. Books, journals, research papers reports and websites used to carry out the study.

3.7 Data analysis and presentation

3.7.1 Data analysis

The data analyzed using both descriptive and inferential statistics analysis methods.

Descriptive statistics

Descriptive data collected was analyzed, interpreted and inferred through triangulation of information. The identified independent variables were analyzed feedback from the target population. Before processing the responses, the completed questionnaires were checked for completeness and comprehensibility to ensure consistency. The data was then be summarized, coded and entered into the Statistical Package for Social Sciences (SPSS) version 20 for analysis to enable the responses to be grouped into various categories. Descriptive statistics such as frequency distribution used to analyze the data. Data presentation was done by the use of percentages and frequency tables. This ensured that the gathered information is clearly understood. Finally, interview questions were analyzed qualitatively.

Inferential statistics

Inferential statistics is the procedure by which we reach a conclusion about a population based on the information contain in the sample drawn from that population. Therefore among inferential statistics, the researcher uses an ordinal logistic regression.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter presents the study findings in the form of tables, graphs and charts so as to ease its interpretation.

4.1 Analysis of Response Rate and Demographic Information

4.1.1 Questionnaire response rate

Table 4.1 presents the questionnaire return rate

Return rate	Frequency	Percentage
Response	38	83
Non response	8	17
Total	46	100

Questionnaires were sent out to all 46 BOA staff members involved in CBS projects out of which 38 responses were received as presented in table 4.1 above. According to Orodho (2004), a response rate of 30% on a large sample of more than 30 items is representative enough and thus the 83% response achieved in the survey was considered excellent.

4.1.2 Respondents' Gender Distribution

The researcher sought to establish the gender distribution of CBS project team members at BOA and thus asked respondents to indicate their gender on the questionnaires results of which are summarized in figure 4.1 below.
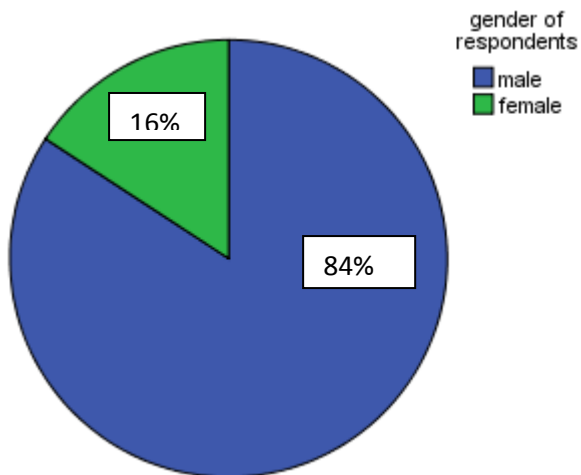
Figure 4.1 Respondents' Gender Distribution

Out of 38 survey respondents 32 (84%) were male whereas only 6 (16%) were female showing that majority of CBA projects are resourced by men.

4.1.3 Distribution of respondents by Age

The study requested the respondents to indicate their age. Their responses appear on Figure 4.2 below.
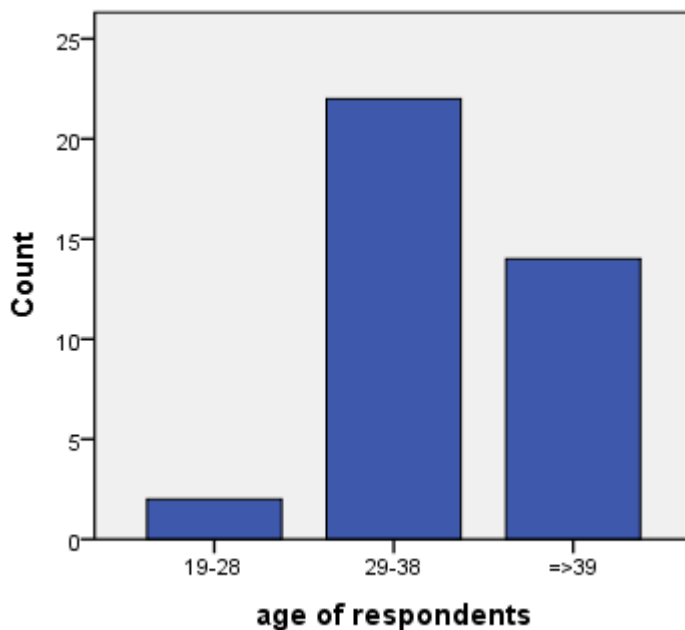
Figure 4.2 Age of respondents

Considering the age groups of the respondents, the higher number of respondents was in the range of 29-38 years, which represent 58 %, followed by age groups of 39 and above which represent 37% and the rest 5% are in the range of 19-28 years (figure 4.2). This indicated that most of the respondents were between the age of 29 and 38.

4.1.4 Educational Background of the Respondents

From the analysis on educational background of respondents, it was found that 14 respondents (37%) have undergraduate degree, and the rest 24 respondents (63%) have graduate degree /masters. This profile shows that the BOA's CBS project team is qualified in terms of educational background.
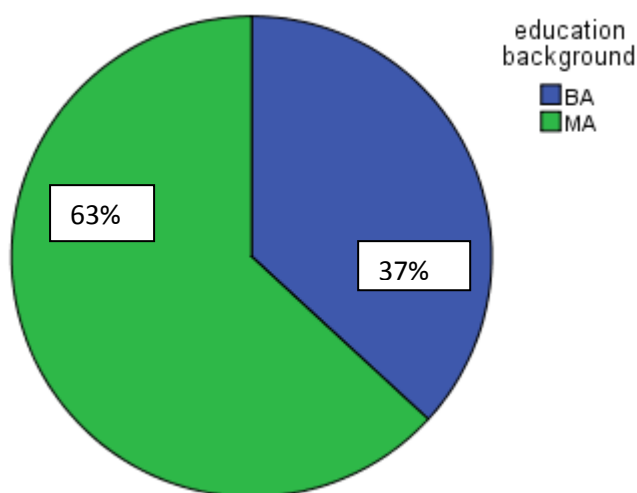
Figure 4.3 Educational Background of respondents

4.1.5 Role of respondents

The respondents for the survey questionnaire were categorized as; team coordinators, team leaders, technical and business team members based on the roles played by them in relation to the CBS project and at the bank. Table 4.2 illustrates role of respondents in CBS project implementation. As can be seen in the following table most of the respondents 58.0% were from business team the rest 42 % were Core Banking Solution implementation team coordinators, team leaders and technical team members.

Table 4.2 role of respondents

Role	Frequency	Percentage
Team coordinator	2	2
Team leader	8	21
Technical team member	6	16
Business team member	22	58
Total	38	100

4.1.6 Respondents' work experience at BOA

Survey respondents were asked to specify the work experience at the bank /number of years they had worked at BOA. Results of which are summarized in table4.3 below.

Table 4.3 Respondents' work experience / Length of Employment at BOA

Period of service	frequency	Percentage
<3	4	10
3-5	9	24
=>5	25	66
Total	38	100

As it is indicated 10% of the survey respondents have been working with BOA for less than three years at the time of data collection. Moreover, a high percentage of them (66%) had been with BOA for more than 5 years showing that BOA commits well experienced banking staff to its CBS projects.

4.2 Success of BOA CBS Projects in terms of achieving business objectives

The primary goal of any IT projects would be to meet the business objectives by implementing a suitable software package in relation to this, When asked whether they felt BOA CBS projects were completed successfully in terms of accomplishing the intended business objectives, (32%) of the respondents felt that BOA CBS projects are always in struggle to deliver the intended business objectives. majority of the respondents (42%) however felt that BOA CBS projects were mostly

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successful in achieving the intended business objectives. were as (26%) of the respondents felt that BOA CBS projects were always successfully accomplish the intended business objectives. Results for this survey question are summarized in table 4.4 below.

The survey sought to establish business objectives earmarked by shareholders and executives for these projects were eventually delivered.

Table 4.4 Success of BOA CBS Projects in terms of achieving business objectives

Response options	Frequency	Percentage
Always successful	10	26
Mostly successful	16	42
Mostly struggling	0	0
Always struggling	12	32
Total	38	100

project success referred to as reaching the business objectives and the planned results in compliance with predetermined conditions of time, cost and performance.(Dvir,1998).With the primary goal of pursuing any project being to meet a particular business need, the project management team at BOA and within the wider banking fraternity keeps to evaluate their profession and the value that they bring to the shareholders.

4.3 Top management support as a Project Success Factor

There were three questions related to Top Management Support, which were designed to identify the level of top management Support during the CBS implementation processes**.**

4.3.1 Top Management Support to Project Managers and Teams

When survey respondents were asked whether the BOA Top Management was supportive to project managers and teams throughout the entire project life cycle, 74% of them responded to the affirmative as shown in table 4.5 below.

Table 4.5Top Management support to project managers

Response	Frequency	Percentage
Yes	28	74
No	10	26
Total	38	100

This indicates that the top management is committed to helping its staff delivers on project objectives.

4.3.2 Top Management Availability

Asked whether Top Management was readily available and accessible to the project managers and teams, the majority (61%) of respondents responded that BOAs top management is readily available for decision making and guidance whereas the rest (39%) doesn't agree with this as shown on table 4.6 below.

Table 4.6 Top Management Availability for guidance and decision making

Response option	Frequency	Percentage
Strongly agree	6	16
Agree	17	45
Disagree	12	31
Strongly disagree	3	8
Total	38	100

Project managers at BOA should leverage on this top management support to deliver projects.

4.3.3 Availability of Tools and Resources

Survey respondents were asked whether BOA's top management has consistently provided all the tools and resources necessary to successfully deliver on CBS projects with a good 76% (58% + 18%) of the respondents being happy with Top Management in this area as shown in table 4.7 below.

Table 4.7 Availability of Project Delivery Tools and Resources

Response option	Frequency	Percentage
Strongly agree	7	18
Agree	22	58
Disagree	9	24
Strongly disagree	0	0
Total	38	100

For any worker to deliver on their tasks then the employer must equip them with all relevant tools and resources. BOA's top management has done well to adequately equip its project management teams.

According to Schmidt (2001) top management support is consistently recognized as a critical success factor. Akkermans and Helden (2002) has also identified Top Management Support as a CSF for ERP projects. The above results show that there is a good level of top management support at BOA in setting direction during implementation of the CBS which can be recognized as an important factor for the successful delivery of CBS project.

4.4 User Involvement as a Project Success Factor

4.4.1 Involvement of System End Users in Project Activities

Survey respondents were asked whether system end users were involved during all stages of the CBS projects at BOA so as to establish the level of end user engagement with their responses to this question shown in table 4.8 below.

Table 4.8 Involvement of End Users in Project Activities

Response option	Frequency	Percentage
Yes all the time	7	18
Yes most of the time	17	45
Yes-sometimes	14	37
Never involved	0	0
Total	38	100

Only 18% of the survey respondents felt that system end users were always involved in project activities with the (37%) citing the fact that end users were only involved in some of the project activities. The majority (45%) of the respondents felt that most of the time end users were involved at all stages of the project. researches has shown that one of the surest ways of ensuring project success is to involve the end users at all stages of the project so BOA has to give emphasis to this.

4.4.2 Involvement of System End Users during Requirements Definition

Majority of the literature reviewed in chapter 2 of this study pointed to the lack of user involvement during requirements definition stage of most IT projects and the surveyor thus sought to establish whether this was the case at BOA. Survey respondents were asked to rate the level of end user participation during requirements definition process in BOA and table 4.9 below summarizes their responses.

Table 4.9 End User involvement in Requirements Definition

Response options	Frequency	Percentage
Perform the actual work of converting business objectives in to user requirements	12	31
Participate in converting business objectives in to user requirements	14	37
Review already defined user requirements and suggests for improvement	9	24
Never involved in the requirements definition process	3	8
Grand total	38	100

Only 8% of the survey respondents felt that end users were not involved at any stage of requirements definition with 92% of respondents citing that users were involved at one stage or the other of requirements definition.

4.4.3 User expectation as a fundamental component of CBS project with in BOA

Survey respondents were asked whether they felt like user expectations treated as a fundamental component of CBS project implementations at BOA. Their responses to this question are summarized in table 4.10 below.

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Table 4.10 user expectation as a fundamental component of CBS project with in BOA

Response option	Frequency	Percentage
Strongly agree	15	39
Agree	20	53
Disagree	3	8
Strongly disagree	0	0
Total	38	100

92% (39% + 53%) of the survey respondents agreed that end user expectation is a fundamental component of CBS project delivery.

Based on the above tables it can be interpreted as there is evidence that user expectation and involvement are fundamental components for the success of CBS project at BOA. Projects that lack user involvement perform poorly (Standish group international, 2010).

4.5 Vendor Selection as a Project Success Factor

The study sought to know the extent to which Vendor Selection influences core banking system implementation. It also sought to identify to what extent certain vendor selection factors influence the success of core banking implementation.

4.5.1 The dependence of CBS project success on the experience of the vendor

The survey respondents were asked if the success of CBS projects in BOA with regard to vendor selection is dependent on the experience/number of years the vendor has been in the business.

Table 4.11 the dependence of CBS project success on the experience of the vendor

Response option	Frequency	Percentage
Strongly agree	10	26
Agree	26	69
Disagree	2	5
Strongly disagree	0	0
Total	38	100

Based on this 95% of the survey respondents implies that the success of CBS project in BOA with regard to vendor selection is dependent on the experience of the vendor.

4.5.2 Dependence of CBS project success on the project management staff skill of the vendor

Respondents were asked whether CBS project success is highly dependent on project management staff skill of the vendor. Majority 87 % (16%+71%) of them agreed that CBS project success is highly dependent on project management staff skill of the vendor.

Table 4.12 Dependence of CBS project success on the project management staff skill of the vendor

Response option	Frequency	Percentage
Strongly agree	6	16
Agree	27	71
Disagree	5	13
Strongly disagree	0	0
Total	38	100

4.5.3 Importance of System support mechanism of the vendor in the CBS project implementation process

Table 4.13 importance of System support mechanism of the vendor in the CBS project implementation process

Response option	Frequency	Percentage
Strongly agree	14	37
Agree	21	55
Disagree	3	8
Strongly disagree	0	0
Total	38	100

4.5.4 Role of vendor project implementation Methodology in determining CBS project success

Table 4.14 the role of vendor project implementation Methodology in determining CBS project success

Response option	Frequency	Percentage
Strongly agree	14	37
Agree	21	55
Disagree	3	8
Strongly disagree	0	0
Total	38	100

As it is clearly indicated in table 4.13 and table 4.14 92% of the survey respondents cite that vendor system support mechanism and project implementation methodology are highly important for the successful implementation of CBS projects in BOA.

4.5.5 Vendor Commitment as one of the challenges faced by banks

When asked whether they felt vendor commitment is one of the challenges faced by banks during CBS project implementation process a considerable percentage of the respondents (55%,

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(24%+31%) felt that vendor commitment is one of the challenges, where as 45% of the respondents disagree with this. Table below shows the responses.

Table 4.15 vendors Commitment as one of the challenges faced by banks

Response option	Frequency	Percentage
Strongly agree	9	24
Agree	12	31
Disagree	17	45
Strongly disagree	0	0
Total	38	100

As the above tables indicates that it is important for the success of CBS implementation that the vendor and attached staff should be well experienced in this area or core banking implementation in order to have the relevant management skills and system support mechanisms.

The organization needs to strongly consider the vendor's project implementation methodology, project management staff skills and system support mechanisms for successful implementation of a core banking system. This is in line with Weber & Current, 1991 who states that there are multi criteria used in selecting suppliers depending on the organizations, the most important being price, delivery, and quality.

4.6 Risk Management as a project success factor

4.6.1 Importance of risk management plan for the success of CBS project success

The study sought to identify to what extent certain risk management factors influence the success of core banking project implementation. In relation to this respondents were asked whether they agree or not with the importance of having risk management plan for the success of CBS project

Table 4.16Importance of risk management plan for the success of CBS project success

Response option	Frequency	Percentage
Strongly agree	20	53
Agree	12	31
Disagree	3	8
Strongly disagree	3	8
Total	38	100

According to the responses 84% (53+31) of the respondents respond that having risk management plan is an important tool for the success of CBS projects. According to Matta, and Ashkenas, (2003) system implementation failures arose due to unplanned implementation process. Risk management plan contributes to project success by establishing a list of internal and external risks. Effective risk management plan allows identifying the project strength weakness opportunities and threats.

4.6.2 Monitoring of project risk should be done throughout the life of the project

With regard to monitoring of project risks, when asked whether they felt monitoring of project risk should be done throughout the life of the project, as the table below indicates 92% of the survey respondents felt that monitoring of risks should be done throughout the life of the project .continuous monitoring of project risks ensure that the risk response strategies are implemented and progressed effectively.

Table 4.17Monitoring of project risk should be done throughout the life of the project

Response option	Frequency	Percentage
Strongly agree	21	55
Agree	14	37
Di agree	3	8
Strongly disagree	0	0
Total	38	100

4.6.3 Most important risk control strategy to increase success of CBS implementation

In relation to risk control strategy respondents were asked to choose the most important risk control strategy they believe which increases the success of CBS implementation the table below shows the responses obtained.

Table 4.18 Most important risk control strategy to increase success of CBS implementation

Response options	Frequency	Percentage
Training	22	58
Awareness	3	8
Effective communication	2	5
Internal audit	11	29
External audit	0	0
Grand total	38	100

The majority 58% of the respondents believes that training is the most important risk control strategy. 29% of them felt that internal audit is important strategy to control risk in order to increase the success of CBS project implementation. 8% and 5% of the respondents believes that awareness and effective communication are important consequently.

According to Otieno (2013), due to the nature of banking business which is very sensitive, complex and vulnerable to fraud and financial loss, risk ought to be handled with a lot of due care and diligence. So it is very important to have appropriate risk control and monitoring measures put in place to minimize all forms of risk involved in project implementation.

4.7 Inferential statistics Analysis

Ordinal Logistic Regression Analysis

Ordinal logistic regression was a type of logistic regression analysis that when the response variable is categorized more than two with having natural order or rank. That is, we can rank the values, but the real distance between categories is unknown. Under Ordinal Logistic Regression

Analysis we can deal Model Fitting Information, Goodness-of-Fit, Pseudo R-Square, Parameter Estimates.

Logit link function is used in the analysis because it is evenly distributed categories and is reasonable choices when the changes in the cumulative probabilities are gradual and logit involves all levels of the response and dichotomizes the response scale.

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	82.044			
Final	.000	82.044	19	.000

Link function: Logit.

The Model Fitting Information table, which gives the -2 log likelihood for the intercept only and final models, can be used in comparisons of nested models. The statistically significant chi-square statistic (p<0.05) indicates that the Final model gives a significant improvement over the baseline intercept only model. This tells us that the model gives better predictions than if we just guessed based on the marginal probabilities for the outcome categories.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	1.030	31	1.000
Deviance	1.984	31	1.000

Link function: Logit.

From the above table the results for our analysis suggest the model does fit very well (**p>0.05**) (i.e. fail to reject the null hypothesis depending on the observed data) Also the model fits adequately.

Pseudo R-Square

Cox and Snell	.507
Nagelkerke	.573
McFadden	.327

Link function: Logit.

For logistic and ordinal regression models, it not possible to compute the same R2 statistic as in linear regression so three approximations are computed instead. What constitutes a "good" R2 value depends upon the nature of the outcome and the explanatory variables Here, the pseudo R2 values (e.g. Nagelkerke = 57.3%) indicates that there is relatively high proportion of the variation in success of CBS project implementation. we would expect there are numerous success factors that affect success of CBS project implementation so the rest 42.7% are included in this.

Parameter estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[success = 1]	-22.972	1.634	197.744	1	.000	-26.173	-19.770
	[success = 2]	-20.503	1.580	168.465	1	.000	-23.599	-17.407
Location	[top management support=1]	-16.453	1.245	174.515	1	.000	-18.894	-14.012
	[top management support=2]	-15.737	1.461	116.041	1	.000	-18.600	-12.874
	[end user involvement =1]	-1.488	1.797	.686	1	.408	-5.009	2.034
	[end user involvement =2]	-20.491	1.392	216.775	1	.000	-23.219	-17.763
	[end user involvement =3]	0[a]	.	.	0	.	.	.
	[vendor selection=1]	-16.904	.923	335.724	1	.000	-18.713	-15.096
	[vendor selection=2]	.789	.877	.809	1	.369	-.931	2.509
	[vendor selection=3]	0[a]	.	.	0	.	.	.
	[risk management=1]	-22.107	1.376	258.217	1	.000	-24.804	-19.411
	[risk management=2]	-20.491	1.392	216.775	1	.000	-23.219	-17.763
	[risk management=3]	-20.842	.000	.	1	.	-20.842	-20.842
	[q18=4]	0[a]	.	.	0	.	.	.

a. This parameter is set to zero because it is redundant.

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In the Parameter Estimates table we see the coefficients, their standard errors, the Wald test and associated p-values (Sig.), the 95% confidence interval of the coefficients and odds ratios. Since p values less than alpha level they are statistically significant; otherwise not. The thresholds are shown at the top of the parameter estimates output, and they indicate where the latent variable is cut to make the three groups that we observe in our data. The threshold coefficients are representing the intercepts, specifically the point (in terms of a logit) where success of CBS project implementation might be predicted into the four categories. The estimates labeled location are the coefficients for the predictor variables.

The findings indicate that the success of CBS projects with in BOA is associated with top management support, end user involvement, vendor selection and risk management. From these Top management support and risk management are found to be more significantly associated with success of CBS projects with in BOA.

4.8 Discussion of Major Findings

This section presents the discussion of results drawn from the data analysis. Discussion involves success of CBS projects implementation in terms of achieving business objectives with in BOA and critical success factors identified in previous section.

4.8.1 Success of CBS project in terms of achieving business objectives at BOA

The primary goal of any IT projects would be to meet the business objectives by implementing a suitable software package. Bhatti (2005), Somers and Nelson (2001), have mentioned in their research work the importance of having clear success measurement criteria to evaluate success of IT projects. Project Management Body of Knowledge (2004) indicates that the completion of a project achieving project objectives and goals within the agreed time frame, and within the budgets at the successful completion of the project. in accordance with this, the survey implies BOA CBS projects are mostly successful.

4.8.2 Critical Success Factors of CBS project

Top Management Support

Akkermans and Helden (2002) has identified Top Management Support as a CSF for ERP projects. Many other researchers including Bhatti, (2005), Somers and Nelson (2001),Ramkumar (2004), Lewis (2003), and Sirivastava (2003) have identified the importance of Top Management Support for the success of software projects. Based on the survey top management plays an important role in the success of CBS project.

User involvement

Projects that lack user involvement perform poorly (Standish group international, 2010). Pettingell (1998) concluded that the inclusion of users in definition and design stage is the best way to increase their perception of the value of the system and to motivate them in order to achieve project success. Based on the above survey results related with user involvement there is evidence that user expectation and involvement is a critical success factor for the successful CBS project implementation.

Vendor selection

In reality, the vendors and their implementation teams manage the CBS implementation projects, Banks have to largely depend on the vendors for the successful completion of the project. So the bank must select the vendor carefully. There are numerous criteria used in selecting suppliers depending on organizations. Shiati (2014) suggests that the most important are price delivery and quality. besides experience of the vendor support mechanism and commitment of the vendor must be given a great emphasis in the selection process. Vendors should be committed to finishing the implementation of the project successfully. They must be attentive to the requests raised by the bank since it plays a vital role in the success of a project. Somers and Nelson, (2001) and Akkermans and Helden (2002) in their research have identified vendor support and commitment as a CSF for the success of ERP projects. This study identifies vendor support mechanism and commitment as critical success factors in relation with experience.

Risk management

As projects are unique in time and trajectory, another main aspect of the risk factor is uncertainty which is inevitable in a project, for this reason a careful risk assessment and proactive risk management plan is a key to the project success (Kahneman &tversky.1979). Respondents indicated risk management as critical success factor.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter will summarize the findings , and draw conclusions based on the data collected and interpreted in chapter four thereby answering the questions set out in chapter one. Recommendations will then be given on what BOA and banks can do to ensure the consistent delivery of successful CBS projects into the future.

5.2 Summary of Findings

This study sought to identify the factors affecting success of CBS projects at bank of Abyssinia by way of investigating the degree to which top management support, user involvement ,vendor selection and risk management each affect the end project outcomes. The researcher adopted both inferential and descriptive approach to research design. Primary data collected by making use of self-administered questionnaires and through interview. Interview response obtained from RMO director, program manager and IT project manager. Questionnaires sent out to 46 staff members who had been involved in CBS projects from implementation to execution including team coordinators, team leaders, and both technical and business team members.

5.2.1 CBS Project implementation Success in terms of achieving business objectives

Based on the interviews made with key informants the most important indicator of a successful IT project for those that took part in the BOA survey is the ultimate realization of business objectives that had prompted the implementation of the BOA IT projects. As it was obtained from the analysis BOA CBS projects are mostly successful in terms of achieving the intended business objectives.

5.2.3 Top Management Support

There was a consensus among majority of survey respondents that BOA's top management is supportive. Top management is one of the important factors for the success of CBS project. Besides, top level interaction among project managers, team members and vendors facilitate successful implementation.

5.2.4 User Involvement

In the area of user involvement the survey results have shown that there are efforts at BOA to involve users at all stages of the project and during requirements definition process. Constant engagement with all stakeholders during every stage of the project is a key when it comes to end product acceptability for use and subsequently translating to project success through the realization of intended project benefits.

5.2.5 Vendor Selection

A bank seeking to implement a core banking system needs to critically consider the vendors implementation methodology. This involves a combination of logically related practices, methods and processes that determine how best to plan, and deliver a project throughout the continuous implementation process until successful completion. The vendor staff also needs to have the necessary skills and experience needed to implement the system. Prior engagement would be necessary to prove this. The cost of implementation should be within the bank's approved budget and the vendor's financial position should be solid. The organization also needs to be certain that the vendor would be available to provide system support after the system has been deployed either on-site or off-site. Since the core banking system will be working with other systems, ease of integration is critical.

5.2.6 Risk Management

An organization needs to have proper risk management plan this is to ensure that the organization does not incur any losses due to the process of system implementation. Besides the institution needs to have concrete risk control measures to safe guard the bank against any form of loss. Monitoring of project risks should be done throughout the life of the project.

5.3 Conclusion

Managing and coordinating a massive system like a core banking system for a bank is not an easy task. This is because effective and specific communication is required when leading and guiding all the stakeholders in a project. Banks have been known to hold very sensitive yet important information. This makes core banking system development become a very sensitive (so as not to lose important information) yet large projects which depend on various determinants including complexity, duration of development, available budget and the desired quality of the project.

For a bank to successfully implement a core banking system, the implementation staff needs to have the necessary support in terms of resource and skill required, increase the level of end user involvement, while ensuring that the inherent risks are mitigated to protect the institution from potential loss. The vendors' engagement should also have a definite implementation plan, skill and support plan once the system has been adopted.

Survey findings demonstrated the fact that stakeholders at BOA know that they still have a long way to go in order to deliver truly successful projects.

In general it can be concluded that literature reviews in the field of project management generate lists of critical success determinants project success. Therefore, investigating determinants of project implementation success is a fruitful area to achieve on a much larger scale.

5.4 Recommendations

Based on the study findings the following recommendations are made:

a)Top management support and guidance throughout the CBS project implementation is important for the success of the project therefore Top management shall give their full corporation to the project managers and team and should provide the necessary support by ensuring that the necessary resources are availed for successful implementation.

b) Continuous efforts should be made to increase the level of end user involvement.

c) During vendor selection process banks shall ensure that the vendor sends an adequately experienced project manager and an implementation team. This will avoid the problem arise during implementation phase. The bank shall maintain a cordial relationship with the selected vendor throughout the project to ensure that the project is completed as expected. Besides the bank should be certain that the vendor would be available to provide system support after the system has been deployed either on-site or off-site.

d) The risk and compliance department of the organization needs to be involved in order to ensure that there are proper risk assessment and control measures in place.

REFERENCE

Abbate, A. (1999).for small banks, future lies in technology and tight focus. *American banker 21* (6),8

Abeyesekera, A., Crisculo, C., Barreto, E, Gallaagher, p.(1999).Partners speak out: *Views on e- commerce .International trade forum, Geneva*, 2 23-25

Boot, A. (2009) .Cracks in the system: Is replacement the optional. *Finance and Development, 105* (12), 7-25

Barki, H., & Hartwick, J. (1994). *Rethinking the Concept of User Involvement.*

Berger, A. (2003).The economic effects of technological progress: Evidence from the banking industries. *Journal of money, credit and banking, 35*(2), 1-10

Collins, T. & Bicknell, D. (1997).*Ten easy ways to avoid a computer disaster*. London, England: Simon & Schuster.

Chege, K. (2012) *factors affecting the success of technology*. Master's thesis university of Nairobi: Kenya.

Casanovas, J., Pastor, J., & Esteves, J. (2004). *A Goals/ Questions/ Metrics Plan for Monitoring User Involvement and Participation in ERP Implementation Projects*.

Chisnall,P.M.(2007). *The essence of market research*. Hertfordshire: Prentice Hall.

Chairlone,S.,&Gosh,G.(2009) .*Emerging banking systems*. Palgrave: MacMillan

Cadle, J. and Yeates, D. (2008). *Project Management for Information Systems*. 5th ed. Pearson Education Limited, pp.3-21.

Classens,S.&Luc, L. (2009).What drives bank competition?:Some international evidence. *Journal of money credit banking,23* (6),273-283

czerniawska,F.,&Potter,G.(2000) .*Business in a virtual world: Exploiting information for a competitive advantage* .London: MacMillan

Essayas,T.(2016). Core banking system effectiveness in Ethiopia: The case of Buna international bank. *International journal of management research and review,6*(19)267-277

Geetha,C.S.(2015).The impact of core banking services in SBM. *International journal of commerce ,business management,4*(1),1

Ghafari, H.& Ansari, S.(2018).Effective of five key factors on the implementation of core banking system. *International journal of scientific research and management, 6*(7)

Hyvari, I. (2006). Success of projects in different organizational conditions. *Project Management Journal*, 37(4) 31-41

Hettiarachchi,N.(2009). *Critical success factors in selecting and implementing core banking systems in local commercial banks in Srilanka*: University of Colombo.

Hofmann, H. F., & Lehner, F. (2001*). Requirements engineering as a success factor in software projects.*

Haller,K.,&Heuberger ,.M.(2009).*know how transfer in core banking systems implementation*. Paper presented at the fourth Poland software engineering techniques conference, Karakow, Poland.

Hexaware Technologies (2012). *Technology Solutions*. Retrieved from http://hexaware.com/product-specialization.html

Kerzner, H.(1987).In search of excellence in project management. *Journal of systems management, 38*(2),30-39

Lee, C.(2001) An analytical frame work for evaluating e-commerce business models& strategies. *Internet research: Electronic working applications and policy ,11* (4), 349-359

Lock, D. (2007). *Project management*. 9th ed. Hampshire GU11 3HR: Gower Publishing Limited, pp.5-10.

Munns, A.,&Bjeirmi, B(1996) The role of project management in achieving project success. *International journal of project management,14* (2),81-87

Mugenda, O.M & Mugenda A.G. (2003). *Research Methods: Quantitative & Qualitative Approaches.* Nairobi Acts Press

Musau, N., H.(2015). *Factors Influencing Implantation of Core Banking System Projects by Commercial Banks in KENYA: The Case of Nic Bank Kenya Limited.*

Otieno, P. (2013).An assessment of the role of risk management practices in core banking software project success :A case of commercial banks in Kenya. *International journal of academic research in business & social science*,

Rafizadeh ,Shahsavari, H.(2013), Obstacles to Use of Core Banking: *Quarterly Journal of Governmental Administration*, 46(2), 18-33

Schmidt, R.(2001).Identifying software project risks: An international Delphi study. *journal of management system,17* (4),5-36

Saundres, M.,Lewis,p. ,&Thronhill,A.(2009).Research methods for business students (5th ed.) Britain: Pearson professional limited.

Standish Group International. (2010). *Chaos Summary 2010*.

Somer ,T.,Nelson,K.(2001) *The impact of critical success factors across the stages of enterprise resource planning implementations.* Paper presented at the 34th Hawaii international conference on system science (HICSS), Hawaii, USA.

Shultz, L. Slevin,P. ,&Pinto, k.(1987)strategy and tactics in a process model of project implementation. *Interfaces*,17(4),5-36

Turner,R.,&Muller ,R.(2008).Project managers leadership style as a success factors on projects: A literature review. *Project management journal, 36* (2)49-61

Wysocki, K.(2009).*Effective project management: Traditional, agile ,extreme*.(5th ed.) Canada: Wiley publishing, Inc.

Zineldin, M.(2009) .core banking system replacement as competitive strategy in Swedish banking industry. *The TQM magazine*, vol. 17,329-334

APPENDIX

Appendix III: Key informant interview guide

St. Mary University

School Graduate Studies

Masters of Arts (MA) in Project Management Check List for in-depth Interview Questions to Project Director and Team Leaders of CBS implementation project.

Dear Respondent,

The objective of this interview is to gather and analyze relevant and in-depth information that will provide insights about critical success factors in Core Banking Solution implementation projects at Bank of Abyssinia. This study is undertaken as a partial requirement for the completion of MA in Project Management.

1. Do u agree with that achievement of business objectives is the most important indicator of a successful IT project?

2. To what extent does risk Management influence core banking system implementation?

3. Does your organization carry out risk assessments before implementation of projects?

4. How was the end user involvement considered in the implementation of the core banking system?

5. To what extent does vendor Selection influence core banking system implementation?

6. What method does your organization use in Vendor Selection?

7. Do you have any comment to add?

QUESTIONNAIRE

An assessment of success factors in core banking software project implementation at bank of Abyssinia.

My name is Meskerem Mulugeta and I am undertaking research on success factors affecting the Implementation of Core Banking System Projects by Bank of Abyssinia for my Master's Degree in Project Management. Kindly fill in the questionnaire. Please don't write your name on the questionnaire. Your assistance will be highly appreciated.

Section A: Demographic Information

1. Gender

□ Male   □ Female

2. Age (years old)

□19-28   □29-38   □39 or above

3. Educational background

□ Undergraduate degree (Bachelor's degree)   □Graduate degree (Master's degree) or above

4. Which of the following best describes your role in the Core Banking System project Implementation at the bank?

□ Team coordinator   □ Technical Team member

□Team Leader   □ Business Team member   □ other…………………………..

5. Work experience in the Bank

□ Less than 3 year   □ 3-5 years   □ 5 years and above

Section B- Success of CBS Project

6. Select the statement that best describes the success of CBS projects with in BOA in terms of accomplishing the intended business objectives.

a. always successful

b. mostly successful but sometimes struggling

c. mostly struggling but sometimes successful

d. always struggling but sometimes successful

Section C: Top Management Support as a CBS Project implementation Success factor

7. In your opinion, is BOAs top management supportive to project managers and teams?

☐ Yes ☐ No

8. BOAs top management is readily available for decision making and guidance to the Project Manager and team.

a. Strongly Agree c. Disagree

b. Agree d. Strongly Disagree

9. BOAs top management has consistently provided all the tools and resources required to the successfully delivery of CBS projects.

a. Strongly Agree c. Disagree

b. Agree d. Strongly Disagree

Section D: Vendor selection as a CBS Project implementation Success factor

10. The success of CBS project in BOA with regard to vendor selection is dependent on the experience/ number of years the vendor has been in the business.

a. Strongly Agree   c. Disagree

b. Agree   d. Strongly Disagree

11. The success of CBS implementation is highly dependent on the project management staff skill of the vendor

a. Strongly Agree   c. Disagree

b. Agree   d. Strongly Disagree

12. System support mechanism of the vendor is highly important in the implementation process

a. Strongly Agree   c. Disagree

b. Agree   d. Strongly Disagree

13. Vendor project implementation methodology play an important role in determining CBS project success.

a. Strongly Agree   c. Disagree

b. Agree   d. Strongly Disagree.

14. Do you think that vendor commitment is one of the challenges faced by banks during CBS Project Implementation?

a. Strongly Agree   c. Disagree

b. Agree   d. Strongly Disagree.

Section E: End user involvement as a CBS Project implementation Success factor

15. Are the CBS project end users involved at all stages of the CBS project?

a. Yes – All the time

c. Yes – Sometimes

b. Yes – Most of the time

d. No – Never Involved

16. What is the level of end user involvement during the requirements definition process?

a. Perform the actual work of converting business objectives into user requirements

b. Participate in converting business objectives into user requirements

c. Review already defined user requirements and suggests improvements

d. Never involved in the requirements definition process

17. User expectation is a fundamental component of CBS projects within BOA.

a. Strongly Agree

c. Disagree

b. Agree

d. Strongly Disagree

Section F: Risk management as a CBS Project implementation Success factor

18. Having risk management plan is important for the success of CBS project implementation

a. Strongly Agree

c. Disagree

b. Agree

d. Strongly Disagree

19. Monitoring of project risks should be done throughout the life of the project

a. Strongly Agree

c. Disagree

b. Agree

d. Strongly Disagree

20. Which risk control strategy is the most important in BOA to increase the success of CBS implementation?

a. Training

d. Internal audit

b. Awareness

e. External audit

c. Effective communication

21. Which tool and technique of risk analysis is highly important?

a. Brain storming

c. Focus group discussion

b. Past organizational experience

d. scenario analysis