PROJECT IMPLEMENTATION CHALLENGES OF CORE BANKING SOLUTION OF WEGAGEN BANK S.C

BY

NEBIYAT ALIYU

ADVISOR: SOLOMON MARKOS (PHD)

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

JUNE 2018

ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

PROJECT IMPLEMENTATION CHALLENGES OF CORE BANKING SOLUTION OF WEGAGEN BANK S.C

BY

NEBIYAT ALIYU

A RESEARCH PROJECT WORK SUBMITTED TO ADDISABABA UNIVERSITY SCHOOL OF COMMERCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF ARTS DEGREE IN PROJECT MANAGEMENT

ADVISOR: SOLOMON MARKOS (PHD)

JUNE 2018

ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

PROJECT IMPLEMENTATION CHALLENGES OF CORE BANKING SOLUTIONOF WEGAGEN BANK S.C

BY

NEBIYAT ALIYU

Approving Board Committee:

_____	_____
Examiner	Signature
_____	_____
Examiner	Signature
_____	_____
Advisor	Signature

DECLARATION

I declare that the project entitled “Project Implementation Challenges of Core Banking Solution of Wegagen Bank S.C” is my original work and has not been presented for a degree in this university or any other university and that all sources of material used for the project have been duly acknowledged.

BY: NEBIYAT ALIYU

DATE: JUNE 2018

SIGNATURE: _____

STATEMENT OF CERTIFICATION

This is to certify that Nebiyat Aliyu has carried out this project work on the topic entitled "Project Implementation Challenges of Core Banking Solution of Wegagen Bank S.C" under my supervision. This work is original in nature and it is sufficient for submission for the partial fulfillment for the award of Degree of Masters of Art in Project Management.

SOLOMON MARKOS, (PHD).

SIGNATURE _____

DATE _____

ACKNOWLEDGMENTS

I will praise thee; for I am fearfully and wonderfully made: marvelous are thy works; and that my soul knows right well. First and for most, I would like to give my praise to the Almighty God for none except He was with me in all storms of life and trained me life lessons from every storms of life; great is your work lord.

I would also like to express my sincere gratitude to my advisor Solomon Markos (PHD) for his constructive comments, corrections and suggestion from the beginning of this project work to the end.

Last but not the least my sincere gratitude goes to Mahlet H/Mariam who helped me in facilitating the questionnaire distribution and collection and also I would like to thank all the project team members of CBS at Wegagen bank.

Table of Contents

LIST OF FIGURES

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

CBS	Core Banking Solution
ATM	Automated Teller Machine
S.C	Share Company
POS	Point of Sales
ISO	International Organization for Standardization
SPSS	Statistical Package for Social Science
HR	Human Resource

ABSTRACT

The motivation behind this study is the rapid changes that were happening in the banking industry with the coming of information technology developments related to core banking solution, but a gap remained in addressing the challenges faced while implementing CBS in Ethiopia. To address this study a descriptive research design was employed and quantitative approach was used. Data was collected from twenty five project team members through questionnaire distributed to all of the project team members and 24 of them were filled and collected. The data obtained through questionnaire has been analyzed quantitatively using descriptive statistics: frequency and percentage through SPSS version 21. Accordingly; the study conducted indicate that the CBS implementation project of Wegagen bank S.C faced challenges with regard to project implementation, HR related, vendor related and system related issues. Based on the findings the study recommends that the project team members should be accustomed to project execution process groups ahead of project implementation, there should be a motivating mechanism for rewarding the good works of the project team members and effective end user training should be provided.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Project management is the planning, organizing, directing, and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives (Kerzner, 2009).

According to Cleland & Ireland (2002), the management of a project is like the management of any activity. Two fundamental steps are involved in such management, namely, the making and implementation of decisions.

These days profit making companies work in a multifaceted and changing environment that significantly improves and manipulates their growth and expansion. To cope up with this changing environment, banks use information technology products so as to enable them amass the maximum profit through expansion and delivering quality service to customers (IBM, 2012).

Technology is a never ending road of change and improvements. With more and more banks adapting newer ways of doing things and delivering services, studies on the challenges on the road to achieve this will be a motivation.

One of such recent technological advancements is a core banking solution. According to Hemant (2017), Core banking solution is the process of providing a centralized on line system where all the data related to transactions, customer data are stored and are available to all networked branches for access. It allows its customers to conduct their business irrespective of the bank's branch. Thus, it removes the impediments of geo-specific transactions.

Core banking system is a solution which reduces manual work and increases efficiency. It is an application which is accessed by all of a bank's branches and manages customers' accounts. Core banking functionalities include deposit accounts, loans and payments. These services are made available through multiple channels such as ATM, mobile banking, Internet banking and branches (Shernish, 2011).

However; implementation of core banking solutions in most banks suffer significant overruns of cost and time estimates, which are common while implementing a system. The mentioned difficulties do impede the effective growth of banks and provision of effective service to customers of the banks.

Laudon (2012) identified the following challenges while implementing CBS; Functionality (Capability of software to meet requirements and expectations), Cost and Financial Terms, Ability of the business to adjust to the new system, Availability of skilled personnel, Vendor capabilities and credentials, System Flexibility, Data migration and User friendliness of User Interface.

Besides, Bogaerts (2011) also identified Reaching unanimity within the organization on what is actually needed as implementation challenge of CBS.

The research will identify the major challenges that hinder proper implementation of core banking solution at Wegagen bank SC and suggest possible recommendations as to how to properly handle implementation of core banking solution.

1.2 BRIEF BACKGROUND OF WEGAGEN BANK S.C.

Wegagen Bank is a privately owned share company which started operations on June 11, 1997 with a subscribed capital of Birr 60 million and a paid up - capital of Birr 30 million. The number of shareholders reached 2,262 while the total capital (including paid-up capital, share premium and legal reserves) reached over Birr 2.3 Billion as at March 31, 2015.(Wegagen bank, 2018*)*

Wegagen Bank has a network of 211 branches of which 83 are in Addis Ababa and the remaining 128 are located in regional cities and towns of the country. To expand its service coverage, the Bank keeps on opening additional branches both in Addis Ababa and regional towns.

Wegagen Bank is governed by the Board of Directors consisting of a Chairperson, a Vice Chairperson and seven Directors. The overall management is entrusted to the management team which comprises the President/Chief Executive Officer, who is appointed by the Board of Directors, four Vice-Presidents and sixteen Directors as well as Manager of Engineering Service.

As at March 31, 2016, the number of employees of the Bank stood at 3,726, of which, 1,720 are holding first and second degrees, 343 are diploma holders while the remaining 1,663 attended different levels of education and high school.

1.2.1 INFORMATION & COMMUNICATION TECHNOLOGY

Wegagen Bank is a pioneer to introduce a Core Banking System as of July 2000, thereby managing to network the Head Office & all branches. Through its versatile ISO Standard Core Banking System, the Bank is now delivering more efficient services to its customers.

The system has also enabled the Bank to provide technology-based banking services such as Card payment services (through ATM & POS), internet banking as well as mobile banking services.

1.3STATEMENT OF THE PROBLEM

Today Banking as a business has grown tremendously and transformed itself from only a deposits taking and loan providing system to an institution which provides an entire range of products and services under a wide umbrella. The banking sector in Ethiopia is embracing information technology to upgrade themselves to cope with the changes in the financial sector around the world. One of such transformations in the banking sector is core banking solution.

A core banking system is essentially the heart of all the systems operating in a bank. It can be described as the core of a bank's IT platform. With the advancement of technology, core systems tend to cover more and more functionalities, providing the bank with an integrated solution for most of its operations in varied business lines. A core banking system resides in the heart of a bank's data center and provides a central operational database of customers' assets and liabilities. It enables a 360-degree view of a customer's relationship with the bank (Kudav&Bhasin, 2013).

Nevertheless, a CBS implementation project is, like all other large IT investment projects, costly, time-consuming and complex. Due to that, only 25% of the CBS projects were successfully implemented and rest 50% experienced cost and schedule overrun and other failed (Adamson, 2003).

Studies have shown that changing banking systems is a big challenge to banks. Kudav&Bhasin (2013) have identified the major challenges of CBS implementation to be Lack of an appropriate

product selection methodology, the vendor's inability to deliver, the project group's limited capability, Lack of a well-thought-through model and Lack of support from top management.

According to Anisur (2016), the key challenges in core banking transformation evolve out of its key entities involved; the bank and bank management, vendors and the CBS itself.

As per the informal interview made with project participant and personal observation on the project, human resource related, system related and vendor related challenges of CBS implementation are prevalent at flex cube core banking transformation project of Wegagen bank SC. This is indicative of the fact that there are prevalent challenges while implementing core banking solution project at Wegagen bank, which is the main problem behind this project work.

There are also other researchers who conducted researches on related issues, but they concentrated on Core Banking System Implementation Framework: the Case of Ethiopia(Seife &Mesfin, 2016), Quantitative Usability Measurement for Commercial Off-the-Shelf Products: the case of Core-Banking System (Lemlem&Rahel, 2013), Assessing the Impact of Core Banking and Service Quality on Customer Satisfaction in Commercial Bank of Ethiopia (Endalkachew, 2014).

This is indicative of the fact that prior research works did not give an emphasis on CBS implementation challenges. Besides, most of the empirical evidences made available on CBS were outside Ethiopia implying that the studies were conducted out of contexts where the cultural, geographical, and economic conditions are different from Ethiopia.

Accordingly; there has not yet been made detail research works on project implementation challenges of CBS in the context of our country. Therefore, the researcher has tried to fill focused area gap and contextual gap and pinpointed major challenges of CBS implementation in the context of our country.

1.4. OBJECTIVES OF THE STUDY

1.4.1 GENERAL OBJECTIVE

The main objective of this study was to identify the challenges encountered while implementing core banking solutions/CBS/ at Wegagen bank SC.

1.4.2 SPECIFIC OBJECTIVES

- To investigate the practice of project implementation process group.
- To identify if there is a knowledge gap in project implementation among the project practitioners.
- To determine the challenges of CBS project implementation.
- To suggest possible solutions for future implementation of such projects.

1.5BASIC RESEARCH QUESTIONS

Specifically, the study attempted to answer the following questions:

1. How well is project implementation process being practiced at CBS project of Wegagen Bank S.C?
2. How well acquainted are project team members of the CBS project of Wegagen Bank S.C about project implementation process?
3. What types of challenges are prevalent at CBS Implementation project of Wegagen Bank S.C?

1.6SIGNIFICANCE OF THE STUDY

The major significances of the study are the following:

- It can help to create awareness among financial institutions about the challenges faced during implementation of CBS.
- On the basis of the research findings the study is expected to provide some possible recommendation to solve implementation challenges of CBS.
- It can be a helpful material to other researchers who are inclined to study on this area as a base line information source.

1.7SCOPE OF THE STUDY

Wegagen Bank S.C has a network of 211 branches of which 83 are in Addis Ababa and the remaining 128 are located in regional cities and towns of the country. However, to make the study manageable, the study was delimited to focus on the project participants who were twenty five in number.

1.8ORGANIZATION OF THE STUDY

The study has five chapters with their respective detailed description .The first chapter contains background of the study, statement of the problem, basic research questions, objectives of the study, significance of the study, and delimitation/scope of the study. The second chapter provides the discussion of the review of the related literature and provides the theory and empirical evidences on the topic from previous studies. The third chapter provides the description of the type and design of the research; the subjects/participant of the study; the sources of data; the data collection tools/instruments employed; the procedures of data collection; and the methods of data analysis used. The fourth chapter summarizes the results/findings of the study, and interprets and discusses the findings. The final chapter contains summary of findings, conclusions, limitations of the study as well as hint for future research and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1PROJECT EXECUTION/IMPLEMENTATION

The Executing Process Group consists of those processes performed to complete the work defined in the project management plan to satisfy the project specifications. This Process Group involves coordinating people and resources, managing stakeholder expectations, as well as integrating and performing the activities of the project in accordance with the project management plan (PMBOK, 2013).

Executing processes include coordinating people and other resources to carry out the various plans and produce the products, services, or results of the project or phase. Examples of executing processes include acquiring and developing the project team, performing quality assurance, distributing information, managing stakeholder expectations, and conducting procurements (Schwalbe, 2011).

During project execution, results may require planning updates and rebaselining. This can include changes to expected activity durations, changes in resource productivity and availability, and unanticipated risks. Such variances may affect the project management plan or project documents and may require detailed analysis and development of appropriate project management responses. The results of the analysis can trigger change requests that, if approved, may modify the project management plan or other project documents and possibly require establishing new baselines. A large portion of the project's budget will be expended in performing the Executing Process Group processes (PMBOK, 2013).

During the implementation of the activities and tasks a series of management processes are undertaken to monitor and control: time, resources, cost, risks, quality, issues, changes, deliverables acceptance procedure, communication etc.

Executing the project involves taking the actions necessary to ensure that activities in the project plan are completed. It also includes work required to introduce any new hardware, software, and procedures into normal operations. The products of the project are produced during project execution, and it usually takes the most resources to accomplish this process (Schwalbe, 2011).

The following table lists the knowledge areas, executing processes, and outputs of project execution (Schwalbe, 2011).

Table 2.1 Executing process & outputs

Knowledge Area	***Output***
Project integration management	Deliverables, work performance information, change requests, project management plan updates, project document updates
Project quality management	Organizational process asset updates, change requests, project management plan updates, project document updates
Project human resource management	Project staff assignments, resource calendars, project management plan updates, team performance assessment, enterprise environmental factor updates, organizational process assets updates, project management plan updates
Project communication management	Organizational process assets updates, organizational process assets updates, change requests, project management plan updates, project document updates
Project procurement management	Select sellers, procurement contract award, resource calendars, change requests, project management plan updates, project documents updates

Source: Schwalbe, 2011.

2.2 THE CONTEXT OF INFORMATION TECHNOLOGY PROJECTS

Project management is the process of applying knowledge, skills, tools and techniques to activities within a project. Many of the techniques a project manager uses, as well as the knowledge and experience required to do the work, are similar to those used in managing organizational units (Schwalbe, 2011).

IT project management is a sub-discipline of project management in which information technology projects are planned, monitored and controlled. Like any project, an IT project is a temporary endeavor (with a start date and an end date) to bring about a specific finalized goal.

Unlike projects in many other industries, projects labeled as information technology projects can be very diverse. Some involve a small number of people installing off-the-shelf hardware and

associated software. Others involve hundreds of people analyzing several organizations business processes and then developing new software in a collaborative effort with users to meet business needs (Schwalbe, 2011).

Because of the diversity of information technology projects and the newness of the field, it is important to develop and follow best practices in managing these varied projects.

A Project Manager is responsible for managing the resources of large projects. For large IT Departments, this usually means managing large Software Development projects, Networking projects, IT installations or conversions, or any other function where business and technology needs have to be managed and resources have to be coordinated.

IT projects are receiving great attention in the computer industry because they touch almost everyone's lives. Whether IT projects are managed for business, financial, academia, government, military, or nonprofit organizations, accurate computerized information is needed to make good decisions in less time. However, this computerized information is only as good as the design and management of the IT project systems (Gentile, 2012).

Organizations and project teams have always felt that IT projects are different and therefore must have a unique set of project management tools and techniques to accomplish them. However, project management techniques and tools can apply to any project in any industry, regardless of whether it involves software, hardware, construction, engineering, or services. It is not the tools that are different, but rather the projects. What make IT projects different are their unique risks, the rapid development requirements to meet rush-to-market demands, the short life of technology, and multiple dependencies with other projects. The tools are the same, but they must be applied differently depending upon the project type and complexity (Gentile, 2012).

2.3 INFORMATION TECHNOLOGY AND BANKS

IT refers to processing, storing and transferring information. It uses computers, electronic devices such as telephones, mobile phones, fax machines etc. and telecommunication network. IT has defied all geographical boundaries. Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Internet has significantly influenced delivery channels of the banks. Internet has

emerged as an important medium for delivery of banking products and services (Tiwari & Kumar, 2012).

Today, we cannot think about the success of a banking system without information and communication technology. It has enlarged the role of banking sector in the economy. The financial transactions and payment can now be processed quickly and easily. The banks with the latest technology and techniques are more successful in the competitive financial market. They have been able to generate more and more business resulting in their greater profitability (Rupinder, 2012).

IT is increasingly moving from a back office function to a prime assistant in increasing the value of a bank over time. IT does so by maximizing banks of pro-active measures such as strengthening and standardizing banks infrastructure in respect of security, communication and networking, achieving inter branch connectivity, moving towards Real Time gross settlement (RTGS) environment the forecasting of liquidity by building real time databases, use of Magnetic Ink Character Recognition and Imaging technology for cheque clearing to name a few (Tiwari & Kumar, 2012).

2.4 CORE BANKING SOLUTIONS

Core banking solution is the process of providing a centralized on line system where all the data related to transactions, customer data are stored and are available to all networked branches for access. It allows its customers to conduct their business irrespective of the bank's branch. Thus, it removes the impediments of geo-specific transactions (Hemant, 2017).

Core banking solutions (CBS) act as the epicenter for all systems running in a bank, and it forms the technological platform of the bank. CBS is a set of robust software components designed to meet the challenges of today's banking market. IT empower banks to transform their business, leveraging agile new generation technologies. With the advancement of technology, core systems tend to cover more and more functionalities, providing the bank with an integrated solution for most of its operations in varied business lines. A core banking system resides in the heart of a bank's data center and provides a central operational database of customers' assets and liabilities. It enables a 360-degree view of a customer's relationship with the bank (Hemant, 2017).

According to Kreca&Barac (2015) Core banking (Centralized Online Real-time Electronic Banking) refers to the services of networked branches that allow to their clients to access their funds and to perform simple transactions from any place. In a broader sense, it refers to the exchange, upgrade and outsourcing core banking system integrated into the package of software applications for processing and posting the transactions, as well as managing the accounting processes.

Devaraj, Fan and Kohli. (2002) have stated that the concept of CBS has helped banks become one stop shops. For all the financial needs for retail and corporate customers by offering multiple service under one roof. Customer can now access their accounts from any branch of the bank irrespective of the branch the account was opened. CBS increases employee efficiency and reduces human error and fraud.

Korn (2009) has explained Core banking as the correlation between the performance of banks and the fact whether they have successfully implemented new core banking technology-packaged core banking software.

The first core banking system emerged in 1970's and provided the basic functionality for the core banking transactions. Later, in 1980's, solutions were developed based on packages, with the product-orientation, but without a capacity to process a large amount of data. The first systems that were client-oriented were significantly opened, flexible and scalable with the convergence of digital channels and they appeared in 1990's. The last decades CBS solutions tend to increase the mobility in terms of providing services to the clients, but with an aim to achieve real time processing and to allow multichannel integration (Kreca&Barac, 2015)

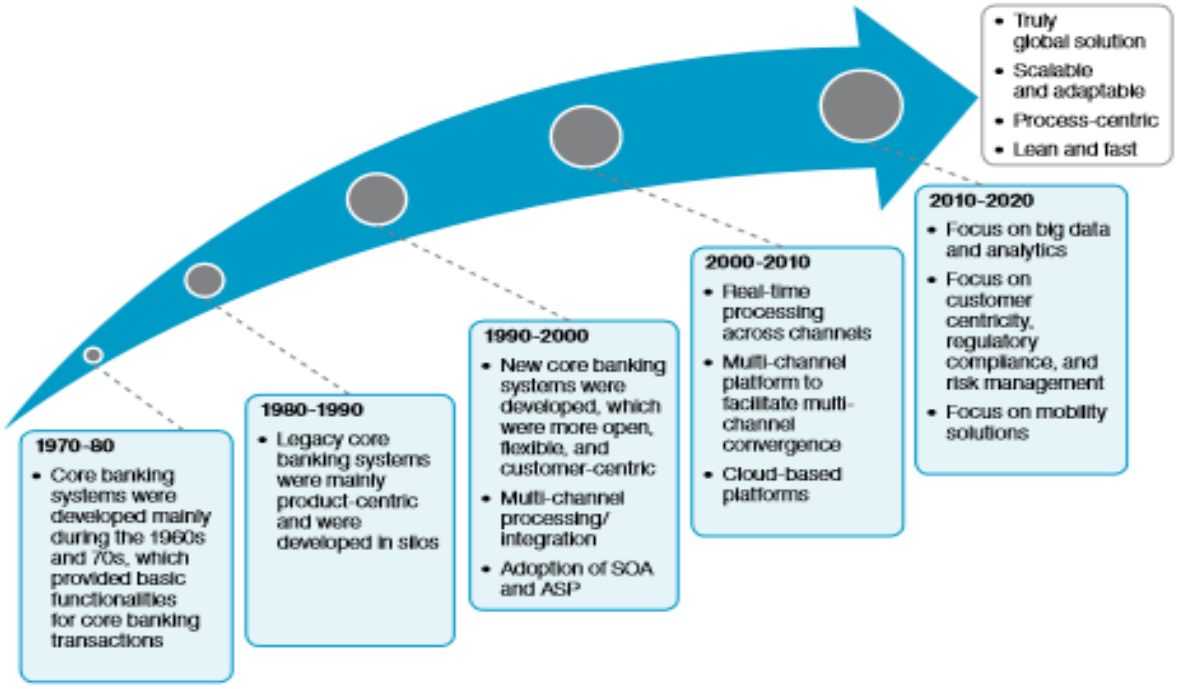
2.4.1EVOLUTION OF CBS

The first core banking system appeared in 1970s and was mainly developed in-house and ran on main frames. Package based solutions started to appear in the 1980s but were limited in their ability to handle large volumes. In the 1990s new players entered into this space with package offerings that were more open, flexible and customer-centric.

The core banking solutions developed in the last decade have focused on convergence of digital channels along with increase in scalability and flexibility. These solutions focus on enhancing the mobility for the customer and internal bank staff and on achieving real time channel processing and multi-channel integration capabilities.

The core banking solutions of the future will be truly global so a bank can easily deploy a system across multiple geographies. New core banking solutions will be more scalable, adaptable and process centric than before and will be lean and fast to be economical to deploy over the cloud and enhance the banks' agility in responding to competition and changing business requirements (Rishi, 2014).

Figure. 2.1 Evolution of CBS



Source: Capgemini Analysis, 2013 "CBS Survey"

2.4.2BENEFITS OF CORE BANKING TRANSFORMATION

Core banking solutions offer the following advantages to the bank (nelito, 2016):

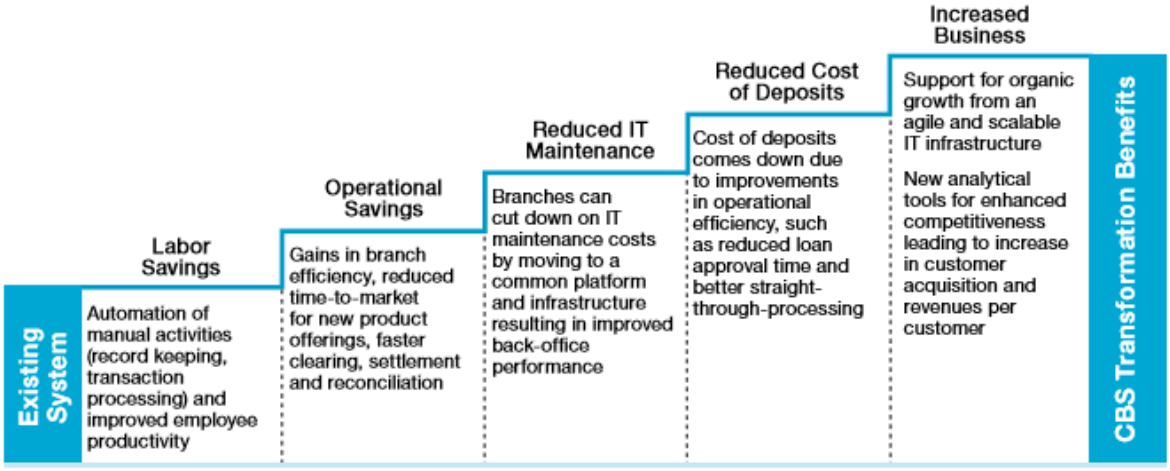
- ✓ Improved operations which address customer demands and industry consolidation
- ✓ Errors due to multiple entries eradicated
- ✓ Easy ability to introduce new financial products and manage changes in existing products

- ✓ Seamless merging of back office data and self-service operations.

Customers find core banking advantageous since:

- ✓ The entire range of banking products including savings, deposit accounts etc are available from any location
- ✓ Accessibility through multiple channels, including mobile banking and web
- ✓ Accurate, timely and actionable information about customer relations
- ✓ Single view between bank and customers
- ✓ Redefining the concept of 'anywhere, anytime' banking

Figure. 2.2 Benefits of CBS



Source:Capgemini Analysis, 2013

As shown in the chart, core banking transformation produces cost savings through labour savings, operational savings, reduced IT maintenance and reduction in the cost of deposits. Business gains come from higher revenues through increased sales per customer and growth in customer acquisition.

Labour savings result due to reduced manpower requirements and improved employee productivity. Operational savings come from front-to-back office integration, which enables straight-through processing and consolidations of customer information.

Core banking transformation improves competitiveness due to faster rollout of products, product innovation and product differentiation. This leads to intangible benefits such as increase in market share and enhanced competitiveness due to reduced costs of deposits. (Rishi, 2014)

2.4.3CORE BANKING SOLUTION IMPLEMENTATION STRATEGIES

The implementation strategies followed by banks mainly depends on its size of operations and most importantly, the vendor's comfort level and experience with the adopted strategy. Analysts broadly classify implementation into (Johny, 2016):

- ***Big Bang*** - The entire bank moves onto the new platform at same time.

• ***Regional Migration*** - In this approach the bank works on geographical patterns – moving different regions one by one onto the new platform.

• ***Line of Business*** - In this approach the bank moves different lines of business slowly on the new platform.

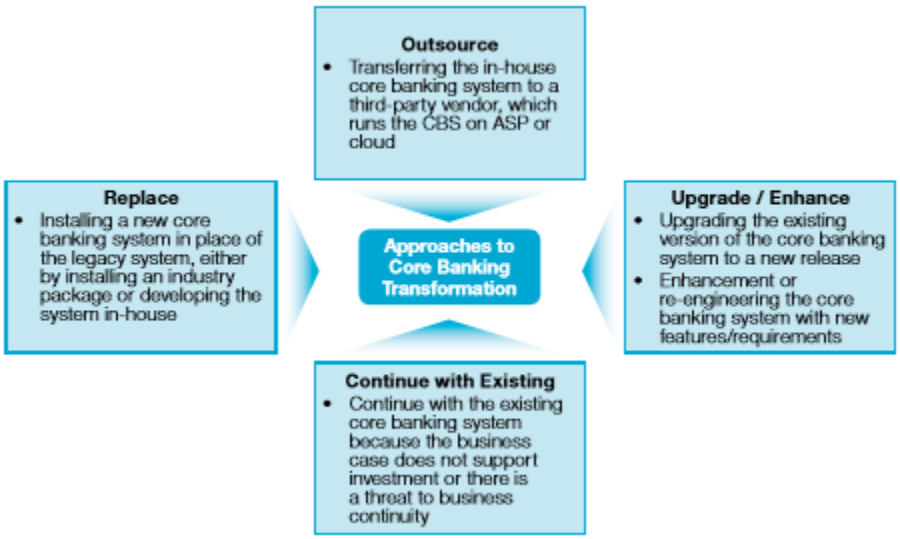
• ***Parallel runs*** - Here, the banks runs its old system parallel alongside the new one.

2.4.4 APPROACHES TO CORE BANKING TRANSFORMATION

If the business case is not strong, then it would make both financial and strategic sense for a bank to not go ahead with the transformation and continue with the existing system. If the business case is strong, then an appropriate transformation approach is warranted: complete replacement, outsourcing or upgrade.

Replacement of the core banking system can be done either in-house or by installing a core banking package solution from a vendor. Upgrading of the core system is done either to a new release of the existing package or enhancing the existing functionality of the system. Outsourcing is done by transferring the core systems to a third party vendor and running the system over a hosted platform or over cloud (Rishi, 2014).

Figure. 2.3 CBS transformation approaches



Source:Capgemini analysis, 2013.

2.5 CRITICAL SUCCESS FACTORS FOR CBS IMPLEMENTATION

Seife and Mesfin (2016) have identified the following points as a success factors while implementing core banking solution:

Product Selection: Clearly establishing goal, objectives, outcomes and benefits expected from the project before selecting the core banking software and its vendor.

Product Evaluation: Research the success of the short listed vendors and their products. Requiring short listed vendors to demonstrate proof of concept before the final selection is made.

Top Management Support: Closely monitoring the progress of the project by the project steering committee and by top management.

Project Management: Proper involvement of IT and Project steering committee during implementation. Organizing experienced and knowledgeable project team for implementation.

Vendor Commitment: Support and commitment of the vendor during the implementation of a core banking system.

2.6 FACTORS AFFECTING CBS PROJECTS

Rishi Y. (2014) identified the following internal and external factors affecting CBS Projects:

2.6.1 INTERNAL FACTORS

Banks must evaluate their own ability to take on a large transformation projects in the following key areas:

- *Business Goals:* Banks must align their IT strategy to their business goals such as operational improvement, ROI, revenue growth and cost reduction. The business goals set must be for a future time frame of three to five years since it takes a long gestation period for core banking transformation to be completed and deliver results. The transformation must deliver improved business functionality and optimize business processes.
- *Stakeholder support:* Strong leadership support and change management focus are critical to core banking transformation success. There should be effective communication and active management of stakeholders with well-defined roles and responsibilities.
- *Package selection:* The core banking package should have a flexible architecture and must be scalable enough to meet the future business requirements of the bank. The package selection process must also take into account the degree of maintenance support and customization required over a period of time.
- *Vendor Selection:* Transformation of core banking systems takes from three to five years and therefore the long-term viability of vendors is of critical importance. Banks must assess vendor's tools, methodologies, business process models and past experience in implementing similar core banking transformation projects. Banks should also consider a vendor's capability to continuously enrich core banking solutions to meet emerging banking requirements.

2.6.2 EXTERNAL FACTORS

Banks should look at the following key external factors when working for core banking transformation projects:

- *Contract Definition*: The contract should contain clauses on support and maintenance post –transformation, user training and transfer of training, service level agreements, and quality assurance programmes. Risk mitigation strategies for time and cost overruns should be included in the contact.

- *Managing Expectations*: The business case should contain agreed-upon measures on improved efficiency ratios, as well as agreed upon IT milestones over the transformation timelines. There should be clear expectations of the benefits from transformation over the short and long term.
- *Communication*: Roles and responsibilities need to be clearly identified for all stakeholders who are involved with transformation projects-from the bank and from the vendor, so as to facilitate communication among all stakeholders.
- *Deployment strategy*: A modular or phased approach to deployment significantly reduces the risk of core banking transformation. For multi-site implementation, a cluster-based approach can mitigate risk over a single large rollout.
- *Change management*: The bank should put a strong governance mechanism in place and any scope changes to requirements must be properly managed to prevent slippages.

2.7CORE BANKING SOLUTION IMPLEMENTATION CHALLENGES

Studies of failed Core Banking Projects points out the following as the major challenges for any CBS implementation project (Johny, 2016):

Prolonged Project: The implementation project on an average takes place anywhere between 6 months to a year depending, on the degree of customization required. If the vendor has in place good implementation processes, the implementation time can be reduced. Generally a few branches are chosen and networked under the new system, and once all the issues are settled, it will be slowly extended to other branches of the bank. This process is called ‘going live’. This is reported to have taken up to nine years.

Business Process Re-engineering: BPR basically implies that the current processes used to perform a function are inefficient. With the implementation of CBS the processes have to be aligned with the ‘best of the breed processes’ that comes along with the CBS. Hence BPR means review of current processes. It might be possible that a process can be scrapped altogether, combined with another process and make it a single process, replacing an entire process with a new process. All of this necessitates that the bank revisits each and every process, identify the bottlenecks and prepare for a change. Invariably implementation of CBS is accompanied by BPR and the banks must be ready for this change.

Data Migration: Porting of legacy data to the new system. Since data is very crucial and secretive to a bank it is very important that the data is migrated from the current system successfully into the new system. Care has to be taken in porting. Before the implementation the bank might share some of its data with the implementation partner for testing purposes.

Top management Commitment: It is another aspect crucial for a successful implementation. The top management should be very committed and positive to the project. It should field its best employees from IT and business into the project and they should stay till the project is completed. Another important aspect is the management should also allay any employee fears about retrenchment. All the concerned employees must be informed and well trained to accept the new system.

Ownership: Most of the bankers felt that core banking implementation is the project of the IT department. Technology department of most banks were not fully developed, this forced the management to depend on the external consultants for CBS implementation. There was always conflict between the bank IT team and the consultants.

Delay in Finalizing the User Requirements: There was a lot of delay from the bank side in finalizing the user requirements; this was mostly because of the inability of the banks to distinguish between "wish list" and "must-haves."

Resistance to Change: The banking staff's preference for existing processes and their reluctance to adopt newer, out-of-the-box functionality processes from new solutions was a common problem in all the banks. Resistance to change was mainly because the branch users were mostly not involved in the system development stage. The banks also did not have proper change management procedures in place.

Expectation Management: Stake holders at different levels have different expectations from the implementation of CBS.

Ambiguous Roles and Responsibilities: Change in the project management team at the bank level, during the project lifecycle; this often results in inadequate knowledge transfer, which in turn results in requirements and key issues not being addressed properly.

Coordination and Communication: Many core banking transformation programs face challenges midway through the project due to lack of coordination and lapses in communication between the vendor and the bank project management teams.

Documentation: No proper documentation on the implementation process and the people involved. Lack of historical information on geographical customizations made on the legacy core systems, resulting in the existence of multiple versions of the legacy system.

According to Rishi (2014), during core banking transformation project, the risks and potential losses are very high due to date migration, integration of multiple process and the consolidation of multiple systems.

Rishi (2014) identified the following implementation challenges associated with core banking transformation:

- *Time and cost management*: Core banking transformation projects usually have a long project timeframes and therefore there are inherent risks of slippages and cost overruns. Project governance structure and risk management should therefore be an inherent part of project management.
- *Measuring payback period*: core banking transformation projects usually have long term payback periods and therefore sometimes do not justify large upfront costs. It is therefore important to measure a core banking solution's return on investment (ROI) by measuring ratios, business process improvement and strategic gains.
- *Stakeholder management*: core banking transformation leads to significant changes to business process and IT systems and therefore it is a pre-requisite to have buy-in from all internal stakeholders. Furthermore, since core banking transformation projects usually stretch into years, long term commitment from all stakeholders becomes essential to success.
- *Resource requirement*: Core banking transformation projects require a lot of resources and significant investments over a period of time. It is therefore important to adopt an appropriate an appropriate transformation strategy that takes into account the available financial and human resources.

- *Change Management*: Core banking transformation projects need to deal with significant change management issues, such as organizational resistance to change, internal communication to all affected departments and retraining of IT and banking staff on the new system.

Most core banking system implementations face challenges midway through the project. This can happen due to lack of coordination and communication between the vendors and the bank's project management team. Inadequate information gathered during the requirement phase, inability of the banks to identify the important requirements, and scope changes are additional challenges faced during a core banking system implementation (Kudav&Bhasin, 2013).

Problems which occur during the different phases of implementation include integrating with an ageing existing system in the development phase, seamless and smooth transition with zero error in the implementation phase, user training and coping with resistance to change in process and work culture in the development and testing phases, localization and customization of a solution to suit the unique requirements of a bank, matching expectations and deliverables and incremental changes leading to cost and schedule overruns (Aggarwal, 2006).

Venkatesh& Ghosh (2013) identified the top ten challenges banks face when implementing core banking transformation as identifying tangible & measurable business benefits, scope creep & change in requirement, ignoring business process re-engineering, underestimating the role of a system integrator, governance, communication and stakeholder management, implementation methodology and winning formula, customization, integration with best of breed solutions and data migration.

Laudon (2012) identified the following challenges while implementing CBS; Functionality (Capability of software to meet requirements and expectations), Cost and Financial Terms, Ability of the business to adjust to the new system, Availability of skilled personnel, Vendor capabilities and credentials, System Flexibility, Data migration and User friendliness of User Interface.

Study Conducted by Kudav&Bhasin(2013) point out the main reasons for CBS project failures as:

- Inappropriate product selection
- Inability of vendors to deliver
- Limited capability of project group
- Limited capability of integrators
- Lack of well thought out plan
- Lack of Top Management support

2.8EMPIRICAL REVIEWS

A study conducted in Kenya by Ngui(2015)indicate that to successfully implement a core banking system, the implementation staff needs to have the necessary support in terms of resource and skill required, have a clear plan based on the project scope, 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.

Another research in Kenya conducted by Albert(2015) reveal that strategic factors affecting the implementation of a new core banking system in Kenyan banks 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 commitment and support, vendor knowledge transfer, end user involvement, careful package selection, data analysis and conversion, dedicated resources, steering committee, user training, education on new business processes, business process re-engineering, architecture choices, change management, vendor partnership, vendor tools, use of consultants and supervision by the board.

There are also other researchers who conducted researches on related issues in the context of Ethiopia, but they concentrated on Core Banking System Implementation Framework: the Case of Ethiopia(Seife &Mesfin, 2016), Quantitative Usability Measurement for Commercial Off-the-Shelf Products: the case of Core-Banking System (Lemlem&Rahel, 2013), Assessing the Impact of Core Banking and Service Quality on Customer Satisfaction in Commercial Bank of Ethiopia (Endalkachew, 2014), The Development of Core Banking System in Ethiopia: the Case Study on Ethiopian Commercial Banks(Negalign and Lisanwork, 2016).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The aim of this chapter is to explain the research methodology and design that was used to carry out this research. The chapter starts with describing the research design and approach for the research. This is followed by the discussion on the data collection and analysis techniques.

3.2 RESEARCH DESIGN & APPROACH

The researcher adopted a descriptive research design as the study is intended to assess and explain the major challenges prevailing while implementing CBS and for the reason that descriptive analysis is simple and clear to draw inferences. As far as the approach for the paper is concerned, the research implemented a quantitative research approach wherein a survey questionnaire was used to collect data from the project participants.

Creswell (2009) noted that quantitative approach employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield numeric data that can be analyzed using statistical procedures. It is a means for testing objective theories through examining the relationship among variables. It is advantageous as it, procedurally, follow scientific approach, tests reliability and validity of the instrument. It minimizes bias from the researcher's influence and employs large sample size. Hence, the results can be believed on and the results can be generalized to larger population. However, it is not capable to address issues which cannot be quantified. So that, it may has limited scope.

Various methodologies that may fall in the quantitative approach are illustrated in the table below:

Table 3.1: Various Quantitative Approaches:

Research methodologies	***Key Features***
Laboratory Experiment	Identification of the precise relationship between chosen variables in a designed laboratory situation. Uses quantitative analysis and allows intensive study of a small number of variables
Field Experiment	Extension of laboratory experiments into real life situations. However it is often difficult to find organisations prepared to be experimented upon
Archival Analysis	Based upon the quantitative and qualitative analysis of archival records to describe the incidence or prevalence of a phenomenon, or to be predictive about certain outcomes
Forecasting Future Research	Providing insights into likely future events or impacts, these studies use techniques that include regression analysis, time series analysis, or the Delphi method and change analysis. They attempt to deal with the impact of change, but must deal with complexity and changing relationships between variable understudy
Simulation	Used to study situations that are otherwise difficult to analyse by simulating the behaviour of the system by the generation or introduction of random variables
Surveys	Questionnaires, interviews and observations are used to obtain data on the practices, situations or views of a sample of a particular Population. Surveys allows large number of variables to be analysed quantitatively, but do not provide insight into underlying causes

Source: Sekaran, 2003

3.2 SOURCES OF DATA COLLECTION

The study incorporated both primary and secondary data sources for data collection purpose.

The sources of the primary data for this study were staffs of Wegagen Bank who directly participated in the project and observations since the researcher is an employee of the selected company and has participated in the project temporarily for some days.

Besides, secondary data was collected through review of the CBS project plan of Wegagen Bank S.C and the Internet.

3.3 METHOD OF DATA COLLECTION

In order to meet the objectives of the paper the required data was obtained through structured questionnaires that were disseminated to the project team members in person.

As a secondary data source the CBS project plan of Wegagen Bank S.C and online information were explored to enhance and add-on the findings of the study.

3.3.1. Survey Questionnaire

Survey Questionnaire is used as the main source of primary data in this study. Questionnaire was developed based on the objectives of the paper. The questionnaire explained the purpose of the study and close-ended questions that are classified into four major parts of project implementation related, HR related, vendor related and system related issues were distributed to the project team members.

3.3.2. Document Review

The CBS project plan of Wegagen Bank S.C and the Internet were reviewed and assessed as additional sources of data and for understanding about the CBS project. The company's website was also assessed for the profile and history of the company.

3.4 RESEARCH POPULATION

3.4.1TARGET POPULATION

The flex cube core banking transformation project of Wegagen bank was conducted with twenty five team members. Thus, the general population of the research was all the twenty five team members of the project. Accordingly; a census survey was used to gather data from all of the twenty five team members.

3.5DATA ANALYSIS & PRESENTATION

The process of data analysis involves making sense out of text and image data. It involves preparing the data for analysis, conducting different analysis, moving deeper and deeper into understanding of data, representing the data and making interpretations from it (Creswell, 2009).

For the purpose of this particular study the data collected was analyzed using quantitative method. The collected data was analyzed primarily using descriptive statistics. The collected questionnaires were inserted into SPSS version 21 software in order to make a descriptive analysis of the data, which helped to examine the data quantitatively using frequency and percentage.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 INTRODUCTION

This chapter presents the result of the analysis of the data obtained from the questionnaire collected. A descriptive statistics is employed to present the results of the questionnaire. To analyze the collected data against the objectives set for this research, Statistical procedures were carried out using SPSS Statistics version 21.00. In order to pinpoint the challenges encountered while implementing CBS project at Wegagen bank, the researcher has collected data through close ended questionnaire.

4.2 DESCRIPTIVE STATISTICS AND RESPONDENTS PROFILE

The questionnaire were developed using five scales ranges; where 1 represents strongly disagree, 2 Disagree, 3 Neutral , 4 Agree and 5 Strongly Agree. Among the 25 (100%) questionnaires that were distributed to CBS project implementing team members 24 (96%) questionnaires were filled and collected. The collected 24 questionnaires were inserted into SPSS version 21and a descriptive analysis of the data was made wherein the result is presented qualitatively in terms of frequency and percentage.

4.3 DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Table4.1 Demographic Characteristics

No.	Items	Variables	Respondents	
			Frequency	Percentages
1	Age	< 25 years	2	8.3
		26-30 years	9	37.5
		31-35 years	9	37.5
		36-40 years	2	8.3
		>40 years	2	8.3
		Total	***24***	***100***
2	Gender	Male	20	83
		Female	4	17
		Total	***24***	***100***
3	Qualification	Diploma	2	8
		Degree	12	50
		Masters	10	42
		Total	***24***	***100***
4	Experience	< 2 years	1	4
		3-6	9	38
		7-10	5	21
		11-14	7	29
		>14	2	8
		Total	***24***	***100***

Source: Own survey, 2018

As can be seen from the table above 75% of the total respondents fall between the ages of 26-30 and 31-35 years old and the remaining percentage is covered between the ages of below 25, 36-40 and above 40 years old. With the same inference 83% of the respondents are males while the remaining 17% are females. The result indicates that the project team is comprised of young and enthusiastic staffs which can help accomplish the project successfully.

Concerning the experience of the respondents 38% of them do have a work experience between 3-6 years while 29% of them do have an experience of between 11-14 years. The rest 33% of the respondents have been in the banking industry below 2 years, between 7-10 years and above 14years.From the table it can be understood that the project team is built by staffs of different disciplines having good experience in the banking sector.

With regard to the qualification of the respondents, 8% of them hold a diploma, 50% of them first degree and the remaining 42% do hold a masters degree. Thus, the distribution shows that the project was carried out by well qualified and experienced project team members.

Table4.2 Current position of respondents

Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Core team	5	20.8	20.8	20.8
	Credit Analyst	4	16.7	16.7	37.5
	CRM	8	33.3	33.3	70.8
	Accountant	1	4.2	4.2	75.0
	Credit information officer	2	8.3	8.3	83.3
	Trade service	1	4.2	4.2	87.5
	E-banking support	1	4.2	4.2	91.7
	Claim & settlement officer	1	4.2	4.2	95.8
	Director	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

Source: Own survey, 2018

As can be seen from the table above, the project is carried out by staffs of different disciplines having their own experience and know how on different departments within Wegagen bank.
The mix of the project team members is indicative of the fact that they can handle the implementation of the project effectively.

4.4 PROJECT IMPLEMENTATION RELATED

Table 4.3: project team member's response on project related issues

No.	Items	Variables	Respondents	
			Frequency	%
1	Direction and management of project implementation was done according to the project plan.	Disagree/Strongly disagree Neutral Agree/strongly agree	14 5 5	59 20 21
2	Quality assurance works were done at the time of project implementation	Disagree/Strongly disagree Neutral Agree/strongly agree	15 4 5	63 17 20
3	Project communication management has been well carried out	Disagree/Strongly disagree Agree/strongly agree	11 13	45 55
4	Procurements were properly conducted at the appropriate time	Disagree/Strongly disagree Neutral Agree/strongly agree	3 15 6	12 63 25
5	Project participants do have the necessary knowledge of project implementation	Disagree/Strongly disagree Neutral Agree/strongly agree	13 2 9	54 8 38

Source: Own survey, 2018

From the table shown above concerning the practice of whether the project manager gives direction on how to implement the project according to the plan, 12% of the respondents strongly disagree, 46% disagree, 21% of them were neutral and the rest 21% agreed on the issue. This is indicative of the fact that there exists in some extent a problem of managing the project according to the plan.

As per the data collected from the respondents cumulatively 63% of them do not agree that quality assurance work was done at the time of project implementation while only a cumulative of 21% of the respondents favored the issue which implies that the project was not implemented with care.

The table is indicative of the fact that project communication management was well carried out as more than 50%of the respondents agreed on the issue. However; 46% of the respondents were against the issue. Thus, on average it is assumed that information was distributed properly while implementing the project.

As per the data gathered through questionnaire most of the respondents (63%) were uncertain whether procurements were properly conducted wherein 63% of them responded neutral.

Concerning whether the project participants have the required knowledge of project implementation 50% of the respondent disagreed, 4% of them strongly disagreed, 8% were neutral, 33% agreed and only 4% strongly agreed which is indicative of the fact that there is a knowledge gap about project implementation among the project team members.

4.5 HR RELATED CHALLENGES

Table 4.4: project team member's response on HR related issues

No.	Items	Variables	Respondents	
			Frequency	%
1	There is adequate human resource for implementation of CBS project.	Disagree/Strongly disagree Neutral Agree/strongly agree	17 1 6	71 4 25
2	The project participants have the required skills and experiences.	Disagree/Strongly disagree Neutral Agree/strongly agree	6 3 15	25 12 63
3	There is a mechanism for rewarding project team members based on their performance	Disagree/Strongly disagree Neutral Agree/strongly agree	17 5 2	71 21 8

Source: Own survey, 2018

As per the response obtained cumulatively 71% of the respondents do not agree on the statement that there was adequate human resource while cumulatively 25% of them favored the statement and the remaining 4% were neutral. Thus, it is assumed that adequate human resource was not deployed for implementing the project.

With regard to participants having the required skills and experiences most of the respondents (cumulatively 62%) favored the statement while cumulatively 25% of the respondents were against the statement and the rest 13% were neutral. Thus, most of the project participants were well skilled and experienced.

The response obtained for the statement if there is a mechanism for rewarding good performance indicate that 46% of the respondents strongly disagree, 25% disagree 21% are neutral and the

remaining are in favor of the statement. Thus, it can be concluded that there is no motivation mechanism for rewarding good performance.

4.6 VENDOR RELATED CHALLENGES

Table 4.5: project team member's response on vendor related issues

No.	Items	Variables	Respondents	
			Frequency	%
1	The vendor is capable and does have the required credentials for implementing the CBS project	Disagree/Strongly disagree Neutral Agree/strongly agree	3 9 12	12 38 50
2	The vendor is willing to transfer knowledge at the time of implementing the project	Disagree/Strongly disagree Neutral Agree/strongly agree	14 5 5	59 21 20
3	There is coordination and proper communication between the vendor and the bank project management teams	Disagree/Strongly disagree Neutral Agree/strongly agree	17 4 3	71 17 12
4	The vendor is available nearby at the time of implementation of the project	Disagree/Strongly disagree Neutral Agree/strongly agree	13 5 6	54 21 25

Source: Own survey, 2018

As can be seen from the table 50%of the respondents support the statement that the vendor is capable while 38% were neutral and only 12% disagreed with the statement. Thus, it can be concluded that the vendor selection was made correctly.

58% of the respondents were in support of the statement that the vendor is not willing to transfer knowledge while21%of them were neutral and the rest 21% supported that the applicant is willing to transfer knowledge. Thus, it can be inferred that the vendor was not as such committed toward the project.

From the response obtained it can be deduced that there is a challenge with regard to coordination and communication between the vendor and the project team wherein 71% of the respondents supported this fact. Only12% of them supported the statement that there is proper communication between the two parties mentioned.

The physical location of the vendor can be considered a challenge while implementing CBS project for out of the total respondents 54% were against the statement that the vendor was nearby and 21% were neutral and only 24%of the respondents agreed with the statement.

4.7 SYSTEM RELATED CHALLENGES

Table 4.6: project team member's response on system related issues

No.	Items	Variables	Respondents	
			Frequency	%
1	The system has capable & functional software to meet requirement & expectations	Disagree/Strongly disagree Neutral Agree/strongly agree	3 4 17	12 17 71
2	The system is flexible enough to implement the project	Disagree/Strongly disagree Neutral Agree/strongly agree	1 7 16	4 29 67
3	The user interface is friendly and can be used easily	Disagree/Strongly disagree Neutral Agree/strongly agree	7 1 16	29 4 67
4	Data migration was made properly and with care	Disagree/Strongly disagree Neutral Agree/strongly agree	15 5 4	63 21 16
5	Proper and adequate end user training conducted for implementing the project	Disagree/Strongly disagree Neutral Agree/strongly agree	17 3 4	71 12 17

The table shown above indicates that most of the respondents (71%) agreed that the system is capable and functional to meet expectation only 13%of the participants disagreed with the statement and the remaining 17%were neutral which indicates that the system is good in terms of performing the required job.

The table also indicates that there was no a challenge with regard to system flexibility as 67% of the respondents agreed with the statement and only 4% disagreed with the issue.

Most of the respondents (Cumulatively 67%) agreed the fact that the user interface of the system is friendly and can be accessed easily whereas 29% of them were against the issue and only 4% were neutral. Thus, since the user interface is friendly it can be recognized that the project team members can easily adapt themselves with the system.

It can be considered that data migration is a big challenge while implementing CBS project as most of the respondents (cumulatively 62%) are in favor of this statement while 21% are neutral and the remaining 16% agreed that data migration is not as such a challenge.

As can be observed from the table above cumulatively 71% of the respondents were against the statement that proper and adequate end user training was provided whereas 12% of them were neutral and the rest 17% agreed. Thus, it can be inferred that since end user training is not made properly the project implementation can face a challenge to be completed successfully

Table 4.7 Statistics for major factors

Sr. No.	Factors	Mean	Standard deviation
1	Project implementation practice	14.40	5.53
2	HR related	13.8	5.67
3	Vendor related	20.92	7.03
4	System related	18.80	6.19

Weighted average mean of the variables= (14.40+13.8+20.92+18.80)/4 = 16.98

Based on the above figures vendor related factor is the highest from the weighted average mean and HR related factor is the lowest of all. Thus, it can be deduced that HR related factors are the most challenging factors for CBS implementation project of Wegagen bank followed by project implementation practice.

CHAPTER FIVE

MAJOR FINDINGS, CONCLUSION AND RECOMMENDATION

This chapter presents the summary of finding; conclusions drawn and recommendation have been given based on the findings of the study to improve CBS implementation projects.

5.1 MAJOR FINDINGS OF THE STUDY

In this study the analysis done on general issues of the practice of project implementation of CBS project and challenges encountered while doing so indicate that project implementation process groups were not properly followed and the project implementation faced challenges with regard to human resource deployment, system related and vendor related issues.

- In order to achieve this objective the project executing process groups of directing & managing project execution, performing quality assurance, information distribution and proper handling of procurements were raised as issues for the project participants. The result indicate that although information distribution was well carried out while implementing the CBS project of Wegagen bank, direction and managing of the project execution as per the plan and quality assurance works were not done properly at the time of implementing the project. Besides, even though the project team members are well experienced and skilled in the banking industry, they don't have the necessary knowledge of project implementation.
- With regard to human resource deployment the project executing team members are well skilled and have long years of experience in the banking industry. However; the study conducted indicate that adequate human resource was not deployed for the project and there is no mechanism for rewarding good performance which entails a huge motivation deprivation among the project team members.
- The study revealed that the vendor is capable, experienced and does have the required credential for implementing the project. However; the vendor was not as such willing to transfer knowledge to the project team members and also there was a communication gap between the vendor and the bank project management team which has made the implementation work difficult. Besides, the physical location of the vendor was also raised as a difficulty while implementing the project.

- Concerning system related issues the project team members identified that the system is functional, flexible and user friendly but data migration was not properly handled and adequate end user training was not conducted which created a headache while implementing the project.

5.2 CONCLUSIONS

Based on the findings of the research, the following conclusions were drawn on the project implementation challenges of Wegagen bank S.C. The project did not properly followed project implementation process. To be specific the project implementation was not directed as per the plan, quality assurance works were not properly handled and the project team members do not have a knowledge about project implementation.

The project faced vendor related, HR related and system related challenges while implementing the CBS project as discussed below:

The project assigned skilled and very experienced staffs of different discipline. However; it missed the fact that adequate human resource deployment and a reward mechanism for motivating good performance is a necessary condition for successful project implementation.

The project can be considered successful in selecting the vendor for the vendor is capable, experienced and does have the necessary credentials for implementing the CBS project. However; the challenges faced here are that the vendor was not willing to transfer knowledge and the physical location of the vendor entails a difficulty for successfully accomplishing the project.

Finally from the study it can be concluded that the system is functional, flexible and the user interface is friendly enough to successfully accomplish the project implementation but data migration was not handled properly and adequate end user training were not made.

5.3 RECOMMENDATIONS

The research conducted on project implementation challenges of the CBS project of Wegagen bank S.C. reveals that as in the case of many projects this project is not also free of challenges. To overcome the challenges encountered and improve the successful implementation of CBS projects the paper recommends the following points to be given due considerations:

- Before commencing implementing CBS project, the bank should let the project team members to be accustomed to project execution process groups of direction and management of the project as per the project plan, quality assurance works, information distribution works, and procurement handling and the like. The bank's project team members should also know how to handle each of the implementation process groups and effective training must be provided about project implementation.
- It is a convincing issue that adequacy of resource is a necessary condition for successful implementation of any project. Accordingly; the HR department of the bank should deploy adequate human resource in order to accomplish the implementation successfully. Besides, it is assumed that a motivated employee can accomplish tasks far well than unmotivated employee. Thus, the bank must set a mechanism for rewarding a good work like providing bonus, recognition and appreciation letters and any other motivating method must be employed.
- While making a contract with the vendor, the Bank should make a discussion as to how willing is the vendor to transfer knowledge to the bank's project team members and the physical location of the vendor shall also be given emphasis while selecting vendor.
- Finally the paper suggests that the bank should employ care full and effective data migration technique like cleansing the data very well before migration and proper and adequate end user training should be made ahead.

5.4LIMITATIONS

This study was limited to only CBS project implementation challenges the case of Wegagen Bank SC therefore; the findings of this paper are exclusive to this bank and cannot be used to make generalization of all other banks in Ethiopia.

5.5SUGGESTIONS FOR FURTHER RESEARCH

The study suggests that it is important to look into project implementation challenges of CBS projects at other banks beside Wegagen bank so that the results can be compared for effective recommendation.

REFERENCES

Adamson, I., Chan, K., Handford, D. 2003, “Is Core replacement a necessity”, International Journal of Bank Marketing, Vol. 21 No.6, pp.347-58.

Aggarwal. N, 2006. "Roadmap to a Successful Core Banking Replacement - Management Report,"

Albert. M, 2015 “Strategic Factors AffectingtheImplementationofa New Core Banking Systemin Consolidated Bankof Kenya”.

Amol S., 2016“What is core banking solution (CBS)” https://www.nelito.com/banking solutions/core banking. (Accessed on 15/03/18).

Bogaerts, E. 2011. “The 4 C’s of Core Banking”. Journal of Internet Banking and Commerce, 16(1).

Creswell, John W, “Research design: Qualitative, Quantitative, and Mixed Methods Approaches”, 3rd edn, Sage Publications, California, USA, 2009

Devaraj. S., Fan. M., and Kohli. R., 2012“Antecedents of B2C Channel Satisfaction and Preference: Validating E-Commerce Matrix”, Information system research.

Endalkachew, 2014 “Assessing the Impact of Core Banking and Service Quality on Customer Satisfaction in Commercial Bank of Ethiopia”.

Gentile.S, (2012). “Project management in the information technology industry” Brandeis University.

Harris N., 2015 “Factors influencing implementation of CBS projects by commercial banks in kenya”.

Hemant P., 2017 Core Banking Solutions. Shanbhag&Parab Assoc.

IBM, (2012). “The value of transforming core banking systems” New York, IBM Corporation

Johny, 2016 “Success of Implementation of Core Banking Solutions – A Studyof Factors Involved”.

Kaur R., 2012“Impact of information technology on customer service with reference to selected banks in chandigarh”. International journal of engineering and management science.

Kerzner H., 2009.Project Management.New Jersey: John Wiley & Sons, Inc

Kolb, D. A., and Frohman, A.L. (1970).An Organization Development Approach to Consulting.Sloan Management Review

Korn V., 2009 “Core Banking Systems for Large Banks”. Temenos Journal.

Kwon, T. H. and Zmud, R.W. (1987). “Unifying the Fragmented Models of Information Systems Implementation"

Laudon J., 2012.Management Information Systems. New Jersey: Prentice Hall.

Lemlem&Rahel, 2013 “Quantitative Usability Measurement for Commercial Off-the-Shelf Products: the case of Core-Banking System”.

MarijaKreća and DušanBarać, 2015 "Comparative Analysis of Core Banking Solutions in Serbia".

Mohammad Anisur, 2016"Core Banking Software (CBS) Implementation challenges of e-Banking,An Exploratory Study on Bangladeshi Banks”.

Negalign. M and Lisanwork. A, 2016 “The Development of Core Banking System in Ethiopia: Challenges and Prospects” (Case Study on Ethiopian Commercial Banks).

PMBOK guide, 2013. A Guide to the Project Management Body of Knowledge. Fifth edition.

Rishi Y., 2014 “Core Banking Transformation: Measuring the value” Capgemini.

Rohan Kudav and MeghaBhasin, 2013 "Understanding Failed Core Banking Projects," Cognizant.

Schwalbe K., 2011 Information Technology Project management. Boston, Augsburg College.

Seife &Mesfin, 2016 “Core Banking System Implementation Framework: the Case of Ethiopia”.

Sekaran, U. (2003), Research Methods for Business: A skill building approach, (4th Ed.), USA: John Wiley & Sons

Venkatesh& Ghosh, 2013 “Top Ten Challenges Banks Face When Implementing Core Banking Transformation” Finacle.

Wegagen bank, 2018 ,company profile https://www.wegagenbanksc.com. (Accessed on 15/03/18

APPENDIX

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

Questionnaire

This questionnaire is a part of an MSc research project, which is designed to identify the major challenges of project implementation of core banking solution at Wegagen bank. To attain this objective, your honest response to this questionnaire is indispensable. Hence, the researcher kindly requests your cooperation to fill in the questionnaire. The information collected in this questionnaire is anonymous and will only be reported in a comprehensive manner. All your information supplied in this questionnaire will be confidential and used only for the purpose of the study. For confidentiality you should not write your name on this questionnaire. Your assistance will be highly appreciated.

I thank you very much for your honest cooperation!!!

Personal Information

1. Your age?

□ Below 25years □ 26-30years □ 31-35years □ 36-40years □ Above 40years

2. Your gender?

□ Male □ Female

3. How long have you worked in the Banking Industry?

□ Less than 2years □ 3-6years □ 7-10years □ 11-14years □ above 14years

4. Your Educational qualification

□ Diploma□ Bachelor Degree□ Master's degree□ PHD□Others

5. Your current position:_____

General Instructions

The questionnaire has two major parts, the first part deals with the knowledge area of project implementation and the second part includes implementation challenges of core banking solutions. The second part is divided into three major areas of Human resource related, vendor related and system related challenges.

Part one: Project implementation related

Based on how you feel about the statement rate the following questions: Scale range: [1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree]

Factors	Scale range				
	1	2	3	4	5
Direction and management of project implementation was done according to the project plan					
Quality assurance works were done at the time of project implementation					
Project communication management(information distribution) has been well carried out					
Procurements were properly conducted at the appropriate time					
Project participants do have the necessary knowledge of project implementation					

Part two: CBS implementation challenges

HR related challenges

Based on how you feel about the statement rate the following questions: Scale range: [1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree]

Factors	Scale range				
	1	2	3	4	5
There is adequate human resource for implementation of CBS project					
The project participants have the required skills and experiences					
The project has experienced, knowledgeable and organized project team					
There is a mechanism for rewarding project team members based on their performance					
The project manager is experienced and committed towards project implementation					

Vendor related challenges

Based on how you feel about the statement rate the following questions: Scale range: [1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree]

Factors	Scale range				
	1	2	3	4	5
The vendor is capable and does have the required credentials for implementing the CBS project					
The vendor is committed to the project implementation					
The vendor is willing to transfer knowledge at the time of implementing the project					
The vendor has experience in successfully accomplishing related projects					
There is coordination and proper communication between the vendor and the bank project management teams					
The vendor is available nearby at the time of implementation of the project					
The cost of post implementation support is fair					

System related challenges

Based on how you feel about the statement rate the following questions: Scale range: [1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree]

Factors	Scale range				
	1	2	3	4	5
The system has capable & functional software to meet requirement & expectations.					
The system is flexible enough to implement the project					
The user interface is friendly and can be used easily					
Data migration was made properly and with care					
Proper and adequate end user training was conducted for implementing the project					
The business is able to adjust to the new system easily					