ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE

CRITICAL FACTORS AFFECTING THE SUCCESSFUL IMPLEMENTATION OF ENTERPRISE RESOURCE PLANNING-HRM SYSTEM IN COMMERCIAL BANK OF ETHIOPIA: EMPOYEES PERSPECTIVE

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Approved by

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DECLARATION

I, Biruk Lemma, declare that the project entitled "**Critical factors affecting the successful implementation of Enterprise Resource Planning-HRM system in commercial bank of Ethiopia: Employees perspective**." is my original work under the guidance and suggestion of the research advisor. It is offered for the partial fulfillment of the Degree of Master of Arts in project management. This project has not been submitted for any degree in Addis Ababa University or any other University and all sources of material used for the project have been duly acknowledged.

Name: Biruk Lemma Signature: _____ Date: December 2018

This research project has been submitted for examination with my appropriate approval as university advisor.

Confirmed by

Name: _____ Signature: _____

Date: _____ Place: _____

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ACRONYMS

CBE	Commercial Bank of Ethiopia
ERP	Enterprise Resource Planning
HRMS	Human Resources Management System

ABSTRACT

The purpose of this study was to identify factors affecting the successful implementation of ERP-HRM system in Commercial Bank of Ethiopia (CBE) and to analyze the implementation of ERP-HRM system from employee's perspective specifically; it tries to identify the correlation between ERP-HRM system implementation and hypothesized factors. The study was carried out in the banks western Addis Ababa district. Clerical and Managerial staffs who have access to the banks Oracle HRM system were included in the sample. Systematic random sampling method was used to select 343 employees from 2429 total employees. Both descriptive and inferential statistical techniques were used to analyze the data. A spearman correlation analysis was conducted to test how well the selected variables are related with ERP-HRM system implementation from employee's perspective. The findings highlight that according to employee's perception of the existing implementation of ERP-HRM system in the bank, factors such as Top management commitment, communication, training and education about the system, employee's involvement in the designing of the system and the inherent risk management of the project was found to be critical for successful implementation of the project. The researcher recommends that the Top management of the bank must also be actively involved in the project implementation stage and monitor the performance of the implementation team. Training and education regarding the system and regular and continuous communication about the system and updates to employees of the bank need to be addressed by the bank. The existing level of training and education regarding the system was deemed to be insignificant by employees.

Key words: Human Resource Management System, Enterprise Resource Planning, Oracle systems

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

ERP system is the result of 40 years of continuous improvement, predominantly through trial and error of technologies which finally helped researchers and practitioners to produce new tools and software to manage business processes and the flow of information among several departments and partners. ERP systems composed of PCs, mainframes, software packages, interfaces, cables, reports, consultants, programmers, and operators (Nlkolopuios, Boersma & Kingma, 2005). According to Mendelson (2000), ERP is a software architecture that designed in order to expedite the information flow as well as the information sharing between various departments in a company, and also provide to decision-makers an enterprise-wide view of all information that they may need to assist them in decision-making.

The primary objective of ERP systems is to find a solution for information fragmentation and to integrate the flow of information inside the company (McAdam & Galloway, 2005). ERP can help companies in automating and integrating corporate cross-functions and also in organizing and standardizing data and business processes. ERP systems also facilitate information sharing whereby supply chain management can make closer cooperation among supply chain partners in order to reduce the cost of transactions (Tarn et al., 2002).

In recent years, many institutions began to adopt new systems to increase productivity and performance, and ERP being one of the most prevalent concepts within the business, as the researches and studies regarding ERP have shown that 30% of the changes in organizations today are due to ERP in terms of the daily operations of the system and the speed of decision-making (Davenport, 2007). Most of the studies indicated that the adoption of the ERP system in an organization helps to improve the compatibility of workflow within the functional departments, their performance, as well as to improve the prediction of new business operations in different markets (Parr & Shanks 2000).

ERP solution package is one integrated information system with different modules like finance, human resources management, supply chain management, production planning and so on. These modules are integrated as one enterprise information system (Rashid et.al 2002).

The ERP system integrates various organizational systems and facilitates error-free transaction and production thereby enhancing organizational efficiency. ERP systems facilitate organizations to integrated key business processes like human resources, manufacturing, finances and supply chain management by allowing access to information in real time.

Though ERP has several independent modules that cover different aspects of a business, HRM module is uniquely connected with employees from each posts i.e. managerial, clerical and non- clerical employees. Human Resources Management System (HRMS) is one of the major components of ERP system designed to integrate and support various HR activities including payroll, performance management, and recruitment and learning management. Human Resources Management System refers to the systems and processes at the intersection between human resources and information technology. HRM merges as a discipline and in particular the basic HR systems evolved into standardized routines and packages of ERP software. The system simplifies HRM activities by eliminating data redundancy and reducing error by keeping and updating record of each worker.

1.2. Background of the Study Area

Commercial bank of Ethiopia is established on 1942 as state bank of Ethiopia and legally re-established as a share company fully owned by the government on 1963. CBE is the largest commercial bank in the banking industry which includes 19 private banks and 2 state owned banks including CBE. As of Dec 21 2017, the bank has a total of 33,119 employees. Currently the bank is celebrating its 75^{th} year anniversary. the banks is predominantly a local bank with more than 1250 branch's all over the country and is aiming to diversify its operation into other countries and has already opened branch's in South Sudan and Djibouti and has finished feasibility study to open branches in Dubai and the USA.

CBE, the largest financial institution in Ethiopia, used to undertake different projects by employing several external project organizations. However over the years the need to integrate several independent project outcomes to achieve central objectives inflexibility of such projects to quickly and effectively adjust to the need of the bank.

CBE in an effort to integrate several back office departments such as human resource, Facilities management and Finance department of the bank has procured Oracles ERP business suit software and hired Indians Mahindra Group for installation. ERP in its nature

requires dedicated teams to customize and analyze the data and to handle upgrades and deployments. Accordingly several project teams dedicated to follow up and manage ERPSs several independent sub functions including HRMS are actively engaged in the project.

Western Addis Ababa District (WAAD) is one of the 15 districts which make up the banks network. As of January 2019, the district has a total of 112 branch's covering area ranging from west Addis Ababa region through Wolkite and to towns near the outskirts of Jimma city. It also has over 2674 clerical employees working in job positions ranging from Junior Officer to District manager. The district also has a total of over 25.1 billion birr in deposit and is expected to mobilize over 6 billion birr in 2018/19 budget year. (www.cbe.portal/2018)

1.3. Statement of the problem

An effective business strategy centers on an aggressive, efficient use of information technology; for this reason the ERP systems have emerged as the core of successful information management, and the enterprise backbone of many organizations. ERP is built on the promise that all critical information will be totally integrated into one single database, however, in practice things have worked different for many organizations.

The pool of research regarding CSFs (Critical Success Factors) in ERP implementation is significant; however, the majority of the academicals effort has been put into understanding the critical success factors from a management perspective. Preventing an ERP implementation project's failure has been heavily focused on the decision-making process of the top management and how senior executives rank the importance of CSFs, rather than looking at the perceptions of the people actually working with the ERP system *i.e.* the users. Understanding the perceptions of the actual users of the ERP systems before initiating an implementation of a new system needs to be given.

Due to prior research focusing primarily on the top management perspective and the CSFs that are most important for ranking members of the organization as previously discussed, there is a gap in existing academia. This research therefore focuses on the perspective of the user of the ERP system to distinguish whether the CSFs that consistently occur in previous research are in line with the perception of the system users.

In the context of Ethiopia, as per the knowledge of the researcher only few studies have been conducted. For e.g. Sintayehu (2014) Tried to assess success factors for implementation of

SAP ERP at Ethiopian Airlines. Derese (2013) has conducted a study on Oracle ERP system at Ethio-Telecom, a government company. This can predominantly be due to lack of organizations employing ERP system in the country. However over recent years several organizations like Mesfin Industrial Engineering, Ethiopian Railway Corporation, Heineken brewery, Commercial bank of Ethiopia and Wegagen bank are attempting to implement the system. This indicates the need to conduct more research on ERP in Ethiopian context.

Managing over 30,000 clerical employees in more than 1200 branches over 15 districts in the country can be tiresome without the application of a centralized database capable of providing standardized information on major components such as leave management, payroll, recruitment and selection and performance management. Thus, importance of Human resource management system to the bank and its contribution to its success cannot be overemphasized as human resource is valuable and serves as a backbone of an organization.

Prior Research's on the satisfaction level of employees in the bank have identified that inconsistency in promotional opportunities, access to training and development, access to HR related information's like vacancies and standardized scale to compare potential applicants for a specific job vacancies were cited as a drawback of the existing fragmented HRM system. The introduction of Oracles ERP in General and HRMS module in particular is designed to address the above mentioned and other potential HRM related issues in the bank. Thomas (2015) identified a clearly visible dissatisfaction of both employees and HR staffs with the existing HRM system due to the redundancy of processes in CBE. Additional man-hour input requirement during data preparation that necessitates additional cost in terms of overtime payment was also found to be a significant hurdle the bank has to overcome on daily basis.

According to study conducted by Birhane (2016) on training and development practice of commercial bank of Ethiopia, absence of well-established and coordinated training and development policy, inadequate needs assessment, inappropriate training and development objectives, out-dated training and development methods and lack of close supervision and follow up were identified as a major causes of inefficiency in training and development. The introduction of ERPs HRMS is expected to solve these problems by providing adequate record of past history and assessing training development needs of each employees. Accordingly CBE awarded Oracle a contract to provide eight ERP sub modules which work together to modernize its day to day activity. Currently the project is in its implementation

stage and employees across the bank are using the systems HRM system in their day to day activities.

This paper therefore attempts to identify factors affecting implementation of ERP-HRM in the bank from employee's perspective and to assess the implementation of ERP-HRM system in commercial bank of Ethiopia.

1.4. Research Questions

The study address the following questions;-

1 What is the current implementation status of ERP-HRM system in commercial Bank of Ethiopia?
2 What factors do bank employees regard as critical to a successful ERP HRM system implementation?
3 What are the changes in performance that result from ERP HRM system implementations?

1.5. Objectives of the Study

The general objective of the study is to identify factors affecting the implementation of ERP-Human Resources Management System (HRMS) in Commercial Bank of Ethiopia and assess the existing status of ERP implementation in the bank. The specific objectives of the study try to identify:-

1) To assess the implementation of ERP-HRM system from employees perspective.
2) To identify critical factors affecting the successful implementation of ERPS HRM system.
3) To analyze the Human Resource Management system component of ERP in the bank

1.6. Scope of the study

The scope of this project is bound to conducting a single-case study to investigate ERP-HRM system implementation in commercial bank of Ethiopia. The study scope is further limited to studying the users or employees perspective in the implementation of ERP in commercial bank of Ethiopia's western Addis Ababa district. Due to the similarity of the working conditions, HRM procedure and HR related issues in the bank, the selection of

Western Addis Ababa district as a focus area for this study and its implication for bank wide assessment is justified.

1.7. Significance of the Study

The importance of this study is to shed light on ERP system, to provide and assess the systems acceptability from employee's perspective. The findings from this research regarding ERP system implementation progress and critical success factors associated with the systems can benefit financial sector in Ethiopia in general and Commercial Bank of Ethiopia in particular, which represent an important institution. The results of this study will have greater input to the human resource practice of the bank and the assessment of the project status that can be further designed and amended their HR function.

Due to the lack of local studies on the area conducted, the study will also assist various sectors such as infrastructural institutions, consultants and academics who are interested in adopting ERP system by providing groundwork on areas to focus. Furthermore, it can help as a source document and as a stepping stone for other researchers who want to make further study on related areas.

1.8. Scope and Limitation of the Study

This study is limited to testing the correlation between factors frequently used in research and the perception of ERP system users within Human Resources management sub module. An ERP system user is defined as an employee within the bank working actively within an ERP system on a day-to-day basis. For an employee to be viable for this study, he/she must have experienced an ERP implementation and usage of HRMS component of the system.

The study is limited to employees in Western Addis Ababa district of the bank due to geographic proximity and logistic simplicity. The research is done on the employees of the district with the exclusion of non-clerical staffs of the bank which lack access to the system.

Data is collected from individual employees and major findings are only based on these employees perception towards the ERPs HRM system and hypothesized critical success factors identified by prior research works. As a result, the generalizability of the findings to other banks needs to be carefully addressed.

1.9. Organization of the study

The research is organized in to five chapters. The first chapter or introduction part presents the background issue on the topic at hand i.e. ERP, statement of the problem, objectives, significance, and limitations of the study. The second chapter covers literature review in the field pertinent to the study. The literature review covers both empirical and theoretical documents relating to ERPs HRM system and critical success factors identified as pertinent for the study. The third chapter discusses research methodologies employed and it embraces study area, research approach and design, population and sampling techniques, data source and type, method of analysis and ethical consideration undertaken during the course of the study. Interpretation and discussion of data is presented in chapter four. Finally, chapter five reveals conclusion and Recommendations. Both references and appendixes are treated under separate sections.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter presents the review of related literatures. It includes the conceptual understanding of what ERP mean, and the benefits to be obtained through ERP implementation, ERP-HRMS and specific modules involved in it and their implementation and Critical Success Factors identified in previous research's conducted.

2.1. ERP Overview

Enterprise Resource Planning (ERP) is a business process management (BPM) software that enables the organization to use applications of the integrated business management system and automate most back-office functions related to technology, services and human resources. An ERP is a computer information application that backups, coordinates numerous features of workflow, along with financial records, production strategy, material managements, trading, distribution and human resource management. At its most basic level, ERP software integrates these various functions into one complete system to streamline processes and information across the entire organization (Schniederjans *et.al*2013).

ERP is a broad term, a very complicated type of solution, a name of type of software/ class of software that provides end to end management solution (Shehab *et.al*2004). ERP is those activities supported by multi module applications software that help a company manage the important parts of its business in an integrated fashion. An Enterprise Resource Planning System, commonly known as an ERP system, is a set of business software tools designed to facilitate the flow of information between all departments or functions within a business.

When using multiple process sources of data for a report or a function, input from every source is required, imposing unnecessary bureaucratic crosschecks leading to a delay. The streamlined processes enabled by ERP can help reduce redundancy and duplicate work because data just have to be entered one time. This leads to increased responsibility and skill requirement for stakeholders at all levels, a change that can be met with resistance and low morale.

ERP systems can be a useful tool for organizations to build sound and robust information systems infrastructure and enable management to take better decisions based on accurate and

on-time information. These systems improve product quality and process efficiency and also enhance information sharing and information quality among different functions inside the company as well as to suppliers and other partners in the procurement process. This enhanced overall organization efficiency, particularly procurement efficiency, help to achieve good performance of the entire organization and improve long term profitability. (Stanley, 2015)

In traditional IT systems, each of the system components are found separated as applications by their own with one database system for each of them. However, ERP system integrates all of the components through one central database which is common for all the modules involved in the system.

Key features of ERP includes:-

1. ERP system contains essential characteristics, such as centralized enterprise database, which is the nerve center of an ERP systems, and integration of primary business applications and processes, whereby all business application can share common data and information from the same centralized database, and provides real-time processing, which is very important for customer responsiveness (Zheng *et al*., 2000).
2. ERP systems distinguished from other systems with high and comprehensive functionality, multidisciplinary, high integration rate, supports multi-manufacturing industries with different characteristics, and targets all types and sizes of companies and industries (Klaus *et al*., 2000).
3. ERP is a business management system containing features for business solution such as expediting the connection between the processes of business model and the software implementation of those processes, guarantee a level of integration, and provide data integrity and security (Parr & Shanks 2000).
4. ERP systems also promise organizations for effective improvement in the company such as improve customer service, reduce requirements from back-office staff, and decrease inventory (Gilbert & Swear, 1999).

2.2. History of ERP

The evolution of computers and communication technologies are pushing the physical disintegration of market and enterprises to its global limits over the year, many information and communication technologies have been developed for integrating varies activities of the firm. A technology that has benefited corporations the most in their ability to integrate their

operational processes to improve information flow, reduce cost, streamline business processes, offer product variety, establish linkage with business partners and to reduce response time to customer needs is the enterprise resource planning (ERP).(Lollar, 2014).

According to Shehab (2004) the term ERP was invented in 1990 by Gartner, but its roots date to the 1960s. Back then, the concept applied to inventory management and control in the manufacturing sector. Software engineers created programs to monitor inventory, reconcile balances, and report on status. By the 1970s, this had evolved into Material Requirements Planning (MRP) systems for scheduling production processes.

In the 1980s, MRP grew to encompass more manufacturing processes, prompting many to call it MRP-II or Manufacturing Resource Planning. By 1990, these systems had expanded beyond inventory control and other operational processes to other back-office functions like accounting and human resources, setting the stage for ERP as we've come to know it.

Today, ERP has expanded to encompass business intelligence (BI) while also handling "front-office" functions such as sales force automation (SFA), marketing automation and ecommerce. With these product Inventory control package Material Requirement planning(MRP) Manufacturing resource planning(MRP II)Enterprise Resource Planning(ERP) ERP advancements and the success stories coming out of these systems, companies in a broad range of industries from wholesale distribution to ecommerce use ERP solutions. Moreover, even though the "E" in ERP stands for "Enterprise," high-growth and mid-size companies are now rapidly adopting ERP systems. As a result, companies of all sizes and a wide range of industries are transitioning to ERP systems. When you stop to consider the benefits of ERP, it's easy to see why it's become so popular and why its use will continue to grow so rapidly (Kurbel, 2013).

2.3. ERP modules

Based on market share, SAP, Oracle, and Microsoft Dynamics are the key vendors who are the leaders in major international markets like North America and Europe. Many industry experts / Chief executive officers who wish to implement new ERP software in Fortune 500 companies will most probably end up considering industry’s two biggest leaders: SAP or Oracle. While both ERP providers are clear market share dominators, commercial bank of Ethiopia has awarded Oracle the contract and the subsequent modules included in the project revolve around Oracles products.

Oracle Corporation (Oracle) provides a comprehensive range of IT solutions. Wide product portfolio and cloud business and strategic acquisitions are likely to offer growth opportunities to the company. Oracle has a history of improving global decision making by supporting various types of Reporting/Analysis. Transaction processing happens in Financials, Supply Chain, Projects, PLM, Sales & Marketing, HR, Services.

Every business enterprise has their own requirements and needs. A high-tech consulting company is not going to have the same procurement needs as that of a high-tech manufacturing firm since, no solutions fit all problems, in the same way – no particular product can help you all. There is a practice of mix and match of software vendors bundled together to provide a most suitable customized product for your organization. Accordingly the sub modules of ERP CBE has procured includes a specific sets of products designed for financial institutions. The below presented figure shows the major components of ERP module CBE has procured from Oracle.

Source: Oracle.com, 2018

Figure 2-1. Sub modules of ERP supplied by Oracle

In this regard, it is to be noted that each application is licensed separately so companies can select the combination that is suitable for their business processes. Accordingly CBE has opted to include the following sub Modules of ERP:-

2.3.1. Customer Relationship Management

The Oracle CRM (Customer Relationship Management) is a set of applications that gives you information-driven sales, service, and marketing. Oracle CRM is built on an open, standards-based architecture that streamlines business processes, improves data quality, and

allows all your key divisions to draw from the same source of data. With Oracle CRM, CBE aims to own company owns the single best tool for customer success—accurate information. Oracle's E-Business Suite family of Service Applications provides true information-driven customer service. It will enable the bank to meet and exceed customer expectations by empowering them with information that is consistent, accurate, and actionable.

2.3.2. Financial

The Oracle Financials application includes General Ledger, Cash Management, Payables, Receivables, Fixed Assets, Treasury, Property Management, Financial Analyser and a self-service expenses function.

2.3.3. Oracle Human Resource Management

The Oracle Human Resource Management System (HMRS) module helps companies manage the entire recruitment process and provides a real-time view of all HR activities such as recruitment, training, benefits, and payroll. The HRMS suite fully integrates with all E-Business Suite applications and offers users an analytics package that allows for easy extraction of HR data.

2.3.4. Oracle Project

Oracle Projects Portfolio of applications supports the full lifecycle of project and portfolio management. It provides a single, accurate view of all project-related activities. It allows users to select the best portfolio of initiatives, execute projects in adherence with methodologies, assign the right global resources, proactively streamline project delivery, and track profitability via accurate budgeting, forecasting, and Billings/charge-backs.

2.3.5. Supply Chain Management

The Oracle Supply Chain applications allow organizations to predict market requirements, innovate in response to volatile market conditions, and align operations across global networks. There are several industry-specific solutions available that incorporate demand management, sales, and operations planning, transportation management etc.

2.3.6. Procurement

Oracle Advanced Procurement is an integrated suite of applications that dramatically cuts all supply management costs. The solution helps you to reduce spending on goods and services, streamline procure-to-pay processes, and drive policy compliance.

2.3.7. Value Chain and Planning

Oracle's Value Chain Planning solution enables companies to become more information-driven with best-in-class supply chain planning applications built around a core of optimization, sales and operations planning, and performance management.

2.3.8. Oracle Transportation Management

Transportation management (TMS) provides transportation planning and execution capabilities to shippers and third party logistics providers. It integrates and streamlines transportation planning, execution, and freight payment.

The TMS function delivers functionality for all modes of transportation, from full truckload to complex air, ocean, and rail shipments. The benefits of the TMS function include reduced transportation costs, improved customer service, and greater asset utilization.

2.3.9. Oracle Warehouse Management Systems

Oracle's Warehouse Management System allows coordinated movement of goods and information throughout the extended distribution process. The module provides business processes that can deliver efficient utilization of employees, equipment, and space in the distribution process.

Benefits include an acceleration of the flow of products through the supply chain while reducing lead times and releasing working capital, real-time inventory management, cross-docking, pick-by-line, Advanced Ship Notices (ASN), inbound planning and yard management

2.4. ERP Implementation

There is an immediate need for any company to assess whether an ERP implementation will be successful or not and if a specific ERP system will justify the costs that have to be poured into the project along with the risks that will be taken; indeed, the decision to invest in an ERP system can make or break an organization (Ehie & Madsen, 2005; Mandal & Gunasekaran, 2003). In addition to that, the importance of the human factor while implementing an ERP system is not to be underestimated (Legare, 2002). Legare (2002)found that individual-, group-, and organizational characteristics could influence the success of ERP implementation; individual characteristics being knowledge, cognitive abilities and motivation, group characteristics goals, roles, norms, diversity and problem solving, and organizational characteristics strategy, resources, rewards, culture and structure. There are

many reasons that could result in an ERP implementations' failure. Kumar and Gupta (2012) outline nine reasons; changes, coordination issues, budget issues, customization issue, lack of experience, unfriendly user interface, poor ERP selection and absence of consultant. Umble&Umble (2001) also considered poor top management involvement, poor project management, lack of education and training, people not wanting a new system to succeed, unrealistic expectations about the implementation project, inaccurate data and mismatch between the business and ERP system selected to be reasons of failure.

2.4.1. ERP Implementation Stages

The process of choosing to utilize, carrying out and following up an ERP system implementation is a complex endeavor. This segment will explain the different stages of an ERP implementation to build a general understanding of the process' complexity, motivating why the need for exploring the critical success factors is important.

Motiwalla and Thompson (2012) provide a clear framework for a traditional implementation strategy of an ERP system. The authors divide the implementation into five stages. In the first stage called the scope and commitment stage, necessary requirements are gathered, and what gaps that is to be filled with the ERP system is figured out. During this stage, analyzing and comparing the current business practices with the new is vital in order to avoid significant system modifications after the implementation takes place. After this, the vendor is selected based on the needs of the company, together with factors such as total cost of ownership, consulting and training services and customer service and help desk support. These criteria, together with the budgetary restrictions, help the company narrow down the selection of vendors to the one with the best fit.

During the next stage, called the analysis and design stage, the number and what kind of modules that are to be used is decided. A company can either choose to take a vanilla approach, in which the ERP software package is selected "as is" without any major modifications, or a chocolate approach in which the package is customized to the very needs of the company. The chocolate approach might, because of the customization to user requirements, increase the implementation risk and the investment. During this stage, a change management plan is formed and plans for data conversions, system conversion and training are created.

The third stage is called the acquisition and development stage. This is when the license for the production version of the software is purchased, and the production version of the system is built. The tasks formed to fill the gaps identified in the first stage are carried out. The technical team installs the software and the change management team works with the system users; changing business processes and training on the sandbox version of the software.

Stage four is called the implementation stage. This is the most crucial of the stages since the new ERP system goes live for the first time; often there are mishaps that have to be tended to which costs time and money if not dealt with swiftly. There are four basic conversion approaches used when going live; the phased, the pilot, the parallel and the big bang. The phased approach is a tentative movement from the existing ERP system to the new. This approach can be time-consuming, but it is also the least disruptive to the company. The pilot approach involves implementing a smaller version of the final system prior releasing the full version. This approach is used in order to ensure that the final system is appropriate. The parallel approach is the costliest of the four because the new ERP system is implemented and used while the existing system is still online. This approach is best used when the company is not sure that the implementation will be successful. The final approach, the big bang, is the approach with the highest risk but it is the most straightforward and clean. In this approach, the company simply shuts the existing ERP system down and powers up the new one. This is, of course, risky, but it is also the least costly since there is no duplication of information.

The last stage of the implementation is called the operation stage. In this stage, on-going training for the users is conducted as the ERP modules are released, user feedback from training and actual system practice is controlled in order to make the necessary adjustments to the change management approach. During this stage, new versions of the software are continually released, patches are installed, and the system is upgraded together with the ERP vendor.

2.5. CSFs in ERP Implementation

CSFs that were used as a base for study in different papers will be used as a basis for this paper too. This is to ensure that the CSFs that have been chosen indeed can be considered accepted as critical. After exploring different literature reviews, several CSFs which were found to be consistent with the role of ERPs HRMS system user were selected to be

analyzed. Each CSFs description will include the role of the system user i.e. whose daily work involves working in an ERP system, leading to the formulation of a hypothesis.

2.5.1. Top Management Commitment

The number one cited CSF and considered the most relevant and critical factor by prior researchers is "Top management commitment and support". This concept is referred to the need of having committed leadership at the top management level (Finney &Corbert, 2007). Successful ERP implementation very much depends upon active and persistent top management involvement, and the importance of top management support in each step in all company levels is crucial (Zabjek et al., 2009; Sarker& Lee, 2003; Nah et al., 2003).

Harrison (2004) argues that when some companies hand over their ERP implementation responsibility to the technical departments, they make a vital mistake resulting in a failed project. The use and success of IT in organizations should include participation from the top management, as that reflects that the top management works actively together with the rest of the company towards a successful IT-implementation (Byrd & Davidson, 2003; Nah et al., 2003). (Motwani et al., 2002) conclude that not only should the top management be active in the implementation process, but to ensure progress and ultimately success. Top management should also be able to anticipate glitches that might occur; this naturally puts a great demand on their knowledge regarding ERP systems and the implementation process (Motwani et al., 2002).Since top management commitment includes reinforcing the commitment of all employees, including the employees of the bank, the first hypothesis is:

H1: Top management commitment in ERPs HRMS implementation is considered to be a critical success factor by employees.

2.5.2. Communication

Failing to achieve a fluent and open communication between top management and the system user is a major cause of ERP implementation failure (Huang et al., 2004). Motwani et al. (2005) argue that a company encouraging its employees to participate actively in the implementation is more successful than a company that does not. Furthermore, Motwani *et. al* (2005) discuss the importance of open communication when sharing the news of the change of ERP systems as well as the ongoing updates regarding the change. Indeed, cross functional and interdepartmental coordination is of utmost importance when implementing an ERP system and having excellent company-wide communication is vital (Chen et al., 2009).

Dezdar and Ainin (2011) argue that communication is an important tool to use for management when trying to avoid resistance to change from their employees. Continuous communication with the whole company will let the employees know what is happening, what results are to be expected and if something goes awry, they are directly informed and involved in solving the problem instead of left behind in confusion (Dezdar&Ainin, 2011).

H2: Communication in an ERP HRMS implementation is considered to be a critical success factor by employees.

2.5.3. Training and Education

Somers and Nelson (2004) describe training and education to be crucial when implementing an ERP system. Lack of user training and misunderstanding the enterprise applications appear to be two large reasons responsible for many ERP implementation failures. ERP implementations require a vast amount of knowledge to enable people to solve problems that may occur within the framework of the system. Umble et al. (2003) argue that if the employees do not understand how the system works, they will invent their own processes, by excerpting parts of the system that they can manipulate. To make system user training successful, the training should preferably start well before the implementation process begins (Umble et al., 2003). One of the key variables when planning for a new system is to plan for education and training programs, which in conjunction with other variables are important ingredients to a successful implementation (Mabert et al., 2003).

H3: Training and education in an ERP HRMS implementation is considered to be a critical success factor by employees.

2.5.4. Implementation Team

For an implementation to run smoothly, training is not the only tool that can be used. The need for a strong, competent core team of dedicated and capable employees is also important, especially at the very start of the implementation (Cliffe, 1999). This team is meant to lead the way, using their talents to probe for details when carrying out the planning phase of the implementation. Soh, Kien and Tay-Yap (2000) emphasize the fact that the users have to grow from being just complacent and passive to actually delving deeper into the implementation process; this is particularly true for the core team. Snider, da Silveira and Balakrishnan (2009) also argue that the use of smaller task forces consisting of a few talented employees is a way to reach success when implementing an ERP system.

H4: The composition of the implementation team in an ERP HRMS implementation is considered to be a critical success factor by employees.

2.5.5. User Involvement

In relation to change management and as a result of the frequently cited failures, companies often encounter user resistance. The users are in many cases, often afraid that the ERP implementation will change their role, job status, importance, responsibilities and the access of valuable information (Shaul&Tauber, 2013). The user involvement can hence, be referred to a psychological state of the individual as the importance and personal relevance of the system to the user (Bhatti, 2005). Beyond the CSF as mentioned above; i.e. education and training, it is important to get users involved during the development of the system, get a hold of the existing knowledge from the user in areas where the team have insufficient expertise (Francoise et al., 2009).

H5: User involvement in an ERP HRMS implementation is considered to be a critical success factor by employees of CBE.

2.5.6. Project Vendors

Since the implementation of a new ERP system is such an undertaking for a company, both financially, technically and time-wise, the need for support is to be considered important. Training and educating the system users is indeed a way to support the process, however, if something goes wrong that needs external help, there should be a support system ready to be kicked into gear (Kremers& van Dissel, 2000). This support system is not only meant to be active when problems occur, but continuously; Hirt and Swanson(2001) argue that one primary function of the project support is the maintenance. This feature is activated during the last stage of the implementation process discussed by Motiwalla and Thompson (2012), the operations stage.

H6: Project vendors support in an ERP implementation is considered to be a critical success factors by the system users in the context of procurement management.

2.5.7. Project Management

Nah et al. (2001) state that a good project management is essential in an ERP implementation project. The project management activities span the first four stages of the ERP life cycle from beginning the project until closing it (Somers & Nelson, 2001; 2004). The approach to

project management suggests that the project planning and control is in correlation with the project's characteristics such as project size, experiences with technology and project structure (Somers & Nelson, 2004; Holland & Light, 1999). An individual or group of employees should be given the responsibility to drive success in the project management (Nah et al., 2001). When the project team is formally established, the team must subsequently be defined in terms of its milestones (Holland & Light, 1999). It includes determining the critical paths of the project, deciding on the timeliness of the project and managing the force of timely decision making (Nah et al., 2001). Hence, the scope should be established, clearly defined and be limited.

H7: Project management in ERP implementation is considered to be a critical success factor by the system user in the context of procurement management.

2.5.8. Risk Management

Last but not least is the CSF named risk management which involves developing proper troubleshooting tools, adequate skills and techniques and in relation to the CSF use of consultants, working closely with vendors and consultants when something is wrong in the system (Shaul & Tauber, 2013). Troubleshooting errors is critical when implementing an ERP, and the relationship with vendors and consultants to resolve software problems should also work well (Holland et al., 1999; Nah et al., 2001). The need to be flexible in ERP implementations and to learn from unforeseen circumstances have been argued by Finney and Corbett (2007) and Al-Mashari et al., (2003) as an ongoing requirement of the implementation process. Chen et al., (2009) state that there are two risk factors influencing unfavorable project outcomes; external (e.g., business models and entrants) and internal (e.g., project size, duration, complexity, and outsourcing).

H8: Risk management in an ERP implementation is considered to be a critical success factor by the system user in the context of procurement management.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1. Research Design and Approach

The research utilizes explanatory approaches while conducting the study. After conducting extensive review of literature to understand already existing theories and to identify critical factors which exist from employee's perspective from prior studies, the research aims to provide valuable insights from a system user or employee's perspective with the objective of identified CSFs. Literature review leads to the CSFs that were used for the formation of the hypotheses. These hypotheses will then be connected to the employee's perspective in an ERP HRMS implementation. In operational terms, the hypotheses will then empirically be tested with the premises and the logic of the argument that produced them. Hence, the research's nature of explanatory attributes leading to a nature of the research being explanatory (Saunders et al., 2009).

On the course of the study, quantitative data collection method is predominantly used. Quantitative approach uses statistical methods in describing patterns of behavior and generalizing findings from samples to population of interest, and employs strategies of inquiry such as questionnaires and surveys (Marguerit, Dean, & Katherine, 2006).

3.1 Population and Sample

3.2.1 Population

Target population can be defined as a specified group of population which the researchers are interested to collect data or statistic from them (Hair and Bush, 2006). As a result, the target population in this research encompasses employees of Commercial Bank of Ethiopia (including managerial and clerical employees) in Western Addis Ababa district. Accordingly there are about 2429 employees who are considered as a sampling frame for the study.

3.2.2 Sample size

A sample is a sub-set or part of the target population; sampling is a process of selecting subjects or cases to be included in the study of the representative of the target population (Mugenda and Mugenda, 2003). In order to determine the appropriate sample size, Taro Yamane's (1967) simplified formula was used .This formula helps to determine the sample

size of finite Population. If the population is finite it should be corrected to a desired level of precision. Accordingly the formula is n= N/1+N (e) 2

n = Sample size N= Population Size e= the desired level of precision (in this case 0.05)

n= 24293/1+2429(0.05)2

n =<u>343</u>

Probability sampling was the most appropriate to answer the study's research question and abovementioned purpose. With random sampling, each unit of the population had a similar probability of inclusion in the sample, which was intended when deciding the population size. Accordingly the sample size for the research is found to be 343 employees. To select 343 employees from the population, the researcher used systematic sampling method. Sampling frame which listed all clerical employees currently working in the district is collected from the HR department. To select specific respondents from the sampling frame, the researcher used the below presented formula. K **= N/n**

Where N represents the total sample size, n represents the sample size to be employed in the study. Accordingly every 7^{th} employee in the sampling frame was selected as a member of the sample *i.e*. total population divided by total sample size (2429 employees /343 employees).

To make the sampling system more accessible for selected respondents, the researcher used the outlook mailing system of the bank. The usage of this system eliminated the need for the researcher to travel to remote area within the district to collect data. A soft copy of pre-tested questionnaires was e-mailed to list of selected respondents. Respondents were asked to fill the questionnaire online and email it to the researcher.

3.5. Data Sources and Types

Both primary and secondary type of data is used to conduct the study**.** Primary data is collected through questionnaire. This gives specific responses to the research questions. Primary data is recognized as data is gathered for a specific research in response to a particular problem through questionnaires and interviews. While secondary data is collected from various document like annual reports, local and international newspaper related with issues ERP implementation, Research reports, books and journal articles**.** The researcher collects secondary data from the bank's annual report, procedures, and prior ERP related

research's conducted. Questionnaire mainly consist of structured or close–ended questions which use a 5 scale Lykert scale to rate primary data for the study from selected samples in order to take the opinions of employees on the ERPs HRMS implementation in the bank and to complement the data which is collected from secondary sources relating to the banks ERP implementation.

3.6 Data Collection Procedures

Questionnaires are cheap to administer to respondents who are scattered over a large area. It is convenient for collecting information from a large population within a short span of time. According to Zikmund (2010), questionnaires will enable the researcher to reaching out to a large number of respondents within a short time; give the respondents" adequate time to respond to the items, offer a sense of security (confidentiality) to the respondents and it is an objective method since no bias resulting from the personal characteristics.

Through careful and through review of prior research's that focus in ERP implementation and their variables and Critical Success Factors (CSFs), the researcher developed a specific sets of questions to be included in the questionnaire. The questionnaire have Likert scale framework. Likert scale is a scale that can allow the respondents to measure the question and answer according to any kind of subjective or objective criteria. There are usually five options. The options normally are strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA). The respondent can fill up their answer by choosing among the five options available for the sets of questions presented.

The questionnaire was pretested and commented on before their administration to ensure validity and reliability of the data to be collected. According to Kothari (2004), the purpose of pre-testing the data instrument is to ensure that the items in the instrument are stated clearly and have the same meaning to all respondents. It is only during pre-testing that the researcher will be able to assess the ease of use of the instrument. Any sensitive, confusing, or biased items will be identified and modified or omitted. Pre-testing permits refinement before the final test (Cooper & Schindler, 2003). Accordingly the questionnaire was pre tested on few employees, feedback collected, and final draft prepared to be distributed to respondents.

To adequately gather relevant and trustworthy information from the respondents, the questionnaires were translated to Amharic. The researcher took serious steps to maintain the integrity of the questionnaire.

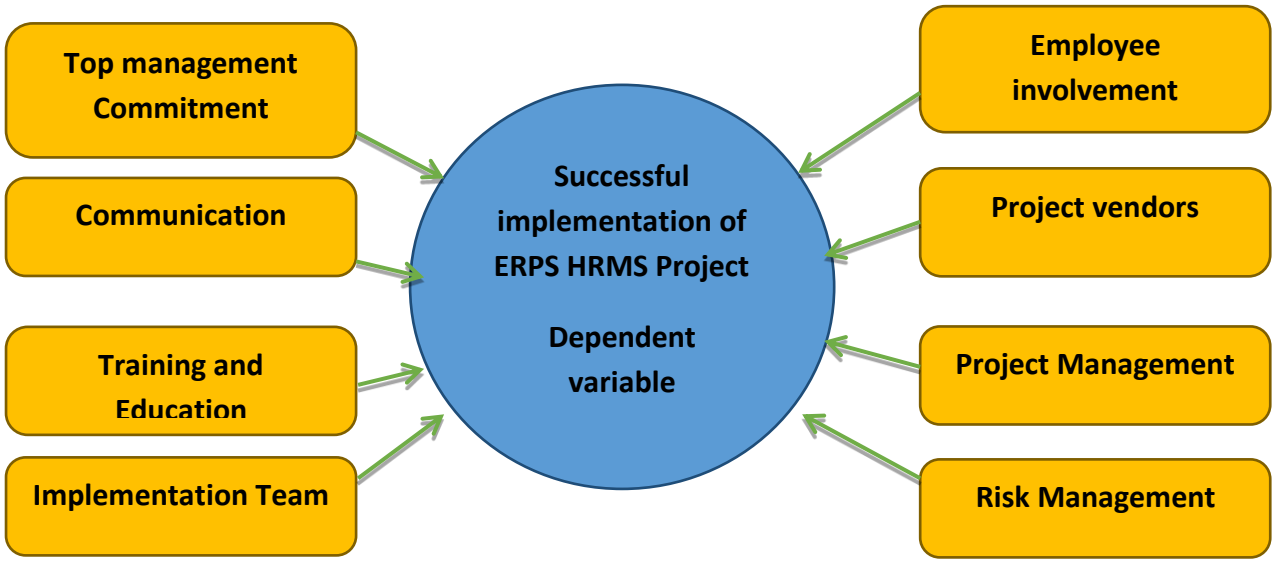
3.7. Data analysis

In analyzing the data collected the researcher used quantitative methods. Quantitative analysis involves computation of descriptive statistics mainly percentages. The use of tables and percentages in particular helped the readers to note the relationships in quantitative sense more clearly.

After data collection, the quantitative responses of the respondents were cleared and coded for analysis. The data was organized, analyzed, and presented by using tables and further discussion was made to interpret the result. SPSS, 20.0 versions (Statistical Packages for Social Science) was used to analyze the data presented. SPSS is selected for analysis because the software is easy to use, to understand and generate relationship between variables and easy to interpret the output with short period of time. Data analysis is a most difficult part in the quantitative research. Other statistical techniques and outputs like mean, standard deviation and correlation, were used as an inferential statistics and as a method to test the outlined hypothesis.

3.8. List of variables

The total number of independent variables included in the project study and their hypothesized relationship with the dependent variable i.e. successful implementation of ERPS HRMS Project presented in the conceptual design below.



Source: Own design: 2018 Figure 3-1. Conceptual Framework

3.8.1 Dependent Variable

The dependent variable to be studied in the project work is the successful implementation of ERPS HRMS Project. The system is adopted from Oracles ERP module. HRM system has several specific function designed to aid HR problems that might arise in the bank. Some of these functions include absence management and self-service portal.

3.8.2. Independent Variables

Independent variables in this project work are identified factors which are expected to critically affect the successful implementation of ERPs HRM system. The successful consideration and incorporation of this factors into the implementation of ERPs HRM system is expected its success from the perspective of actual users of the system i.e. employees. Prior researches in the implementation of ERP system has provided the researcher a base to select critical success factors as independent variables. The results from the questionnaires were measured by using 5 points lykert scale.

Top management Commitment: This concept is referred to the need of having committed leadership at the top management level. Employee's attitude towards this concept and its existing status in the implementation of ERPs HRM system is elicited using different questions.

Communication: Continuous communication with the whole company will let the system users know what is happening, what results are to be expected and if something goes wrong. Employee's attitude towards this concept and its existing status in the implementation of ERPs HRM system is elicited using different questions.

Training and Education: Lack of user training and misunderstanding ERP applications appear to be two large reasons responsible for many ERP implementation failures. Employee's attitude towards training and education status in the bank and its implication in the success of the project is studied.

Implementation Team: The existence of strong, competent core team of dedicated and capable employees is necessary for successful implementation. Employee's attitude towards existing project implementation team and their capacity to handle the project work is studied.

Employee Involvement: The involvement of employees in the project implementation phase to better equip them with the system goes long way in the success of the system. Employees

are thus questioned about their apparent involvement in the project phases and its impact on the overall success of the project.

Project vendors: The continuous involvement of project system vendors i.e. Oracle and project team in the banks future ERP system related endeavors and its capacity to improve the project success. Employee's attitude towards existing relationship of the bank and project providers needs to be explored.

Project management: Good project management is essential in an ERP implementation project. The project management activities spans through stages of the ERP life cycle from beginning the project until closing it.

Risk management: As with any endeavor, the implementation of ERPs HRM system comes with its own sets of risks and the capacity of the bank and the project team to anticipate and manage such risks is key for success. Employee's attitude towards the existence of capable risk managing team and environment can impact the overall success of the project.

Specific sets of questions designed to elicit answers regarding Critical Success Factors were included in the questionnaire to understand employee's attitude towards ERPs HRMS implementation. Answers to this question were used to measure employee's attitude towards each success factor identified and general ERP implementation in the bank.

3.9. Reliability and validity

3.9.1. Reliability

The term reliability is concerned with the question if the results of the study are repeatable (Bryman & Bell, 2011). In other words, it refers to replication and consistency, thus, if research can be replicated by a third party and would achieve the same findings, seeing the research as being reliable (Saunders et al., 2009). This can be ensured by demonstrating the procedures, showing transparency and giving thorough explanations about the methodological choices, data collection and analytical steps as detailed as possible (Yin, 2013). Reliability concerns the robustness of the questionnaire, thus, if the produced findings will be consistent over time and under different conditions, such as different samples and respondents.

For this research, the internal consistency approach was exerted with the use of the Cronbach's Alpha (α) method, to ensure the reliability of this study. This statistic is mostly

used to measure the consistency of responses to a set of questions that are combined as a scale. It consists of an Alpha coefficient with a value between 0 and 1. Since the questionnaire was utilizing a Likert-type scale, this approach was considered most appropriate to apply to test the reliability of the scale. A value of 0.7 or above is typically employed "as a rule of thumb" and implies an acceptable level of internal consistency (Bryman & Bell, 2011; Saunders et al., 2009). The Cronbach's alpha value results were found to be consistent (table) and within the "rule of thumb" values mentioned above. Cronbach's alpha was conducted by employing SPSS construct to the questions of the variables which employed Lykert scale answer options. This confirmed that the value received in the questionnaire was on an acceptable level. Thus, the reliability of this study could, therefore, be accepted. The author moreover considers the reliability of this research of high level, as both the questionnaire and the cover letter are accessible for any third party to take part of.

Table 3.1 Reliability Statistics

Variables	Cronbach's Alpha	N of Items
Top management commitment	0.71	4
Communication	0.704	4
Training and Education	0.750	4
Implementation Team	0.756	4
Employee Involvement	0.786	4
Project vendor support	0.791	4
Project Management	0.70	4
Risk Management	0.782	4

Source: SPSS: 2018

3.9.2. Validity

Assessing validity about questionnaires according to Saunders et al. (2009) refers to the ability of the questionnaire to measure what is intended to be measured. In a survey study, the measurement validity applies primarily to a quantitative study and has essentially to do with the question of whether a measure that is devised of a concept reflect the reality that it is supposed to be representing (Bryman & Bell, 2011; Saunders et al., 2009). The questionnaire was constructed and distributed in English which can be considered a common business language around the world. To avoid any misinterpretations or the probability of misconceptions, we applied the accuracy of expression to assure that each stated question and statement was easily understandable and that they mirrored the purpose of this study.

To further ensure the validity and prior using the questionnaire it is argued by Bryman and Bell (2011) to include a pilot testing with respondents similar to those who will complete it. The statement "however pressed for time you are, do your best to give the questionnaire a trial run" (Bryman & Bell, 2011) indicates the importance of the completion of a pilot testing before actually reaching the representing respondents. The author conducted the pilot test with ten employees in the banks Anwar mesgid branch. These respondents further asked to give feedback on the plausibility of the questions, clarity of the instructions if anything was unclear and the usability of the questionnaire. Feedbacks from the sample questionnaires were included in the final draft of the questionnaire.

3.10. Ethical Consideration

Ethical conduct can be described as morale values, confidentiality, and anonymity of an individual, group, or an organization. Confidentiality and anonymity usually refers to the assurance that researcher give to the participants that their identity and involvement in a research will be kept confidential (Terera, 2014). Similarly practicing full disclosure with research participants is an essential part of the research process.

In this research the participants will be notified of the confidentiality of their responses and anonymity of their identity; they will also be informed about the nature of this research and why it is carried out, moreover they will be made aware that what is required from them as a participant.

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

In this Chapter, the results of the survey showing how well the critical success factors discussed in prior research, focusing primarily on the management perspective corresponds with the perceptions of the system users. Each hypothesis is analyzed by using the descriptive statistics and Spearman's simple rank correlations derived from SPSS. The result from the analysis shows critical success factors in the implementation of ERP-HRM system from employee's perspective. The hypotheses were also analyzed using the frame of reference in order for us to make sense of the empirical findings and give explanations as to what the results imply. This chapter provides demographic data of the respondents who represent the population and their view of the existing ERP systems through the questions designed to elicit response.

The research aimed to investigate the relationships between ERP-HRM implementation success and our 8 CSFs; all variables were non dichotomous and ordinal in nature. As mentioned before, the respondents were asked to rate their perceptions through a spectrum of values on a 5 point Likert scale reaching from "Strongly agree" to "Strongly disagree". Bryman and Bell (2011) recommends using Spearman's simple rank correlation, also known as Spearman's rho (ρ), when dealing with ordinal variables. Through Spearman's simple rank correlation, the researcher studied if there existed a relationship between our independent variables (Hypothesis 1-8) and dependent variable (successful implementation of ERPS HRMS Project).

4.1. Demographic Characteristics

A total of 347 questionnaires were distributed to professional employees in branches of commercial bank of Ethiopia's Western Addis Ababa districts out of which, 325 questionnaires were returned with response rate of 94%. Given the lack of cooperation to fill questionnaires and return on time, the researcher repeatedly contacted selected respondents through email and phone to get the maximum amount of response rate possible. Information related to the demographic variables of respondents is displayed as follows.

Table 4.1. Gender distribution of respondents

No	Gender	Frequency	Percent
1	Male	224	69.0
2	Female	101	31.0
	Total	325	100.0

Source: own survey: 2018

As shown above in Table 4.1, relatively higher compositions of male than female employees of the company were represented in the sample.

Out of the total respondents, 185 of respondents with 57% are age below 30, 71 of respondents or 22% are age 30-40, 29 of respondents or 18% are age between 40-50, and 10 respondents or 3% is aged above 50.The demographic data of the company showed that most of the employees are in the younger age group i.e. between the ages of 18-29, which has also been exhibited in the data received from participants of the study.

Table 4.2. Age distribution of respondents

No	**Age of respondents**	**Frequency**	**Percentage %**
1	18-29	185	57
2	30-40	71	22
3	40-50	59	18
4	Above 50	10	3
	Total	325	100

Source: own survey: 2018

The data displayed in Table 4.3. Below concerning the educational qualification of the respondents, shows that 89%, and 10%, represented those who are qualified with first degree and second degree above respectively which resembles to the overall demographic data of the bank.

Table 4.3. Educational Background of respondents

No	Educational Background	Frequency	Percentage
1	Diploma	4	1
2	Degree	288	89
3	Masters	33	10
4	Ph.D.	0	0
	Total	325	100

Source: own survey: 2018

As shown in the Figure 2, the percentage of years of experience of respondents selected for this study is presented below. More than half of the current employees of the Bank have less than four years of experience. 51% of all respondents have experience level not greater than four years.

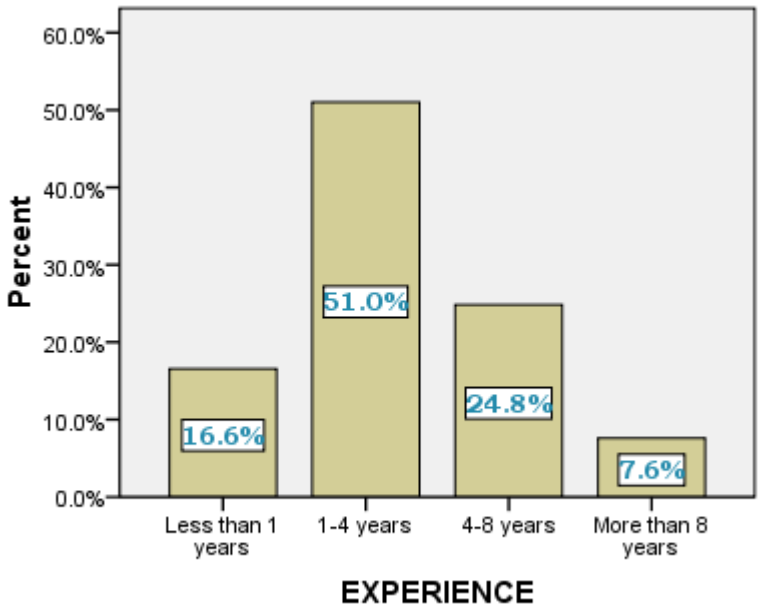


Figure 4-1. Experience levels of respondents

4.2. Results and Analysis of Hypotheses

The following section presents the descriptive statistics and Spearman's simple rank correlations derived from SPSS. Spearman's simple rank correlation is used to measure the monotonic relationship between our dependent and independent variables. Monotonic relationship means that the relationship does not have to be linear. If there had existed a positive monotonic relationship between our independent and any of our dependent variables, we would have observed an increase in the dependent variable when the independent variable

increases. The increase does not, however, have to be linear, but it has to be continuous or at least not be negative during any part of the observation. It also measures how well ERP-HRM implementation success correlates with identified CSFs in the bank.

Employees were asked to indicate the extent to which they agreed and disagreed to statements relating to the variables under study on a five-point Likert scale (1=Strongly Disagree to 5= strongly Agree). To further improve the interpretation of the result the researcher further believes that 0.5 scale margin should be used to improve the analysis of results. Accordingly a more than 3.5 lykert scale can be considered as moderate agreement. Standard deviation was used to indicate the variation or "dispersion" from the "average" (mean). A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data is spread out over a large range of values. This is well elaborated in the table and narratives below which show the respondents and the statistics

4.3. ERP Implementation Success

A review of the literature pertaining to ERP implementation success illustrated that basically success can be categorized into four perspectives: ERP system, ERP user, ERP project, or ERP adopting organization i.e. organizational impact. Based on their frequency analysis on different prior research's conducted on implementation stages of ERP projects, it was found that organizational impact and user satisfaction were the two most frequently used measures of implementation success. Hence in this research, ERP-HRM implementation success was defined based on two dimensions, i.e. organizational impact and user satisfaction. It evaluates optimal success from the business and user perspectives.

Table 4.4. Mean and standard deviation of ERPs HRMS Implementation

Statistics Result					
NO	**ERPs HRMS Implementation**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
IMP1	ERPs HRMS implementation is successful.	325	4.04	0.61	0.042
IMP2	CBE has improved after using ERPs HRM system.	325	3.86	1.13	0.151
IMP3	Human resource efficiency has been improved after implementation of ERPs HRM system	325	3.74	0.456	0.046
IMP4	I am satisfied with the implementation of ERPs HRM system	325	3.63	0.142	0.058
AVERAGE		**325**	**3.81**	**0.584**	**0.074**

Source: own survey: 2018

The result of the descriptive statistics shows that respondents generally believe in the success of ERP-HRM implementation as a way forward to improve any and all HRM related issues that used to hamper the daily activities of the bank. Respondents believe the bank overall has improved after the implementation of ERP-HRM system (Mean =3.86).The result further showed that the human resource related efficiency of the bank has improved immensely when compared to its prior state.

4.2.1 Hypothesis 1: Top Management Commitment

The first hypothesis regarding top management commitment received a Spearman's simple rank correlation coefficient of 0.358 at a 0.0428 significance level which means that it is statistically significant at $p < 0.05$ and is hence accepted (see Appendix C).

The questionnaire and table below further revealed that even though most employees believe top managements lack of knowledge on the projects subject matters (mean=2.06), they generally believe there is an agreeable level of top management commitment to the project.

Table 4.5. Mean and standard deviation of Top management Commitment

No	Statistics Result				
	Top management Commitment	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
TM1	Do you think there is top management support for the project	325	4.1	1.003	0.083
TM2	I believe there is a strong top management involvement in the project	325	3.78	1.003	0.083
TM3	Top management knowledge of the bank has adequate knowledge of the project matter	325	2.06	0.502	0.042
TM4	Top management support is a critical factor in the Implementation of ERPs HRM system	325	3.98	0.897	0.075
AVERAGE		**325**	**3.5**	**0.725**	**0.28**

Source: own survey 2018

This implies that many system users find top management commitment critical when working with an ERP implementation. The result of these survey highlight what is discussed by Yusuf, Gunasekaran and Abthorpe (2004); that the top management should not only possess technical expertise but maybe more importantly, proper leadership skills in knowing not to take control over the implementation completely. Legare (2002) further discuss the importance of recognizing the human factor while implementing the ERP system; being able to acknowledge the different needs of the system users and knowing when to step in and when just to observe is critical for the implementation to be successful. Edward and Mahshid on their paper to study ERP Success and Top Management Commitment in Large and Small to Medium Sized Enterprises have concluded with mean of 3.42 from analysis of the questionnaire that top management is critical to ERP implementation. To conclude, there is statistically significant correlation between the success of an ERP implementation and the commitment of top management.

4.2.2 Hypothesis 2: Communication

The second hypothesis asked for the importance of communication in ERP-HRM implementation. This hypothesis is approved since it yielded a Spearman's simple rank

correlation coefficient of 0.430 at a significance level of 0.499 when $p < 0.05$ (see Appendix C).

Table 4.6. Mean and standard deviation of communication

No	Statistics result				
	Communication	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
CO1	There is open communication policy regarding the Implementation of the system	325	2.1	1.003	0.051
CO2	There is open interdepartmental communication among involved parties	325	1.78	0.951	0.0842
CO3	There is a flow of continuous updates regarding implementation status of the system	325	2.16	0.341	0.051
CO4	Communication is a critical factor in the Implementation of ERPs HRM system	325	3.25	0.821	0.048
AVERAGE		**325**	**2.32**	**0.779**	**0.058**

Source: own survey 2018

Looking at the frequency of answers, it shows that majority of the employees surveyed agree with the statement that communication is critical factor when implementing an ERP system (mean=3.25). Survey of respondents further revealed that the existing line of communication policy and interdepartmental communication regarding system updates and any quires relating to the project requires a much needed attention. Arguments like CO1, CO2 and CO3 all suggest that employees are not satisfied with the existing communication method. This means that most system users answered between 1 and 2, i.e. either strongly disagree or disagree.

This is in line with prior researches, which argues the importance of communication as a tool for updating the system users on the progress of the implementation (Motwani et al., 2005; Chen et al., 2009). Enterprise-wide communication is a critical success factor that uses tools such as monthly or weekly meetings, bulletins, frequent e-mail updates and newsletters. Nah *et al*. advised that the communication has to be two-way to prevent gaps that can take place if the accurate business requirements and approval are overlooked. Previous scholars believed that there should be an effective communication between ERP project team members and users and also between functional units and departments as well to have a smooth ERP implementation. Besides, the goals and objectives of ERP implementation projects should be

explained for users via adequate communication channels such as presentations, demonstrations, newsletters. Furthermore, the users 'expectation, comments and their approval should be obtained at every level of the project. Lastly, the progress report of the ERP project should be informed to all stakeholders as the implementation takes place.

4.2.3 Hypothesis 3: Training and Education

The fourth hypothesis tested whether the system users considered training and education to have been important in their latest ERP implementation. The importance of proper education and training has been emphasized by prior research to influence a successful implementation both pre-, during and post installation of the new system (Somers &Nelson, 2004; Umble et al., 2003; Mabert et al., 2003). The Spearman simple rank correlation coefficient resulted in 0.532 at a significance level of 0,049 when $p < 0.05$ which means that the hypothesis is accepted (see Appendix C).

Table 4.7. Mean and standard deviation of employees towards Training and education

Statistics result					
No	**Training and education**	N	Mean	Std. Deviation	Std. Error Mean
TE1	There is Continuous training of employees regarding the system implementation	325	1.35	0.750	0.062
TE2	The training and education provided is easy to understand	325	2.28	1.116	0.093
TE3	The bank has provided me with sufficient trainings to improve my capacity to handle the HRM system	325	2.00	0.21	0.025
TE4	Training and education is a critical factor in the Implementation of ERPs HRM system	325	4.00	0.502	0.042
AVERAGE		**325**	**2.40**	**1.031**	**.086**

Source: own survey 2018

Looking at the training and education variable, even though employees believe the significance of training and education for the successful implementation of ERP-HRM system (mean=4.0), the current level of attention given to training and education by the bank needs a much needed revision. Response to statements TE1 (existence of continuous training) and TE3(provision of continuous training) further show that the bank has failed to provide acceptable level of training and education for its employees that can sufficiently improve the knowledge base of employees about the HRM system and the implementation of ERP system in general.

Training and education of ERP users is essential since ERP software's are not easy to use even for highly educated people with excellent IT abilities. The education and training increases ease of use and reduces user resistance which, in turn, enhances the likelihood of ERP systems use and success. ERP training and education should be permanent, based on knowledge transfer principles and handle all features of the ERP system. The main purpose of ERP training must be the effective understanding of the different business processes embedded in the ERP system

4.2.4 Hypothesis 4: Implementation Team

An ERP implementation project engages all of the departments in an organization. It demands the collaboration of technical and business professionals as well as ERP users. Companies implementing an ERP system must be willing to dedicate some of their best employees to the project for successful implementation. These individuals should have a proven reputation and there should be a commitment to release these individuals to the project on a full-time basis. In addition, team members should focus solely on the ERP project and it should be their main concern. Furthermore the members of the ERP project team have to be authorized to make quick decisions regarding the project. This project adopted the definition of ERP HRMS Implementation Team as ERP team members, who are technologically competent, understand the bank and its business, fully involved, highly committed and come from departments affected by the new ERP system i.e. Human resource and information technology department.

The importance of the implementation team in ERP-HRM implementation was the fourth hypothesis being tested. This hypothesis is rejected since the Spearman's simple rank correlation coefficient depicted a value of -0.044 at a significance level of 0.743 when $p < 0.05$ (see Appendix C).

The result of descriptive analysis shows respondents lack of knowledge regarding the composition of implementation team and its subsequent impact on the successful implementation of ERP-HRM system (means of IT1, IT2 and IT3). These can be due to the fact that the implementation team is primarily centered in the head and project offices of the bank and away from system users. Communication between system users and implementation team members is limited.

Table 4.8. Mean and standard deviation of employees towards Implementation Team

Statistics Result					
NO	**Implementation team**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
IT1	Implementation team have the sufficient composition to implement the project	325	1.45	0.67	0.056
IT2	The implementation team have the knowledge to fully implement the system	325	2.03	1.253	0.104
IT3	The implementation team are technologically competent	325	1.9	0.77	0.064
IT4	Implementation team is a critical factor in the Implementation of ERP-HRM system	325	3.56	0.903	0.075
AVERAGE		**325**	**2.23**	**0.9**	**0.07**

Source: own survey 2018

One reason for the rejection of this hypothesis could be that there is dissatisfaction with the implementation team or simply that respondents did not think that the implementation team was an important factor for the project as a whole. Akkermans & van Helden (2002) state that the implementation or project team should consist of system users in order for the team to understand any practical implications. The lack of user involvement in the implementation team can be a reason for rejection of this hypothesis.

4.2.5 Hypothesis 5: Employee Involvement

The fifth hypothesis tested if there was any relationship between ERP-HRM success and employee involvement. This hypothesis is accepted since the Spearman's simple rank correlation coefficient yielded a value of 0.422 at a significance level at 0.0353 when $p < 0.05$ (see Appendix C).It is evident that the sample of the population overall believed that employee involvement in the ERP-HRM implementation was important to consider.

Table 4.9. Mean and standard deviation of respondent's attitude towards Employee Involvement

Statistics Result					
No	**Employee Involvement**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
UI1	Employee involvement in the system implementation phase is included	325	2.09	0.750	0.062
UI2	Employees point of view and attitude is considered while designing the system	325	1.84	1.116	0.093
UI3	The project is considerate of the needs of the employees	325	3.62	0.379	0.031
UI4	Employee involvement is a critical factor in the Implementation of ERPs HRM system	325	4.2	0.299	0.108
AVERAGE		**325**	**3.85**	**0.636**	**0.073**

Source: own survey: 2018

The descriptive statistics show that the respondent's answers yielded a mean value of 3.85. That tells us that employees of CBE agreed that employee involvement as being critical in the ERP-HRM implementation. The results of the study further showed lack of involvement and consideration of employee's point of view in the designing stages of the project (Mean of 2.09 for UI1 and 1.84 for UI2).

The result of the research is consistent with previous studies conducted which support the premise that Employee involvement enhances user satisfaction by developing reasonable beliefs about the capabilities of the ERP system. Zhang 2016 *et al*. believed that when a company makes a decision to implement an ERP system, the employee should be involved in the definition phase of the firm's ERP system requirements and also in the implementation of ERP systems. When an employee participates in the ERP implementation process, the employee can comprehend the new system faster and present his opinions. Motwani et al. (2002) and Mandal and Gunasekaran (2003) also argues that the management has to take the staff into account when redesigning or restructuring the organization in any way.

4.2.6 Hypothesis 6: Project Vendor Support

ERP vendors should establish a good relationship and communicate well with adopting companies, provide quality services in an adequate time, assign employees with the domain

knowledge of the industry and enough experience for implementation, offer adequate training and practice to increase the user's proficiency in ERP usage and finally provide suitable user guides, operation guides, manuals and any formal documents required for using the ERP system

The sixth hypothesis tested in this study is project vendor support when implementing ERP-HRM system. The results depicted a Spearman's simple rank correlation of 0.0847 at a significance level of 0.542 when $p < 0.05$ (see Appendix C). The hypothesis is hence rejected since the significance level yielded a value above the p-value stating that it is not statistically significant to say that project vendor support describes a successful ERP-HRM implementation.

Table 4.10. Mean and standard deviation of respondent's attitude towards Project Support

Statistics Result					
No	**Project Support**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
PS1	There is continuous support system for the implementation of the system	325	2.16	0.35	0.0654
PS2	The vendor support provided is satisfactory for the implementation of the system	325	2.84	1.016	0.073
PS3	I believe the project vendor will have continued project relation long after the project ended for e.g. for maintenance	325	2.62	0.379	0.041
PS4	Project vendor Support is a critical factor in the Implementation of ERPs HRM system	325	3.7	0.419	0.113
AVERAGE		**325**	**2.83**	**0.541**	**0.0731**

Source: own survey: 2018

ERP systems are extremely complex and require extensive training. Users need training in-house to see how the system will change organizational business processes. ERP training should deal with all aspects of the system, be continuous and based on the principles of knowledge transfer which requires the direct involvement of consultants and vendors.

The descriptive statistics actually show interesting data. The mean value of the answers for 4 question estimated 2.83 which basically suggests that the respondents are not fully aware of the impact project vendors can have on implementation success. Respondents are not sure

about the existing relationship the project vendor has with the bank. The rejection of the hypothesis is rather interesting and could have several reasons. It could be that the project vendor support system was not needed to be kicked into gear. Hence, the vendor support system was not required to be executed due to a smooth implementation process. Kremers and Van Dissel (2000) argues that if anything goes wrong, the need for a proper support system is important to have planned. (Hirt & Swanson, 2001).

4.2.7 Hypothesis 7: Project Management

The seventh hypothesis tested in this study is project management and its impact on the successful implementation of ERP-HRM system. Management of ERP implementation projects usually comprises five main parts including preparing an official implementation plan, providing a reasonable time frame, setting up periodic meetings for monitoring project status, having an effective project leader who is also a champion and participating project team members who are stakeholders.

An excellent project management has been emphasized to be essential by prior research to influence a successful implementation ERP project from a management perspective (Nah et al., 2003). However, The findings of the research shows a Spearman simple rank correlation coefficient, depicted as -0,071 at a significance level of 0.550 when p< 0,05 means the hypothesis is rejected (see Appendix C).

Table 4.11. Mean and standard deviation of respondent's attitude Project management

Statistics Result					
No	**Project management**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
PM1	Time management of the project is strong	325	3.21	0.61	0.022
PM2	The project's scope and critical paths to be followed are carefully identified	325	2.68	1.03	0.123
PM3	Project planning and control method employed is strong	325	3.24	0.416	0.101
PM4	Project Management is a critical factor in the Implementation of ERPs HRM system	325	4.01	0.169	0.098
AVERAGE		**325**	**3.285**	**0.556**	**0.086**

Source: own survey: 2018

Despite respondents believe on the criticality of the need for strong project team and decisive project manager as can be seen from PM4 (mean =4.010), the specific requirements and day to day workings of the project team it seems are lost for most respondents. This can be mainly due to the limited openness of the interworking of the project management team at branch level. The lack of user involvement in the implementation stages of the project can also attribute to the rejection of the project management as a critical factor in the implementation of ERP-HRM system.

4.2.8 Hypothesis 8: Risk management

The last hypothesis being tested by the research is risk management practice of the bank in ERP-HRM implementation process. This hypothesis is accepted based on a Spearman's simple rank correlation of 0,425 at a significance level of 0.007 when $p < 0.05$ (see Appendix C).The task of risk management in ERP project is to identify the potential risks of ERP project concerning the bank's goals and to eliminate or minimize them.

Table 4.12. Mean and standard deviation of respondent's attitude Risk management

Statistics Result					
No	**Risk management**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
RM1	Risk management of the project is strong	325	3.04	0.61	0.042
RM2	The project management team has the capacity to identify any and all problems and issues that might affect the project performance	325	4.18	1.03	0.161
RM3	The project management has the sufficiently flexible to handle and recover from possible risks that might arise	325	3.86	0.456	0.016
RM4	Risk Management is a critical factor in the Implementation of ERPs HRM system	325	3.93	0.162	0.098
AVERAGE		**325**	**3.75**	**0.564**	**0.079**

Source: own survey: 2018

The moderate correlation coefficient can be interpreted as when the ERP-HRMS implementation is not successful, the risk associated with the project is high, or the inverse where the implementation is successful and the need for risk management low. When an

implementation is going poorly, naturally the ability to find what is causing the problems, training to avoid it happening again and being sufficiently flexible in the process to recover from the problem and move on is vital for the implementation to succeed ultimately.

the descriptive statistics of the study shows that employee believe there exists a coordinated sets of steps to help the project from falling behind or handle any problems that might arise in the course of the study (mean of 4.18 for RM2 and 3.86 for RM3).

According to the magnitude of the correlation coefficient of significant independents of the study, it was found that training and development is the most critical factor with correlation coefficient of 0.532 followed by communication with correlation coefficient of 0.430. Risk management is the third critical factor with correlation coefficient of 0.425 followed by employee's involvement in the project implementation and top management commitment.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATION

This chapter provides a summary of the purpose and results of the study. Then, conclusions are discussed based on researcher's insights gained regarding study findings and limitations. In addition, recommendations are presented for the company under the study and for other professionals interested in pursuing additional research in the future.

5.1. Summary of Major Findings

In this research, system users or employees perspective towards identified success factors in the implementation of ERP-HRM system are explored. Researching the correlation between the CSFs mentioned in prior research and the perception of the system users shows us that there exists a gap between the two and that the perspective of the system user needs more academic attention. In the course of this study the researcher identified Five CSFs from prior research that correspond well with the employees perception of what goes into a successful ERP-HRM implementation in CBE; training and education, communication, risk management, employee involvement and top management commitment.

Training and education of system users or employees about the interworking of the system were also identified as a critical factor in ERP-HRM implementation process. The complexity and novelty of the system requires a much needed attention be given to employees who will actually use the system.

Communication between system users and project team management about the project requirements, updates and follow ups were deemed to be the second critical factors employees identified about ERP-HRM project. Respondents further identified the need to improve existing communication channels of the project.

Risk management associated with ERP-HRM predominantly covers the capacity of the project management team and leader to manage and foresee any and all unexpected facets of the project and hence equally prepare for with adequate measures. Respondents during the course of the study identified the criticality of strong and experienced risk management for the successful implementation of ERP-HRM project.

Employee or user involvement in the designing and implementation of the project stages is also identified as a critical success factor in ERP-HRM implementation processes. Employees have unique insights about the sub modules of ERP products thus involvement of employees, HR officers and managers in the designing and implementation stages of HRM project was deemed to be significant.

Top management support was perceived by the respondents as critical and important for the successful ERP-HRM implementation in commercial bank of Ethiopia. Implementing an ERP system is not a matter of changing the software systems; rather it is a matter of reengineering the company and transforming the business practices to the best business practices. So, top management support can play a useful role in settling disputes and in providing clear direction.

5.2. Conclusion

This general objective of the study tries identifying critical success factors in ERP implementation in the bank from employee's perspective and to assess the implementation of ERPs HRM system in commercial bank of Ethiopia. Accordingly during the course of the study it was found that several of the hypothesized factors were found to be critical in the implementation of ERPs HRM system from employee's perspective.

Table 5.1. Conclusion of hypothesis

Hypotheses	Accepted / Rejected
H1: **Top management commitment** in ERPs HRMS implementation is considered to be a critical success factor by employees.	Accepted
H2: **Communication** in an ERP HRMS implementation is considered to be a critical success factor by employees.	Accepted
H3: **Training and education** in an ERP HRMS implementation is considered to be a critical success factor by employees.	Accepted
H4: **The composition of the implementation team** in an ERP HRMS implementation is considered to be critical success factor employees.	Rejected
H5: **User involvement** in an ERP HRMS implementation is considered to be a critical success factor by employees of CBE.	Accepted
H6: **Project vendors support** in an ERP implementation is considered to be a critical success factors by the system users in the context of	Rejected

procurement management.	
H7: **Project management** in ERP implementation is considered to be a critical success factor by the system user in the context of procurement management.	Rejected
H8: **Risk management** in an ERP implementation is considered to be a critical success factor by the system user in the context of procurement management	Accepted

Source: Own survey, 2018

Apart from providing answers as to what the critical success factors for the implementation of ERP-HRM project both theoretically and practically, the study also tries to provide practical validation and reasoning for the results of the findings. It further serves as secondary data for prospective researchers and a reference point for future studies.

5.3. Recommendations

From the summary of the findings made from examining the correlations between ERP-HRM implementation and identified Critical Success Factors (CSFs), the following points are forwarded as recommendation in order to help the bank solve the identified gap related to the implementation of the system and steps that need to be taken to improve the banks overall performance.

- Training and education regarding the system and regular and continuous communication about the system and updates to employees of the bank need to be addressed by the bank. The existing level of training and education regarding the system was deemed to be insignificant by employees.
- Communication among project members and employees regarding the progress and implications of the project to further improve implementation success needs to be incorporated in to the project planning and implementation manuals. Regular communication of system updates and how to use manuals to employees is also required.
- User involvement in the designing and implementation of project needs to be addressed by the bank. By including the users in the project team before starting the implementation process and put attention to their reasoning, this will aid the understanding of users and what they find to be the essential aspects of the CSFs that should be addressed. These aspects would then serve as input for practitioners and

researchers to modify current implementation strategies and processes to ensure that the CSFs includes all needed aspects for the entire organization

- The researcher recommends that the success of ERP-HRM implementation project can further be help along with the continued support and commitment of top management of the bank and their support should go beyond giving green light to the implementation team. Top management of the bank must also be actively involved in the project implementation stage and monitor the performance of the implementation team.

5.4. Suggestion for Further Research

This research covers small part of Enterprise Resource Planning (ERP) and Human resources component. The research also tries to cover the perspective of employee and tries to create a correlation between identified success factors and implementation success. More investigation into the relationship between identified variables and implementation success needs to be investigated to increase the acceptability of the result in this research. Furthermore several modules of ERP which were not included due to the limitations of this paper can also be investigated.

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Appendices –A

Addis Ababa University

School of Commerce

Questionnaire

Dear respondent,

I would like to thank you in advance for showing willingness to fill the research questionnaire. This questionnaire is designed to collect data from employees working in Commercial Bank of Ethiopia (CBE). The data is collected for partial fulfillment of Master of Arts in Human Resource Management under the research entitled "***Implementation of ERP's Human Resources Management System (HRMS) in Commercial Bank of Ethiopia (CBE): employee's perspective in Western Addis Ababa District (WAAD***)

Please read this information before you start completing.

1. **Purpose:** The study is intended for academic purpose. Besides, the output of the study may help as an input for the organization for any improvement in the future.

2. **Confidentiality**: The records of this study will be kept private and stored securely. In the final reports, there will be no information included that will make it possible to identify you as a research respondent.

3. Put "√**"** mark in the box to the point which highly reflects your idea.

Part-1: General information

Direction: **Please put a check mark (√) on the appropriate box**

1. Gender	A. Male	☐	B. Female	☐
2. Age	A. 18-29	☐	B. 30-40	☐
	C. 40-50	☐	D. Above 50	☐
3. Educational level	A. Diploma	☐	B. Degree	☐
	C. Masters	☐	D. Ph.D & Above	☐
4. Monthly salary range	A. Less than 5,000	☐	B. 5,000-10,000	☐
	C. 10,000-15,000	☐	D. greater than 15,000	☐

Part II: independent variables: Top management Commitment

Listed below are questions designed to elicit employee's perceptions towards identified Critical Success Factors in the Implementation of ERPs HRM system. Please indicate how strongly you agree or disagree with each statement by placing a√**.**

NO	Top management Commitment	*Strongly Disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
TM1	Do you think there is top management support for the project					
TM2	I believe there is a strong top management involvement in the project					
TM3	Top management knowledge of the bank has adequate knowledge of the project matter					
TM4	Top management support is a critical factor in the Implementation of ERPs HRM system					
NO	**Communication**	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
CO1	There is Open communication policy regarding the Implementation of the system					
CO2	There is Open interdepartmental communication among involved parties					
CO3	There is a flow of continuous updates regarding implementation status of the system					
CO4	Communication is a critical factor in the Implementation of ERPs HRM system					
NO	**Training and education**	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
TE1	There is Continuous training of employees regarding the system implementation					
TE2	The training and education provided is easy to understand					
TE3	The bank has provided me with sufficient trainings to improve my capacity to handle the HRM system					

TE4	Training and education is a critical factor in the Implementation of ERPs HRM system					
NO	**Implementation team**	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
IT1	Implementation team have the sufficient composition to implement the project					
IT2	The implementation team have the knowledge to fully implement the system					
IT3	The implementation team are technologically competent					
IT4	Implementation team is a critical factor in the Implementation of ERPs HRM system					
NO	**User Involvement**	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
UI1	Employee involvement in the system implementation phase is included					
UI2	Employees point of view and attitude is considered while designing the system					
UI3	The project is considerate of the needs of the employees					
UI4	Employee involvement is a critical factor in the Implementation of ERPs HRM system					
NO	**Project Support**	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
PS1	There is continuous support system for the implementation of the system					
PS2	The vendor support provided is satisfactory for the implementation of the system					
PS3	I believe the project vendor will have continued project relation long after the project ended for e.g. for maintenance					

PS4	Project Support is a critical factor in the Implementation of ERPs HRM system					
NO	**Project Management**	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
PM1	Time management of the project is strong					
PM2	The project's scope and critical paths to be followed are carefully identified					
PM3	Project planning and control method employed is strong					
PM4	Project Management is a critical factor in the Implementation of ERPs HRM system					
No	**Risk management**	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
RM1	Risk management of the project is strong					
RM2	The project management team has the capacity to identify any and all problems and issues that might affect the project performance					
RM3	The project management has the sufficiently flexible to handle and recover from possible risks that might arise					
RM4	Risk Management is a critical factor in the Implementation of ERPs HRM system					

Part III: Dependent variable: ERPs HRMS Implementation

NO	ERPs HRMS Implementation	*Strongly Disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
IMP1	ERPs HRMS implementation is successful.					
IMP2	CBE has improved after using ERPs HRM system.					
IMP3	Human resource efficiency has been improved after implementation of ERPs HRM system					
IMP4	I am satisfied with the implementation of ERPs HRM system					

Appendices-B

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መጠይቅ

ውድ የዚህ መጠይቅ መላሾች፣

በቅድሚያ በዚህ መጠይቅ ለመሳተፍ ላሳያችሁት ፍቃደኝነት የከበረ ምስጋናዬን ላቀርብላችሁ እወዳለሁ፡፡ ይህ መጠይቅ በኢትዮጲያ ንግድ ባንክ ውስጥ ከሚሰሩ ሰራተኞች መረጃን ለመሰብሰብየተዘጋጀ ነው፡፡ መረጃውም የሚሰበሰበው በአዲስ አበባ ዩኒርሲቲ በፕሮጀክት ማናጅመንት የሁለተኛ ዲግሪ ለድህረ ምረቃ ጽሁፍ ሚሚያ በ በኢትዮጲያ ንግድ ባንክ ምአራብ አዲስ አበባ ዲስትክት የኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክት የሰው ሀይል አስተዳደር ንኡስ ፕሮጀክት ስኬታማ አተገባበርን በዋነኝነት የሚያግዙ ንጥቦችን ከሰራተኞች አንጻር መገምገም በሚል አቻ ትርጉም ለሚዘጋጀው ጥናት ነው፡፡

የመጠይቁን ጥያቄዎች ከመሙላትዎ በፊት የሚመለከተውን መረጃ ያንብቡ፡፡

1. <u>አላማ፡</u> ይህ ጥናት የሚካሄደው ለትምህርት ብቻ ነው፡፡ ከዚህ በተጨማሪ ጥናቱ በባንኩና ለፕጀክቱ ተጨማሪ ግብአት በመሆን ማገልገል ይችላል፡፡
2. <u>ሚስጥረኝነት፡</u> የዚህ ጥናት መረጃዎች በአጠቃላይ ሚስጥራቸውን በጠበቀ መለኩ የሚቀመጡ ሲሆን የመላሾችን ማንነት በዚህ መጠይቅ ላይ ማስፈር አይቻልም፡፡
3. መልስ መስጠት በፈለጉበት ቦታ ላይ“√” ምልክት ያስቀምጡ፡፡

<u>ክፍል 1፡ አጠቃላይ መረጃ</u>

1.	ጾታ	A. ወንድ	☐	B. ሴት	☐
2.	እድሜ	A. 18-29	☐	B. 30-40	☐
		C. 40-50	☐	D. ከ 50 በላይ	☐
3.	የትምህርት ደረጃ	A. ዲፕሎማ	☐	B. ዲግሪ	☐
		C. ማስተርስ	☐	D. ዶክትሬት	☐

4. ወርሀዊ ደሞዝ	A. ከ 5000 ብር በታች	☐	B. 5,000-10,000 ብር	☐
	C. 10,000-15,000 ብር	☐	D. ከ 15000 ብር በላይ	☐

<u>ክፍል ሁለት፡ ጠቋሚ</u>

ከዚጎ በታች የተዘረዘሩት ጥያቄዎችና መመዘኛዎች በኢትዮጲያ ንግድ ባንክ ምአራብ አዲስ አበባ ዲስትክት የኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክት የሰው ሀይል አስተዳደር ንኡስ ፕሮጀክት ስኬታማ አተገባበርን በዋነኝነት የሚያግዙ ንጥቦችን ከሰራተኞች አንጻር ለመገምገም ተብለው የተዘጋጁ ጥያቄዎችን አካቷል፡፡ በመስፈርቶቹና በጥያቄዎቹ ላይ ያሎትን ግላዊ አስተያየት ቀጥሎ ባለው ሰንጠረዥ ውስጥ ካሉት ምርጫዎች መካከል የስማማል የሚሉትን በመምረጥ <u>√</u> ምልክት ያስቀምጡ፡፡

ቁጥር	የበላይ አመረር ቁርጠኝነት (Top management Commitment)	በጣም አልስማማም	አልስማማም	አርግጠኛ አይደለሁም	እስማማለሁ	በጣም እስማማለሁ
TM1	ፕሮጀክቱ የበላይ አመረር ድጋፍ አለው ብለው ያምናሉ፡፡					
TM2	የበላይ አመረር በፕሮጀክቱ ውስጥ በበቂ ሁኔታ ይሳተፋሉ ብዬ አምናለሁ					
TM3	የባንኩ የበላይ አመራሮች ስለ ፕሮጀክቱ በቂ የሆነ እውቀት አላቸው፡፡					
TM4	የባንኩ የበላይ አመራሮች ለፕሮጀክቱ ያላቸው ድጋፍና ቁርጠኝነት ለፕሮጀክቱ ስኬታማነት ወሳኝ ሚና አለው፡፡					
NO	**የመረጃ ልውውጥ (Communication)**	**በጣም አልስማማም**	**አልስማማም**	**አርግጠኛ አይደለሁም**	**እስማማለሁ**	**በጣም እስማማለሁ**
CO1	በባንኩ ውስጥ ስለፕሮጀክቱ ግልጽ የሆነ የመረጃ ልውውጥ ይገኛል፡፡					
CO2	በፕሮጀክቱ ላይ በሚሳተፉ አካላት መካከል ግልጽ የሆነ የመረጃ ልውውጥ አለ፡፡					
CO3	ፕሮጀክቱንና ሲስተሙን በተመለከተ አዳዲስ መረጃዎችና ተጨማሪ ሀሳቦች በተከታታይ ይቀርባሉ፡፡					
CO4	በባንኩ ውስጥ የመረጃ ልውውጥ ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም ስኬታማነት ወሳኝ ሚና አለው፡፡					

NO	ትምህርትና ስልጠና (Training and education)	በጣም አልስማማም	አልስማማም	አርግጠኛ አይደለሁም	አስማማለው	በጣም አስማማለው
TE1	በባንኩ ውስጥ ስለ ኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ስለ የሰው ሀይል አስተዳደር ሲስተም ተከታታይነት ያለው ስልጠና ለሰራተኞች ተሰጥቷል፡፡					
TE2	ስለ ፕሮጀክቱ የሚሰጡ ትምህርትና ስልጠናዎች ለመረዳት ቀላል ናቸው፡፡					
TE3	ባንኩ ሲስተሙን በበቂ ሁኔታ በመረዳት እንድጠቀምበት የሚያበቃ ስልጠና ሰጥቶኛል፡፡					
TE4	በባንኩ ውስጥ ትምህርትና ስልጠናለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክት ስኬታማነት ወሳኝ ሚና አለው፡፡					
NO	የፕሮጀክት አፈጻጸም ቡድን **(Implementation team)**	በጣም አልስማማም	አልስማማም	አርግጠኛ አይደለሁም	አስማማለው	በጣም አስማማለው
IT1	ፕሮጀክቱን ተግባራዊ ለማድረግ ታቅዶ የተዋቀረው ቡድን በቂና ገንቢ የሆነ የቡድን ተዋቅሮ አለው፡፡					
IT2	የተዋቀረው ቡድን ስለ ኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ስለ የሰው ሀይል አስተዳደር ሲስተም በቂ የሆነ እውቀት አለው					
IT3	የተዋቀረው ቡድን ፕሮጀክቱ የሚጠይቀውን አስፈላጊ የቴክኖሎጂ እውቀት አላቸው					
IT4	በባንኩ ውስጥ የፕሮጀክት አፈጻጸም ቡድን ተዋቅሮ ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም ስኬታማነት ወሳኝ ሚና አለው፡፡					
NO	የሲስተም ተጠቃሚዎችን አካታችነት **(User Involvement)**	በጣም አልስማማም	አልስማማም	አርግጠኛ አይደለሁም	አስማማለው	በጣም አስማማለው
UI1	በኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም ትግበራ ወቅት በሲስተሙ ተጠቃሚ የሚሆኑ ሰራተኞችን አካታች አድርጓል፡፡					

UI2	በፕሮጀክቱ እቅድ ቀረጻ ወቅት የሰራተኞች ወይም የሲስተሙ ተጠቃሚዎች ሀሳብና አስተያየት እንዲካተት ተደርጓል፡፡					
UI3	የሲስተሙ አቀራረጽ የሰራተኞችን ፍላጎት ከግምት ውስጥ ያስገባ ነው፡፡					
UI4	የሰራተኞች ወይም የሲስተሙ ተጠቃሚዎች በፕሮጀክቱ ውስጥ መካተት ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም ስኬታማነት ወሳኝ ሚና አለው፡፡					
NO	የሲስተሙ አቅራቢዎች እርዳታ **(Project Support)**	***በጣም አልስማማም***	***አልስማማም***	***አርግጠኛ አይደለሁም***	***እስማማለው***	***በጣም እስማማለው***
PS1	የሲስተሙ አቅራቢዎች በፕሮግራሙ ትግበራ ወቅት ተከታታይ የሆነ እርዳታ ለፕሮጀክቱነ ለባንኩ ሰጥተዋል፡፡					
PS2	የሲስተሙ አቅራቢዎች ለፕሮጀክቱና ለባንኩ የሰጡት እርዳታ በቂ ነው፡፡					
PS3	በእኔ እይታ የሲስተሙ አቅራቢዎች ፕሮጀክቱ ከተጠናቀቀ በኃላም ከባንኩ ጋር የስራ ግንኙነት ለምሳሌ ለጥገና ለማሻሻያ ይኖረዋል ብዬ አምናለው፡፡					
PS4	የሲስተሙ አቅራቢዎች ከባንኩ ጋር ያለው ግንኙነት ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም ስኬታማነት ወሳኝ ሚና አለው፡፡					
NO	**ፕሮጀክቱ ማናጅመንት (Project Management)**	***በጣም አልስማማም***	***አልስማማም***	***አርግጠኛ አይደለሁም***	***እስማማለው***	***በጣም እስማማለው***
PM1	በፕሮጀክቱ አፈጻጸም ወቅት የነበረው የጊዜ አጠቃቀም ጠንካራ ነው					
PM2	የፕሮጀክቱን ወሳኝ ምእራፎችና አላማዎች ለማሳካትና ለመለየት ጥንቃቄ የተሞላበት ስራ ተሰርቷል፡፡					
PM3	የፕሮጀክቱን እቅድና ክትትል ለማከናወን የተሰሩ ስራዎች ጠንካራ ናቸው፡፡					
PM4	የፕሮጀክቱ ማናጅመንት ሲስተም ለኢንተርፕራይዝ					

	ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም ስኬታማነት ወሳኝ ሚና አለው፡፡					
NO	**ሪስክ ማናጅመንት (Risk Management)**	***በጣም አልስማማም***	***አልስማማም***	***አርግጠኛ አይደለሁም***	***እስማማለው***	***በጣም እስማማለሁ***
RM1	በፕሮጀክቱ ውስጥ ያለው የሪስክ ማናጅመንት ጠንካራ ነው					
RM2	የፕሮጀክቱ አፈጻጸም ቡድን ሊያጋጥሙ የሚችሉ ችግሮችን ቀድሞ መተንበይ ብቃት አላቸው					
RM3	የፕሮጀክቱ አፈጻጸም ቡድን የሚያግጥሙ ችግሮችን ለመከላከልና ከችግሮቹም በፍጥነት ለማገገም የሚያስችል ብቃት አላቸው፡፡					
RM4	የሪስክ ማናጅመንት ሲስተም ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም ስኬታማነት ወሳኝ ሚና አለው፡፡					

ክፍል 2፡**<u>ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም</u>**

NO	**ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ፕሮጀክትና ለሰው ሀይል አስተዳደር ሲስተም (ERPs HRMS implementation)**	***በጣም አልስማማም***	***አልስማማም***	***አርግጠኛ አይደለሁም***	***እስማማለው***	***በጣም እስማማለሁ***
RM1	ለኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ና የሰው ሀይል አስተዳደር ሲስተምፕሮጀክትአፈጻጸም ስኬታማ ነው					
RM2	የባንኩ የሰው ሀይል አስተዳደር አሰራር ከፕሮጀክቱ አፈጻጸም በኋላ ተሻሽሏል					
RM3	የሰው ሀይል አስተዳደር በፕሮጀክቱ ምክንያት ተቀላጥፏል፡፡					
RM4	የሪስክ ማናጅመንት ሲስተም በባንኩ የኢንተርፕራይዝ ሪሶርስ ፕላኒንግ ሲስተም የሰው ሀይል አስተዳደር ፕሮጀክት አፈጻጸም ደስተኛ ነኝ፡፡					

Appendices- C **Correlations**

		Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Q0 ERPs HRMS Implementation	Correlation Coefficient	1	0.358	0.430	0.532	-0.044	0.422	0.0847	-0,071	-0,425
	Sig. (2-tailed)	0	0.0428	0.049	0.049	0.743	0.353	0.542	0,550	0.007
	N	325	325	325	325	325	325	325	325	325
Q1 (Top management commitment)	Correlation Coefficient	0.358	1	0.381**	0.296*	0.296*	0.332**	0.022	0.225	0.265*
	Sig. (2-tailed)	0.0428	0	0.001	0.011	0.863	0.097	0.773	0.01	0.023
	N	325	325	325	325	325	325	325	325	325
Q2(communication)	Correlation Coefficient	0.430	0.381**	1	0.301**	0.411**	0.083	0.189	0.015	0.795**
	Sig. (2-tailed)	0.049	0.001	0	0.01	0.334	0.487	0.11	0.898	0.001
	N	325	325	325	325	325	325	325	325	325
Q3(Training and Education)	Correlation Coefficient	0.532	0.296*	0.301**	1	0.409**	0.301**	0.162	0.265	0.314**
	Sig. (2-tailed)	0.049	0.011	0.01	0	0.056	0.206	0.008	0.023	0.007
	N	325	325	325	325	325	325	325	325	325
Q4 (Implementation team)	Correlation Coefficient	-0.044	0.296*	0.411**	0.409**	1	0.087	0.022	0.089	0.370**
	Sig. (2-tailed)	0.743	0.863	0.334	0.056	0	0.465	0.799	0.452	0.001
	N	325	325	325	325	325	325	325	325	325
Q5 (User Involvement)	Correlation Coefficient	0.422	0.332**	0.083	0.301**	0.087	1	0.022	0.296	0.395**

	Sig. (2-tailed)	0.0353	0.097	0.487	-0.206	0.465	0	0.799	0.011	0.004
	N	325	325	325	325	325	325	325	325	325
Q6 (Project support)	Correlation Coefficient	0.0847	0.022	0.189	0.162	0.022	0.022	1	0.118	0.189
	Sig. (2-tailed)	0.542	0.773	0.11	0.008	0.799	0.799	0	0.321	0.11
	N	325	325	325	325	325	325	325	325	325
Q7 (Project Management)	Correlation Coefficient	-0,071	0.225	0.015	0.265	0.089	0.296	0.118	1	0.189
	Sig. (2-tailed)	0,550	0.01	0.898	0.023	0.452	0.011	0.321	0	0.11
	N	325	325	325	325	325	325	325	325	325
Q8 (Risk Management)	Correlation Coefficient	0.425	0.265*	0.795**	0.314**	0.370**	0.395**	0.189	0.189	1
	Sig. (2-tailed)	0.007	0.023	0.001	0.007	0.001	0.004	0.11	0.11	0
	N	325	325	325	325	325	325	325	325	325