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St. Mary's University, Ethiopia

ST.MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

**OPPORTUNITY AND CHALLENGE OF ENTERPRISE
RESOURCE PLANNING (ERP) IMPLEMENTATION IN ETHIO
TELECOM**

BY

HILINA TADDESE

June 2017

ADDIS ABEBA, ETHIOPIA

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**A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY SCHOOL
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PROJECT MANAGEMENT**

June 2017

ADDIS ABEBA, ETHIOPIA

**ST.MARY’S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
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**BY
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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of the research advisor. All sources of materials used for the thesis have been duly acknowledge. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Name

Signature

St.MARY'S UNIVERSITY, Addis Ababa June 2017

ENDORSEMENT

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

Advisor

Signature

St.MARY'S UNIVERSITY, Addis Ababa June 2017

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List of Abbreviation/ Acronyms

BSC- Balanced Score Card

ERP- Enterprise Resource Planning

HR- Human Resource

HRM- Human Resource Management

HRMS- Human Resource Management System

HRIS- Human Resource Information System

ICT Information Communication Technology

IS Information System

IT Information Technology

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Abstract

The main purpose of this research is to examine the opportunity and challenges of implementing ERP in ethio-telecom and to recommend possible solutions for the gap. The data was collected using questionnaire and semi-structured interview from a target population. From the total of 147 target population this research selected 108 sample and collected data after that analyzed by using SPSS version 20. Then the data presented using descriptive statistics with the help of frequency, tables and percentage to provide information. Mean and Standard Deviation through measure of central tendency were also used to analyze data. for the data that were collected by semi-structured interview questions and open-ended questions, interpreted it manually The result shows that network problem, limited support from vendors and lack of knowledge transfer to the internal asset from vendor were the main challenge. On the other hand the main opportunities the company get by implementing ERP includes the report generated from the system are providing more timely information to the staffs as well as for top management to made more effective decision and improves services for Human Resource (HR) clients. But commitment of top management is required to remove the existing challenge such as continuous system down, lack of support from vendors, it takes long time to recover the system down and lack of adequate training from vendors and better to have clear measurement tool to know the company is enjoyed the opportunities. The finding is also identified the above discussed challenges and opportunity for the company and suggests solutions to prepare proactively to minimize the effects of the challenges and to enjoy the opportunities.

Key Words: Opportunities, Challenges, Enterprise Resource Planning and Ethio Telecom.

Chapter one

Introduction

1.1 Background of the Study

Like never before Organization now a day they are constantly realizing advancements that eliminate their backward and time taking working trends. In light of the fact that in globalization world removing down old working system and executing new innovation is mandatory and very essential to every organization to be successful and achieve its objective. In addition to this when any organization implement this improved and more automated system it has creates many benefits like it gives real, accurate and paperless data. (Kevin, 2017).

In our globalized world sitting without any change and improvement leads organization their existence in question. Now a days With the rushing and increasing flows of information and communication, organization can now access more information from all over the world so improving organizational performance only from internal perspective have impact because organization must observe what is happening in the globe to be more effective and efficient organization. (Heerwagen, 2016)

Rahnavarda and Bozorgkhou (2014) argue that during the past few years, there has been growing competition among organizations and firms to offer products and services in a global market. Enterprise Resource Planning Systems (ERP) is one of the most important tools for the integration of information and communication technology (ICT) in organizations to join in global market. These systems are not only capable of planning resources, but also integrate all units and corporate functions in an integrated computer system to meet all necessary requirements.

An ERP system enables an organization to integrate all the primary business processes in order to enhance efficiency and maintain a competitive position. As defined by Tenkorang and Helo (2011) ERP is an enterprise-wide information system that integrates and controls all the business processes in the entire organization. In addition The Enterprise Resource Planning (ERP) system is an enterprise information system designed to integrate and optimize the business processes and transactions in a corporation. The ERP system facilitates the smooth flow of common functional

information and practices across the entire organization. This definition also noted by Tsyen, Idrus and Kalsom (2016) ERP it is a system having configurable software package that supports integrating transaction process which spans across various business areas by consolidating all business activities in to uniform system environment.

According to lineke (2014) he define ERP system are computer applications that are used by companies in many industries in addition its supports data integration and support for best practice processes. The data integration means the data only entered once, after which they are available for use throughout the organization.

As Almahdi (2015) Enterprise Resource Planning (ERP) system solutions are currently in high demand by both manufacturing and service organizations, because they provide a tightly integrated solution to an organization's information system needs. ERP allows professional people to manage their company in one system that integrates the entire business process and creates a wide-enterprise view of significant corporate information.

The implementation of an ERP system in an organization is a very complex project. The implementation of such systems is difficult and involves a high costs, as well as considerable time and resources. Organizations contemplating such a project must be aware of the necessary commitments. (Almahdi, 2015).

This issue also discussed by Rahnavarda and Bozorgkhou (2014) ERP implementation normally costs significantly and it is time consuming since it needs fundamental changes in processes, which creates tensions in most parts of the organizations and the outcome could be undesirable. In order to integrate the resource management and research excellence, ERP can contribute as one of the most advanced technology. However, implementing an ERP system is one of the main challenges in recent decades, so that organizations consider the investment in ERP systems as a significant strategy, which creates competitive advantage for many organizations.

In addition to the tools being used, the most important success-factor for any big company is its culture & organizational structure if the company's structure is not well organized; it might be the root cause for the failures of the used ERP tool. As in the case of small companies ERP is not mandatory since its cost is greater than the benefit.

Ethio-telecom has different objective from that it have a desire of being a world class company and in order to be a world class company, it decided to use a more advance system tools ERP so

that its employees' activities are shifted from routine tasks to strategic ones. This tool has an advantage of automating all manual processes.

As the History of ERP shows other developed countries started to use ERP starting from the mid of 1960 which is more than 50 years back. According to Rashid, Hossain & Patrick (2002) Starting from 1960 ERP have different names and made additional improvement. In 1960 its name called inventory control package (ICP), in 1970 martial requirement planning (MRP), 1980 manufacturing resource planning (MRP) and 1990 it became Enterprise resource planning (ERP). Literature related the topic is more done on developed country. But as Dixit and Prakash (2011) and other authors working on the topic mentioned on limitation part their conclusion and finding is limited to specific country specially for Developed country and for specific industry. For developing country like Ethiopia ERP is relatively new and not many studies have been done on the topic.

The motive of this research is to fill the above mentioned gap. Since telecom companies are highly dependent on technologies the company (ethio-telecom) is not new to implement new technology based system. But regarding system on human resource aspect, it is new phenomena. So the researcher's interest and motive is to identify the opportunity and challenges of implementing the system, to show the potential opportunity and challenges and finally to recommend possible solution for the gap identified.

1.2 Background of the Organization

The introduction of telecommunications services in Ethiopia dates back to 1894, seventeen years after the invention of telephone technology in the world. Because of different reason its name changed many times. Some of them are Imperial Board of Telecommunications of Ethiopia (IBTE), Ethiopian Telecommunication Services (ETS), Ethiopian Telecommunications Authority (ETA), and Ethiopian Telecommunications Corporation (ETC). Then on regulation No 197/2010 ethio-telecom established at November 29, 2010 as Public Enterprise (Ethio-telecom Establishment council of Ministers Regulation, 2010). The vision of the company is to be a world-class provider of telecom services and its missions are Connect Ethiopia through state-of-the-art telecom services, Provide high quality, innovative and affordable telecom products and services that enhance the development of our nation, Build reputable brand known for its customers' consideration, Build its managerial capability and manpower' talent that enables ethio telecom to operate at international level and Support community and environmental development. Thus, ethio

telecom is born from this ambition in order to bring about a paradigm shift in the development of the telecom sector to support the steady growth of our country. Following introduction of the new company, a full-fledged IT solution named ERP was introduced having an objective of creating an automated work environment in the company. Since ERP started in developing country in the mid of 1960 it pass different stages and names According to Rashid, Hossain & Patrick (2002) Starting from 1960 ERP have different names and made additional improvement. In 1960 its name called inventory control package (ICP), in 1970 martial requirement planning (MRP), 1980 manufacturing resource planning (MRP) and 1990 it became Enterprise resource planning (ERP).

1.3 Statement of the Problem

Implementation of modernized system can help any organization in many aspect this issue was supported by different writer according to Linda (2003), ERP is the process of integrating all the business functions and processes in an organization to achieve numerous benefits. First, a single point of data entry helps to reduce data redundancy while saving employee's time in entering data, thereby reducing labour and overhead costs. Second, the centralization of information, decision-making, and control leads to increases in efficiencies of operations and productivity, as well as coordination between departments, divisions, regions, and even countries.

In addition to the above mentioned points implementing ERP system have its own opportunity for the company by integrating every procedure of your business while improving the quality of several areas simultaneously and it create favourable condition for the company to implement other systems or their will be technological advancement, ERP systems is that they increase the availability of the information, helping companies to have information in real time to make decisions and the staffs have known how to use modern system so it cannot be headache for any organization to implement new system, the organization have an opportunity of having one master data, and the organization have more modernized staff who is capable of using modern system. With the help of ERP we can have the idea about how and what data flowing among the different processing activities in organization , which keeps top level management updated in the regards of organizational information. The ERP also gives the better understanding of the current organizational workflow and fund-flow which help the organization to change its tactical decisions by creating new strategies for the improvements (Ramdas and Amar 2014).

Despite the significant benefits and opportunities that ERP software packages provide in managing and integrating cross-functional business processes there are several difficulties and barriers that relate to such an implementation. Implementing an ERP system is a major project requiring a significant level of resources, commitment and changes throughout the organization. Often the ERP implementation project is the single biggest project that an organization has ever launched. More than half of ERP projects have been judged to be unsuccessful or do not achieve their expectations (Nic and Rosnah 2016).

As disused by Goeun(2013) Unlike other information systems, the major problems of ERP implementation are not technologically related issues such as technological complexity, compatibility, standardization, etc. but mostly about organization and human related issues like resistance to change, organizational culture, incompatible business processes, project mismanagement and top management commitment.

Therefore the main reason to conduct this research is that after implementing ERP project the company has facing continuous system problem. As informed on continuous email communication there is a continuous system down. Even if this issue is known but it does not supported by any studies to know the exact problem so, this study addressed this issue. During system down the HR department staffs back to their manual work which is more time taking due to this when the system recovers the staffs are forced to insert the data they worked manually when there is system down which creates high work burden for the staffs. Plus during system down when top management wants data they did not have get on time and real data. As reported on continuous ERP evaluation reports the other challenge the company facing after implementing ERP is that there lack of adequate support and knowledge transfer from vendors' side. This issue also be one of the big hindrance for the organization .In addition to that, after implementing the Project of Oracle ERP in HR department, the company is recently implemented the system to other departments and have plan to integrate BSC evaluation system to this system so the company has to learn from the strengths and weaknesses they have and to know clearly the real benefits they enjoyed and the potential benefits they haven't figured out yet plus they have to know the problem they faced before and have to take corrective action for the upcoming other.

1.4 Research Question

In the light of the above statement of the problem in mind, the research study has formulated the following major research question:

- How does the implementation practice of ERP looks like?
- What are the major opportunities of Implementing ERP?
- What are the major challenges of Implementing ERP?

1.5 Study Objective

1.5.1 General Objective

The major objective of this study is to assess the opportunity and challenges of implementing ERP system in ethio-telecom and to recommend possible solutions for the problem.

1.5.2 Specific Objective

- To examine the practice of ERP system in ethio tele com
- To investigate the opportunities in the implementation of ERP system.
- To identify challenges in the process of implementation of ERP system.

1.6 Definition of Terms

ERP (enterprise resource planning) – according to Seo (2013) ERP system has been one of the most popular business management systems, providing benefits of real-time capabilities and seamless communication for business in large organizations.

BSC (balanced score card) – Norton and Kaplan (1996) strategic management system that helps managers to translate organization strategy in to operational objectives and implement it.

IS (Information System) – Nuamann, Shasha and Vossen (2017) - software and hardware systems that support data intensive application.

HR (Human resources) - are defined as firm's knowledge, experience, skill and commitment of the employees to the firm; their relations with each other and with others outside the firm.

They are the most important firm asset, the ones that research, design, project and differentiate the firm from other firms. Qehaja and Kutllovci (2015)

HRIS (human Resource Information system) - The systems and processes at the intersection between HRM (human resource management) and information technology through a HR software solutions (Gupta, 2013).

1.7 Significance of the Study

The general aim of this research was to provide relevant data that can help both the organization ethio tele com and the employees to know their own weakness and strength towards the implementation of the ERP system. Plus to show the challenge and opportunist of this system to both parties in addition to the above listed aim this paper have the following specific aims:

- To inform important decision makers in the company about the problem the organization faced concerning ERP.
- Other companies who implemented this system or those companies who have a plan to implement this can get benefit from this paper.
- It will be as an input to other researcher for further investigation.

1.8 Scope of the Study

The limit of this research is ethio-telecom; on this specific company, the research examines the opportunity and challenges of ERP system. From different ERP function this paper focuses only ERP project implementation from human resource angle and from different branch of ethio telecom this study focus only on head quarter human resource department the reason behind this is that:

- Most of the staffs who participate during feasibility study and system development phase are currently working in this area.
- The system first implements in this department and they have more experience concerning this system.
- Almost all the staffs who are working on this area have worked their day to day activity by using ERP.

1.9 Limitation of the Study

This study has the following limitations:

- Sometime the respondents many be unwilling to fill the questioner.

- Unable to get some of top management on the scheduled date for the interview.
- First, this study cannot be generalized to all other individuals as the respondents are confined to HR professional employees in the telecom sector employees. Therefore, the results cannot be generalized to individuals working in other departments. As such, there is still room for further investigation to include individuals working in other departments or sectors or divisions may add further support to the findings.

1.10 Organization of the Study

This paper will consist of five chapters, which include the following: The first chapter stands for introduction of the study which consists of background of the study, background of the organization, statement of the problem, study questions, objectives of the study, definition of terms, significance of the study, scope of the study, limitation and organization of the study. Chapter two contains review of different literatures both on the area. Which discusses various theories and concepts on ERP system Implementation and related empirical reviews. Chapter three deals with the research methodology and design contains research design, data collection, Sample design and size, data presentation and analysis, reliability and validity. Then, chapter four presents data presentation and analysis. And finally, the fifth chapter portrays the summary, conclusion and recommendation part.

Chapter Two

Literature review

2.1 Introduction

There are many research works and literature conducted about ERP implementation all over the world, from different countries perspectives and in different sectors. So this section tries to review different related literature conducted before concerning about ERP system implementation and its opportunity and challenge.

2.2 What is ERP System?

ERP is one of modern system that has much function and now a day's many companies are using this system to change their manual work to more automated one. As noted by Tsyen, Idrus and Kalsom (2016) ERP it is a system having configurable software package that supports integrating transaction process which spans across various business areas by consolidating all business activities in to uniform system environment. This definition also accepted by other writers as well. Tenkorang and Helo (2011) applies this same definition of ERP helps an organization to integrate all the primary business process in order to enhance efficiency and keep a competitive position plus it is an enterprise wide information system that coordinate and control all business processes throughout the organization.

According to lineke (2014) he define ERP system are computer applications that are used by companies in many industries in addition its supports data integration and support for best practice processes. The data integration means the data only entered once, after which they are available for use throughout the organization. As noted by Goeun (2013), and Linda (2003) also support the above listed points by ERP is the process of integrating all the business functions and processes in an organization to achieve numerous benefits. First, a single point of data entry helps to reduce data redundancy while saving employee's time in entering data, thereby reducing labor and overhead costs. Second, the centralization of information, decision-making, and control leads to increases in efficiencies of operations and productivity, as well as coordination between departments, divisions, regions, and even countries.

As Almahdi (2015) Enterprise Resource Planning (ERP) system solutions are currently in high demand by both manufacturing and service organizations, because they provide a tightly integrated solution to an organization's information system needs. ERP allows professional people to manage

their company in one system that integrates the entire business process and creates a wide-enterprise view of significant corporate information.

In addition according to Nafjan and Mudimign(2005) they define Enterprise resource planning (ERP) system as a business management system that comprises integrated sets of comprehensive software, which can be used, when successfully implemented, to manage and integrate all the business functions within an organization. These sets usually include a set of mature business applications and tools for financial and cost accounting, sales and distribution, materials management, human resource, production planning and computer integrated manufacturing, supply chain, and customer information. This definition also cited Singla (2008) Enterprise Resource Planning software systems (ERP) encompass a wide range of software products supporting day-to-day business operations and decision-making. ERP serves many industries and numerous functional areas in an integrated fashion, attempting to automate operations from supply chain management, inventory control, manufacturing scheduling and production, sales support, customer relationship management, financial and cost accounting, human resources and almost any other data oriented management process. Generally Enterprise Resource Planning (ERP) is software that attempts to integrate all departments and functions across a company onto a single computer system that can serve all those departments' particular needs.

2.3 Consideration before implementing the ERP system

Before implementing any project we must consider different parameters since ERP is also a project several critical issues that managers must consider before making the final decision to integrate all the business functions in the organization. This also noted by Linda (2003) as before integrating business functions, managers must consider several important issues that will help them decide whether an ERP integration is the right choice for their organization or not. These pertinent issues according to her include:-

1. Fundamental Issued

Under this before implementing the ERP system Linda (2003) said we must consider various things like

- Frist managers must consider the fundamental (essential) issue of the system integration of by analyzing the organization's vision and corporate objectives. Plus checking whether the organization is financial and economically prepared to invest ERP.

- Management needs to decide on the key related implementation and business issues and how to proceed. Certainly, ERP is not suitable for companies that are experiencing rapid growth and change in an unstable environment are undergoing change in the corporate management and philosophy, or that will be experiencing merger or liquidation in the near future.
- Finally, organizations need to exploit future communication and computing technology to integrate the ERP system with e-business application.

2. People

During ERP implementation we must give high focus to people related issue like corporate philosophy and leadership style. Let's see people related issue in two separate parts from management and employees side.

- Linda as well as other writer said active top management support and commitment are essential to the success full implantation of the system.
- Most of the time employees can quit wary of any kind of changes so to increase the chance of a successful ERP implementation and reduce users' resistance to change, end users, especially those who are very knowledgeable with the operation, must be involved in all stages of the implementation process.

3. The Organizational Change Process

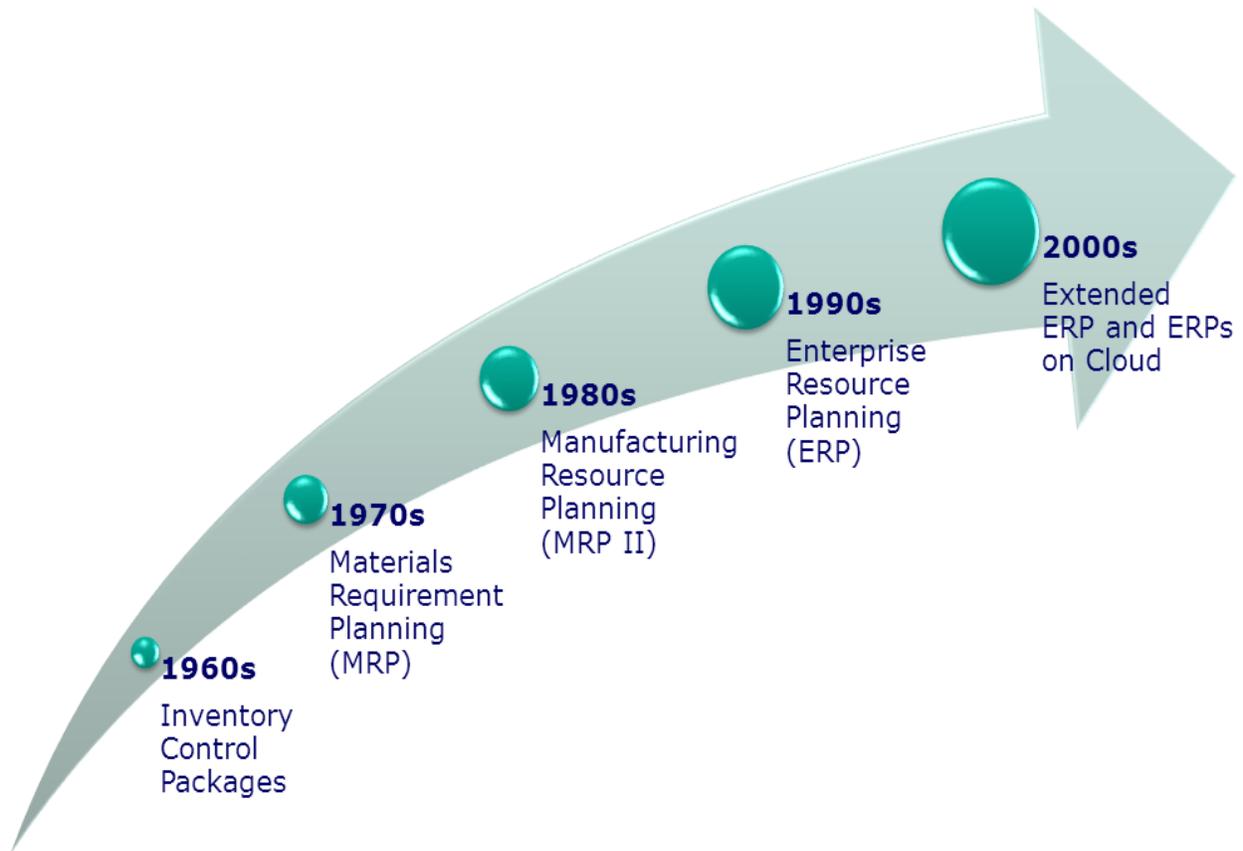
ERP implementation requires organizations to reengineer their key business processes in fundamental ways, revamping old ways of conducting business, redefining job responsibilities, and restructuring the organization. The ERP systems must be customized to address global issues where different countries have different ways of doing business, and to incorporate country-specific business practices pertaining to accounting, tax requirements, environmental regulations, human resources, manufacturing, and currency conversion into the integrated system. So those who implement ERP must know there will be change in the organizational process during ERP implementation.

2.4 Over view about ERP

2.4.1 History of ERP

ERP is more modernized and automated system it passes many steps to reach on its current status. As stated by Rashid, Hossain and Patrick (2002) 1960s most organizations designed, developed and implemented centralized computing systems, mostly automating their inventory control systems using inventory control packages (IC). These were legacy systems based on programming languages such as COBOL, ALGOL and FORTRAN. Material requirements planning (MRP) systems were developed in the 1970s which involved mainly planning the product or parts requirements according to the master production schedule. Following this route new software systems called manufacturing resources planning (MRP II) were introduced in the 1980s with an emphasis on optimizing manufacturing processes by synchronizing the materials with production requirements. MRP II included areas such as shop floor and distribution management, project management, finance, human resource and engineering. ERP systems first appeared in the late 1980s and the beginning of the 1990s with the power of enterprise-wide inter-functional coordination and integration. Based on the technological foundations of MRP and MRP II, ERP systems integrate business processes including manufacturing, distribution, accounting, financial, human resource management, project management, inventory management, service and maintenance, and transportation, providing accessibility, visibility and consistency across the enterprise. During the 1990s ERP vendors added more modules and functions as “add-ons” to the core modules giving birth to the “extended ERPs.” These ERP extensions include advanced planning and scheduling (APS), e-business solutions such as customer relationship management (CRM) and supply chain management (SCM). The below Figure summarizes the historical events related with ERP.

Figure 1 evolution of ERP



Source: <https://www.bing.com/search?q=evolution+of+ERP+pic&FORM=EDGNNC>

2.4.2 ERP functions

Rashid et al., (2002) Different ERP vendors provide ERP systems with some degree of specialty but the core modules are almost the same for all of them. Some of the core ERP modules found in the successful ERP systems is the following:

- Accounting management
- Financial management
- Manufacturing management
- Production management
- Transportation management
- Sales & distribution management
- Human resources management
- Supply chain management

- Customer relationship management
- E-Business

Figure 2 core modules of ERP



Source: <https://www.bing.com/search?q=core+modules+of+ERP+pic&FORM=EDGNNC>

2.4.3 ERP vendors

There are different vendors that supply ERP system according Haim (2000) the below are top ten ERP vendors

SAP – Founded in 1972 by five former IBM engineers, SAP is the undisputed market leader in the ERP space and is the third largest software company in the world. Its current version has more than 30,000 relational database tables that allow it to handle extremely complex business situations. While it is an undisputed number one in the Tier I ERP space, SAP has been criticized at times for being too complex and difficult to handle. If you are a small or medium company, this solution is probably more than what your company needs or could potentially handle.

Oracle – While Oracle was formerly best known for its relational database, it was for many years the database of choice for SAP ERP applications. This cooperative situation had existed since the late 70’s. However, sometime around 2004, Oracle began to look at building its own ERP solutions and at the same time SAP began to offer its ERP solutions on the Microsoft SQL Server database

platform as well. The first Oracle ERP product was Oracle Financials which was released into the market as early as in 1989. However, post 2004, Oracle began to become a serious player in the ERP market and is now a well-established number 2 in the Tier I market.

Microsoft – Microsoft Dynamics is mostly focused on Tier II clients in the ERP space. It provides solutions in a number of different business domains including in the Customer Relationship Management domain. A great advantage of Microsoft products is its great ease of use. This holds for its ERP products as well.

Infor – Infor Global Solutions is a privately held company that has grown rapidly in the Tier II vendor space since 2002. The company has taken an aggressive acquisition route to growth and continues to follow this path even now with its acquisition of ENXSUITE in 2011. Infor has a global presence to match the footprint of the top 3 and has clients in 194 countries. Infor has solutions in as many as in 14 different domains and it has a very good presence in each of the four specific domains that were previously discussed.

Epicor – Started in 1984 and working initially with DOS, Epicor later converted its products to Windows and followed a merger and acquisition path to acquire companies selling ERP products and then to offer their solutions as a comprehensive package. Epicor has a presence in over 150 countries and has more than 20,000 Tier II / III customers. Epicore likes to call its ERP “the key to possibilities not yet imagined”.

Lawson – Acquired by Infor a couple of years ago, Lawson still maintains a separate identity although it does display the Infor logo on its web site. Specifically mentioning that it is tailored for the small to mid-sized business, Lawson has a presence in 68 countries and has more than 4,500 installations. Lawson caters to a large number of verticals and uses this as its USP. Simplicity of the solution is another key focus area in a market best known for its complexity.

QAD – The QAD website shows a chain with the logo of the cloud forming one of the links so we have an idea what is on the company’s mind. The QAD Enterprise Application is designed to make it easy for first time ERP users to begin using an ERP in their company with the least amount of migration problems. The company supports and engages with its customers to ensure that the return on investment is obtained rapidly.

Sage – is a UK based company and had its beginnings in a 1981 summer job when the first version of a type of accounting software was written. This grew into larger versions until eventually, in 1984, Sage Software was launched as a company and achieved a fair amount of success. Like

many other companies in the ERP space, Sage has grown by a number of acquisitions and says that ‘acquisitions are part of its DNA’. The cross pollination of DNA appears to have been very successful given the rate of growth Sage has been seeing.

IFS – Founded in 1983, IFS focuses on building agile ERP solutions that use SOA architecture. This implies easy modification and adaptation to user needs. IFS is most useful four core strategic processes - service & asset management, manufacturing, supply chain and project management. It has a user base in excess of 2,000 installations and customers in 50 countries. One key reason for its success is its sharp focus on specific verticals.

Consona Corp – Deriving its name from ‘consonance with the customer’, Consona is active in ERP, CRM, knowledge management and other related fields. The company is privately held and has grown by acquiring a number of specialist ERP companies. If you are doing business in a niche area where Consona has a focus, you may just be lucky. No one else we know is offering an ERP solution tailored to printed circuit board manufacturers or to metal wire and cable manufactures. A solution as focused as this is bound to be better than a generic ERP when put to use in one of those industries.

2.5. Opportunities of ERP system

Any system implementation have its own opportunity for the organization so implementation of ERP project created opportunity for the organization since it is more modernized system it have the opportunity .According to Hossain,Patric and Rashid(2002) The adoption of an ERP system will provide an opportunity to introduce new procedures that will eradicate existing inefficiencies. Attitudes favorable to the adoption of ERP systems will be enhanced to the extent that ERP systems are perceived as agents of changed processes. According to Mafaz (2005) Organizations in developed countries have recognized ERP systems as effective management systems leading to excellent planning and scheduling capability and significant improvements in productivity. Better customer service, higher return on investments and greater reduction in material costs are other opportunities expected from an ERP system. The global village concept has introduced a whole new way of doing businesses, forcing organizations to redefine their processes by leveraging IT as a strategic business tool to gain the competitive advantage and successfully achieve the goals of the organization. Most ERP vendors provide an opportunity to update procedures and align with perceived best practices to meet changing business needs more quickly Goeun (2013).According

to business case in ERP (2010) states In the longer term as new systems stabilize and staff has the opportunity to maximize use of the new tools.

As stated by Priya (2016) Furthermore, integrated system architecture is a major component of the system as the integration enables an enterprise to access the same system across different demographics. This software is also responsible for increasing productivity by reducing expenses and enabling the enterprises gets potential ROI. The software can integrate high volume of data as well as processes across many departments and geographies. It further empowers an enterprise to move their products much quicker, reconcile shipments faster, and many more. Nonetheless, the enterprise resource planning software provides organizations access to a multitude of crucial data which was either unavailable or impossible to derive with other software. Forch, Kieschnick, Aldridge and Shorter (2007) Human resources functions can be improved through ERP by removing redundancy and tediousness of daily activities. This allows more time to be spent on value-added duties, which in turn leads to a more fulfilling job for employers. As employees become more empowered, they become more involved in decision making. With the right training and guidance, they can make decisions on their own without the close, watchful eye of their supervisor, allowing their supervisor to spend more time on value-added activities.

Oliver and Romm Central (2002) By adopting ERP technology organization have opportunity that lowers the costs of production, a producer organization may be able to secure a price advantage and thereby achieve a greater market share or reap larger than usual profits in addition Improving the performance of existing activities (speed, accuracy, economics) and Integration of data and systems to avoid duplication, inconsistency and misinformation. According to IMB (2012) some companies look at ERP implementations as just a technology change when in fact it is really an opportunity to transform their business and associated processes within their company.

2.6. Challenge of ERP System

Implementation of any system has its own challenges especially when the project is new to the organization. According to Goeun (2013) In spite of ERP's significant growth there are a number of challenges that companies may encounter when implementing ERP. BooYoung(2007) stated Many engineering and construction firms know how beneficial ERP systems are, but they still hesitate to adopt these systems due to their high cost and risk The most known challenges include

resistance to change from the staff, lack of support from the top management, organizational culture and lack of continuous training. This issue also noted by Goeun (2013) ERP implementation have its own challenges like Lack of senior manager commitment, Ineffective communications with users, Insufficient training of end-users, Failure to get user support, Lack of effective project management methodology, Attempts to build bridges to legacy applications, Conflicts between user departments, Composition of project team members, Failure to redesign business process and Misunderstanding of change requirements. Shanab, Shehab and Khairallah (2015) ERP systems are complex systems that face high probability of failure. Implementing such systems need careful planning and guarding against factors for failure. In addition according to Sanchita (2013) there are challenges during implementation of ERP it includes:

- Employee orientation- employees sometimes does not accept changes.
- Working culture- Also affects the acceptance of the implementation of new system in an organization.
- Security concern- A system or technique designed for one country may not be effective in other country.
- Cost factor- Cost is an important factor to be taken into consideration before implementation of the ERP system.
- Training and Learning- The process of training and adaptation to the ERP system be a cumbersome and time consuming process.
- Technical limitation- An organization cannot depend on technological websites or software completely to handle every issues related to HR.

According to Bingi, sharama and Godla (2006) implementing an ERP causes massive change that needs to be carefully managed to reap the benefits of an ERP solution. Critical issues that must be carefully considered to ensure successful implementation include commitment from top management, reengineering of the existing processes, integration of the ERP with other business information systems, selection and management of consultants and employees, and training of employees on the new system. Companies could spend hundreds of millions of dollars and many years implementing ERP solutions in their organizations. Once an ERP system is implemented, going back is extremely difficult; it is too expensive to undo the changes ERP brings into a company. Chen, Chen and Tsai (2009) most enterprises in an attempt to carry out ERP often end up in failure and it seems the probability of the mishaps is considerably high. There are several

failed ERP attempts and companies lost not only the capital invested in ERP packages and millions paid to outside consultants, but also a major portion of their business. Implementing an ERP system is a careful exercise in strategic thinking, precision planning, and negotiations with departments and divisions. It is important for companies to be aware of certain critical issues before implementing any ERP package. Careful consideration of these factors will ensure a smooth rollout and realization of full benefits of the ERP solution. According to Goeun (2013) ERP implementations have sometimes failed to achieve the organization's targets and desired outcomes. Much of the research reported that the failure of ERP implementations was not caused by the ERP software itself, but rather by a high degree of complexity from the massive changes ERP causes in organizations.

Hence; depending on the degree of failure according to our existing practical situations here are the major ERP challenge areas:-

Lack of Top *Management* Commitment

The IT literature has clearly demonstrated that for IT projects to succeed top management support is critical. This also applies to ERP implementations. Implementing an ERP system is not a matter of changing software systems, rather it is a matter of repositioning the company and transforming the business practices. Due to enormous impact on the competitive advantage of the company, top management must consider the strategic implications of implementing an ERP solution. Management must be involved in every step of the ERP implementation. Some companies make the grave mistake of handing over the responsibility of ERP implementation to the technology department. This would risk the entire company's survival because of the ERP system's profound business implications. It is often said that ERP implementation is about people, not processes or technology. An organization goes through a major transformation, and the management of this change must be carefully planned and accurately implemented. The top management must not only fund the project but also take an active role in leading the change Bingi, et al., (2006). According to Eldabi and Naseer (2016) Management may not be clear about the needs and requirement of IT system such as ERP that why and how they are adopting it or whether such a capital investment is needed or no. In addition Intervention from management is often necessary to resolve conflicts and bring everybody to the same thinking but most of the time top management lacks this. Goeun (2013) stated that Since ERP implementation inevitably causes organizational changes; it requires

the engagement of senior management from across the organization that able to resolve conflicts. Without the commitment of senior management, ERP implementation has a high risk of failure.

Organizational Resistance

Chen et al., (2009) stated that No matter how the revolution proceeds; the main target appeal in the revolution is the employees. For most employees, because they have been accustomed to the past traditional business mode, once encountering a revolution, they will be unwilling to cooperate and will resist in order to keep a stable condition. As stated by Nafjan and Mudimign (2005) when implementing an ERP system, top management commonly faces an unwanted attitude from potential users for one reason or another, they resist the implementation process. Shanab, Shehab and Khairallah (2015) Failure in accepting the change is one of the main potential problems that is expected to appear during ERP implementation phase, which is called The Change problem.

Reengineering

Bingi, et al., (2006) Implementing an ERP system involves reengineering the existing business processes to the best business process standard. ERP systems are built on best practices that are followed in the industry. One major benefit of ERP comes from reengineering the company's existing way of doing business. All the processes in a company must conform to the ERP model. The cost and benefits of aligning with an ERP model could be very high. This is especially true if the company plans to roll out the system worldwide. It is not very easy to get everyone to agree to the same process. Sometimes business processes are so unique that they need to be preserved and appropriate steps need to be taken to customize those business processes. If the package cannot adapt to the organization, then organization has to adapt to the package and change its procedures. When an organization customizes the software to suit its needs, the total cost of implementation rises. The more the customization, the greater the implementation costs. Companies should keep their systems "as is" as much as possible to reduce the costs of customization and future maintenance and upgrade expenses.

Shortage of ERP Consultants

Because the ERP market has grown so big so fast, there has been a shortage of competent consultants. The skill shortage is so deep that it cannot be filled immediately. Finding the right people and keeping them through the implementation is a major challenge. ERP implementation demands multiple skills, functional, technical and interpersonal skills. Again, consultants with specific industry knowledge are fewer in number. There are not many consultants with all the required skills. Managing a consulting firm and its employees is even more challenging. The success or failure of the project depends on how well you meet this challenge. Bingi, et al., (2006). According to Salmela and Koskivara (2013) shortage of ERP consultant is one the main risk and challenge in ERP implementation.

Implementation Time

The implementation takes a long time and spends very high estimated cost Chen et al., (2009) ERP systems come in modular fashion and do not have to be implemented entirely at once. Several companies follow a phase-in approach in which one module is implemented at a time. The length of implementation is affected to a great extent by the number of modules being implemented, the scope of the implementation (different functional units or across multiple units spread out globally), the extent of customization and the number of interfaces with other applications. The more the number of units, the longer implementation time. Also, as the scope of implementation grows from a single business unit to multiple units spread out globally, the duration of implementation increases. A global implementation team has to be formed to prepare common requirements that do not violate the individual unit's specific requirements. This involves extensive travel and increases the length of implementation. Bingi, et al., (2006)

The problem with ERP packages is that they are very general and need to be configured to a specific type of business. This customization takes a long time, depending on the specific requirements of the business.

Implementation Costs

According to Shanab, Shehab and Khairallah (2015) Organizations must realize the high cost of ERP implementation and assess if it is ready for such step. ERP implementation requires a wide range of knowledge and external expertise; without external help it is really hard for any

organization to be able to implement ERP successfully. In addition to the previously mentioned costs, ERP implementation costs also include training of staff and the customization of the system to fit with existing firm interfaces. Even though the price of prewritten software is cheap compared with in-house development, the total cost of implementation could be three to five times the purchase price of the software. Bingi, et al., (2006) the implementation costs would increase as the degree of customization increases. The cost of hiring consultants and all that goes with it can consume up to 30 percent of the overall budget for the implementation. Employees could double or triple their salaries by accepting other positions. Retention strategies such as bonus programs, company perks, salary increases, continual training and education, and appeals to company loyalty could work. Other intangible strategies such as flexible work hours, telecommuting options and opportunities to work with leading-edge technologies are also being used. Many companies simply strive to complete the projects quickly for fear of poaching by head-hunting agencies and other companies.

ERP Vendors

As stated by Bingi, et al., (2006) Top management input is very important when selecting a suitable vendor. Management needs to ask questions about the vendor, such as its market focus (for example, midsize or large organization), track record with customers, vision of the future and with whom the vendor is strategically aligned. For a global ERP rollout, companies need to be concerned about if the ERP software is designed to work in different countries. Also, the management must make sure the ERP vendor has the same version of the software available in all the countries the company is implementing the system. Vendor claims regarding global readiness may not be true and the implementation team may need to cross-check with subsidiary representatives regarding the availability of the software. Vendors also may not have substantial presence in the subsidiary countries. It is important to evaluate if the vendor staffers in these countries are knowledgeable and available. If there is a shortage of skilled staff, bringing people from outside could solve the problem, but it would increase the costs of implementation.

Selecting the Right Employees

Bingi, et al., (2006) Companies intending to implement an ERP system must be willing to dedicate some of their best employees to the project for a successful implementation. Often companies do not realize the impact of choosing the internal employees with the right skill set. The importance of this aspect cannot be overemphasized. Internal resources of a company should not only be experts in the company's processes but also be aware of the best business practices in the industry. Internal resources on the project should exhibit the ability to understand the overall needs of the company and should play an important role in guiding the project efforts in the right direction. Most of the consulting organizations do provide comprehensive guidelines for selecting internal resources for the project. Companies should take this exercise seriously and make the right choices. Lack of proper understanding of the project needs and the inability to provide leadership and guidance to the project by the company's internal resources is a major reason for the failure of ERP projects. According to shah et al., (2011). The adoptions of ERP systems always demand both technical and social changes on the part of the organization. The end users' needs to be informed about the benefits that may be gained and the challenges that organization may face during ERP implementation in order to get all those mentally prepared for the change expected

Training Employees

Bingi, et al., (2006) Training and updating employees on ERP is a major challenge. People are one of the hidden costs of ERP implementation. Without proper training, about 30 percent to 40 percent of front-line workers will not be able to handle the demands of the new system. The people at the keyboard are now making important decisions about buying and selling important commitments of the company. They need to understand how their data affects the rest of company. Some of the decisions front-line people make with an ERP system were the responsibility of a manager earlier. It is important for managers to understand this change in their job and encourage the front-line people to be able to make those decisions themselves. Training employees on ERP is not as simple as Excel training in which you give them a few weeks of training put them on the job and they blunder their way through. ERP systems are extremely complex and demand rigorous training. It is difficult for trainers or consultants to pass on the knowledge to the employees in a short period of time. This "knowledge transfer" gets hard if the employees lack computer literacy or have computer phobia. In addition to being taught ERP technology, the employees now have to be taught their new responsibilities. With ERP systems you are continuously being trained.

Companies should provide opportunities to enhance the skills of the employees by providing training opportunities on a continuous basis to meet the changing needs of the business and employees. According to Barton (2001) Increasing reports point to poor training as a major cause behind failed ERP projects. Not just education of the technical staff, but of the user community who are supposed to actually work with the system. ERP changes the way companies do business but, instead of training everyone in the company on how to do business differently, they are trained on new computer software.

2.7 ERP in Ethio telecom

As stated in ethio tele com ERP project charter and reports Currently, Ethio Telecom is integrated different divisions, departments using the modern enterprise system. The integrated divisions are Sales and marketing, Finance, Human Resource, Network and procurement and facility units of the company. Ethio telecom implements this ERP system to automate and transform the edge of company culture and also to make its vision of becoming “World Class Telecom Operator”. Ethio-Telecom enterprise software consists of a set of interdependent software modules that support basic internal business processes like z-smart, ERP production, NNOC SMS, and others. These enterprise system modules enable data to be shared by multiple functions and business processes for precise organizational coordination and control.

For the developing world, a modern telecommunications infrastructure is not only essential for domestic economic growth, but a prerequisite for participation in increasingly competitive World markets and for attracting new investments. In the advanced industrial countries of Europe and North America, universal telecommunications services have penetrated every sector of society. In many developing countries the limited availability of service is constraining economic growth.

Apart from the telecommunication infrastructure deployment it is highly important to equip the back office activities through ITC in a manner that can highly assist the core telecommunication activities, and implementation of modern information and management technologies guarantees a successful improvement in competitive ability. The offered solutions are in demand by the companies seeking to enhance monitoring systems and upgrade their business activities. For companies to improve transparency of their business, they need to have up-to-date information about all operation and financial indicators, assets and resources of all departments and divisions. Actuality is very important: information for the previous quarter or month will not help in making

justified decisions.

Hence, the requirements for a powerful system that can quickly process large volumes of information are highly required. ERP is an information system for company management, designed for the efficient planning and management of all company resources, as well as for the automation of all or individual key business processes. This solution enables proactive resources management for the quick adaptation of business processes to changing market conditions and allows precise evaluations of company's current state of affairs, which helps to increase the company's competitiveness across the board. With the similar reasons mentioned above ethio telecom also introduce this system with the vision of obtaining world class telecom service provider. To be a world class telecom operator there are many requirements set by ITU that all telecom operators across the world need to fulfill, and some of the requirements are having a well-defined business process as per the international standard named eTom and PCMM, supporting all this business process by information system mainly ERP and deploying the best quality of service for the customers in Assessment of Enterprise Resources Planning (ERP) Implementation – the case of ethio telecom all aspects of product and services.

Hence; for the fulfilling the expected requirement and to support the steady growth of the country's economic development ethio telecom implemented an integrated ERP system on December 01/2011 on a modular manner. And mainly the license for this system implementation has been procured from the world well known software developer named Oracle through open tender and integrated by softpro (i.e. Indian software integrator). And the major reasons that drive the company to choose for ERP are mainly related to improving company's performance and decision making, to reduce labor costs, bureaucracy and other related errors. And the other reasons are: to enhance the integration among work units, and establish organizational standardization across different location

2.7 Conceptual Framework

A conceptual framework can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Reichel and Ramey, 1987). As cited in literature ERP is a software system that integrates all business units and make business process easy and organized one .In addition, if the companies adopt such a system tool that helps to use its resources effectively and efficiently this leads successful implementation of ERP. The

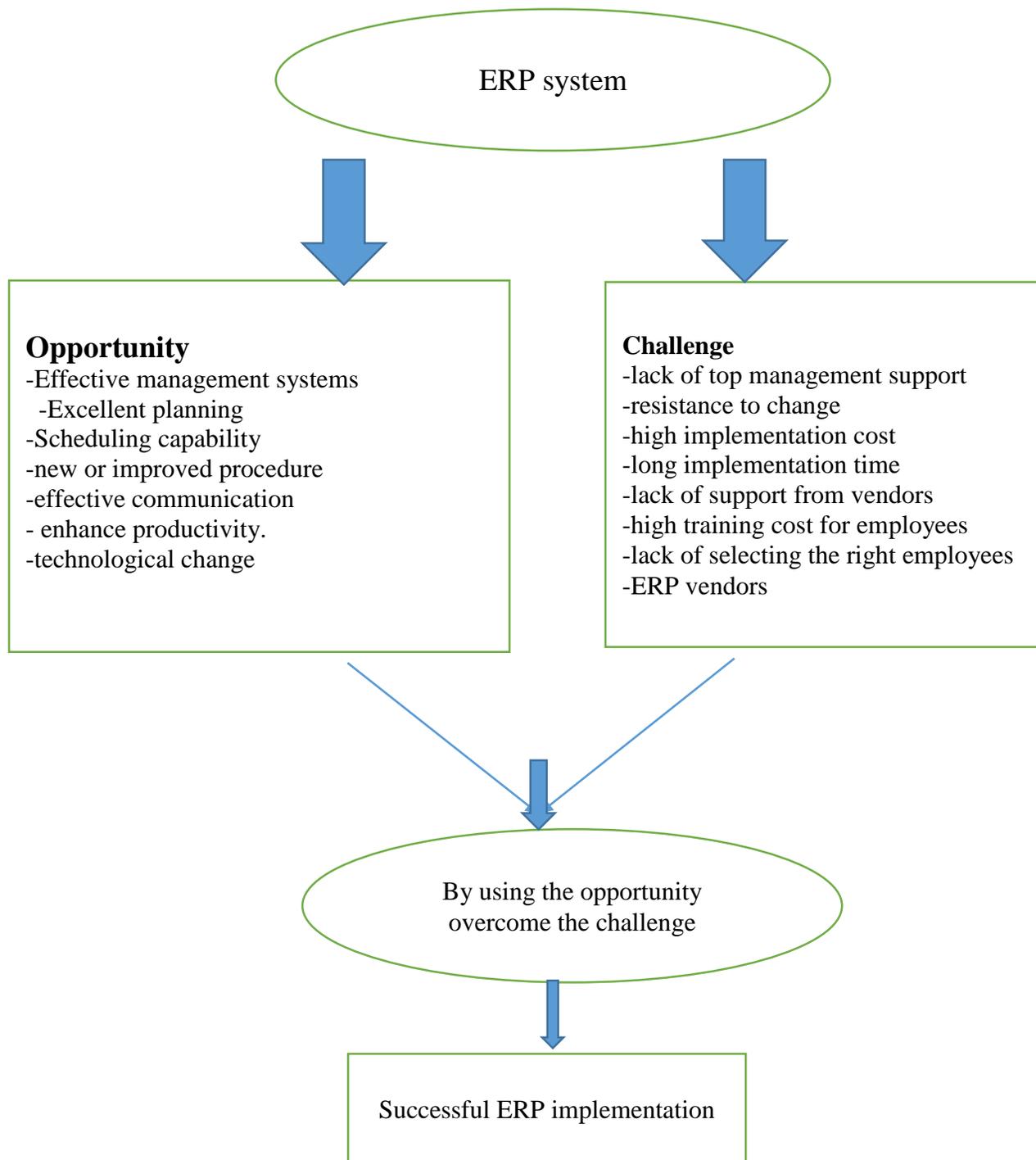
below conceptual frame work comes from different related literature that has been done before and reviewed for this study.

As we see from the below conceptual frame work since ERP is one of a system project it have its own opportunity and challenge. So any organization that implement ERP by enjoying the opportunity must overcome the challenge. ERP is one of the project which needs a huge amount of cost, resource and time so to be effective in ERP implementation organization should give high focus.

When implementing system project like ERP organization can get opportunities. Frist it creates Effective management systems since any decision making process done by using this system it save time and make the decision making process more effective. The second one is Excellent planning and Scheduling capability by using ERP organization have the opportunity to plan for the future and to schedule every activity. It also have the opportunity for new or improved procedure because after implementing the system the existing backward and time taking working procedure can be changed. The remaining opportunity any organization can get by implementing ERP includes Effective communication, enhance productivity and technological change. Every communication can be done by using this system so it decease time spent on communication which leads the organization to be more productive plus it decease company cost.so implementing ERP have its own opportunity fort the organization.

The challenge of ERP includes lack of top management support, resistance to change, high implementation cost, long implementation time, lack of support from vendors, high training cost for employees, lack of selecting the right employees and ERP vendors. This challenges are a big hindrance for any organization that had been implemented this system. So organization should give high focus and to plan properly for mitigate each challenges with short period of time otherwise it creates a big crisis in the organization since it have high project implementation cost

Figure 3 Conceptual frame work



Source: Own depict

Chapter Three

Research Methodology

3.1. Introduction

This chapter presents the research methods that were applied for this study. It deals specifically on the description of the study design, population and sampling techniques, data source, and data collection instrument, Procedures of Data Collection, pilot testing, reliability and validity, Method of Data Analysis and Ethical Considerations.

3.2 Study Design

In this study the study applied both qualitative and quantitative research methods. The research design of this study was descriptive. Descriptive researches are those studies which are concerned with describing the characteristics of a particular individual, or of group and it includes surveys and fact-findings enquire of different kinds (Sakaran, 2003). So it helps to describe the opportunity and challenge of ERP system. In addition the possible consequences the system challenges that the ERP implementation team faces would be described with the possible strategies of overcoming them.

3.3 Population and Sampling Techniques

3.3.1 Size of Organization, Under the Domain of the Study

As discussed on the scope, this paper was only collected data from head office human resource division. So the total number of the population under the study included 146 staff. So, from this staff samples would be taken to get more representative and sound conclusion.

3.3.2. Categories of the Respondents

In ethio tele com Human resource department the employees are divided in to five hierarchical levels. They are chief Officers, officers, managers, supervisors, and staffs. The first four levels are classified as management group whereas the last one categorized as non-management group and it includes specialists and staff. So this study will collect data from all groups.

Table 1 Number and Position of Employees

position	number
chief officer	1
officer	4
manager	13
supervisor	15
specialist	40
Staff	74
Total	147

3.3.3 Techniques Applied to Select the Sample

To get more real data the representatives of the total population included in the research study. All parties involved in the implementation process of Enterprise resource planning are represented by the sample. As a division human resources division is basic source of information concerning ERP. In addition as discussed above the organization have five hierarchical levels. They are chief Officers, officers, expert, managers, supervisors, and staffs. The first level four are classified as management group whereas the last one level are categorized as non-management group and consists of staff and specialties. Therefore, to be representative the sampling considers both groups.

The sample size was 108 respondents out of a target population of 147 human resource departments. These were selected to ensure that the sampling size had characteristic representation of the population using the formulae sited by Mugenda and Mugenda (2003). The formula to find the sample size is:

$$n = \frac{N}{1 + (N * e^2)}$$

Where; N= population size

e= Tolerance at desired level of confidence, take 0.05 at 95% confidence level

n= sample size.

How the formula is used is shown below

$$n = \frac{147}{1 + (147 * 0.05 * 0.05)}$$

$$n = 108$$

The researcher used Stratified random sampling to select the respondents. Since, Stratified random sampling intends to guarantee that the sample represents specific subgroups or strata. Accordingly, application of stratified sampling method involves dividing population into different subgroups (strata) and selecting subjects from each stratum in a proportionate manner. In addition when population from which a sample is to be draw does not constitute a homogeneous group, stratified sampling technique is generally applied in order to obtain a representative sample Kothari (2004). So the HR department consists of staff with different hierarchy level so this method is more applicable.

In relation to this, Stratified sampling can be divided into the following two groups: proportionate and disproportionate. Application of proportionate stratified random sampling technique involves determining sample size in each stratum in a proportionate manner to the entire population Therefore, the choice of stratified random sampling by the researcher enabled to have adequate representation of all subgroups can be ensured. The sample size for this study was 108 and one chief officer, 4 officer, one specialist and one manger (who participate in the visibility study) selected for the interview. The four hierarchical levels had taken as strata. From the complete list of each stratum, respondents are draw at regular interval through order list based on the proportion of the strata to the sample size determined. By considering the target population the researcher determined number of samples from each stratum.

Table 2 Description of samples taken from each stratum

Position	Total number of Target Population	Sample Taken from each Hierarch
manager	12	$108(12/140)=9$
supervisor	15	$108(15/140)=11$
specialist	39	$108(40/140)=31$
Staff	74	$108(74/140)=73$
Total	140	108

3.4 Source of Data

This study used both primary and secondary sources of data for collecting valuable data .The use of primary sources supports the researcher to produce accurate data, and to gather first-hand information which could lead the researcher to make valid analysis. The primary source of data collected by distributing questioner and semi structural interview. Secondary source of data includes feedback collected from the staff during training time, books, journals and articles were searched to make the finding trusting.

3.5 Data Collection Instruments

Human Resource Division is a division where valuable data regarding the topic of study can be obtained. The researcher used both primary and secondary source of data to get valuable information.

3.5.1 Primary data

Primary data are those that are gathered for a specific purpose or for a specific research project.

3.5.1.1 Questionnaire

Questioner provided an efficient way of collecting responses from a large sample. The questioner adapted from Beadles, II, Johns and Lowery(2005) and adapted with modification Singla(2008). The researcher modified it because it works with different industry but almost the objective is similar. Questionnaire consisted of scale questions to collect opinions. Five point Likert-style rating scale (1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5: strongly agree) used when designing the questionnaire. The questionnaire basically has three parts. The first one is demographic information, and then the second part was about the opportunity and challenges of implementing ERP and finally open-ended questions regarding the topic.

3.5.1.2 Interview

Concerning the interview Semi-structured, which means that the areas of interest predetermined and the key questions to be asked or information to be obtained would already know before asking the interview. The interview question is adapted from Jerram and Rao (2010) and Seo (2013).

In both instrument major variables raised were opportunities, challenges of ERP and to take solution for the challenge and recommend solution.

3.5.2. Secondary Data

In this study, secondary data were collected from organizational reports such as company Dash Board report, ethio-telecom ERP implementation project charter, system reports, processes and employment records, feedback collected during training delivery time.

3.6 Validity and Reliability

To check the validity of the questioner The questioner adapted from Beadles, II, Johns and Lowery(2005) and adapted with modification Singla(2008) in addition The validity of the instruments of data collection tested using pilot survey before actually used in the study and asked other professional to check it. Finally after accepting feedbacks, the data collection instrument approved by my advisor.

Furthermore, reliability of the scales checked with the application of the Cronbach Coefficient Alpha for the computations so as to check for the internal consistency of the scales. A Benchmark alpha of 0.70 was set as an acceptable measure of reliability (Raynaldo, 1999). The cronbach alpha coefficient indicates the consistency of responses to items.

The following table shows the SPSS result on the Cronbach Alpha.

Table 3Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	No of Items
.779	25

As indicated in the above table, the Cronbach Alpha test implies that the instrument's internal consistency as 77.9% which is above the acceptable percentage.

3.7 Procedures of Data Collection

After preparing the final research question and semi structural interview question the next step was identified target population and sample size was recognized, then the next decision was to approach the representatives and respondents of this study. First it started with a formal letter of communication then the data collection conduct accordingly.

Questionnaire: To check validity of questions involved in the questionnaire. First giving for some of the respondent to check before distributing the final questionnaire to respondent. Then it distributed for the participants and collected after one-three days.

Semi-Structured interview: first the researcher selected the interviewed person, one chief officer, four officer, one managers and one specialist selected for the interview because all of them are participated on feasibility as well as system development phase so detail information got from them. Then prepared an appointment with them, gave the questions ahead to prepare on it, and on the appointment date the interview conducted.

4.7 Method of Data Analysis

The 108 questionnaires collected from respondents were first checked to identify any damaged questionnaire. Accordingly, 12 were discarded since the response is not reliable. The usable sample size became 96. Then, the 96 questionnaires were sorted. After sorting each questionnaire was coded with unique number. After the coding process is completed, each questionnaire's 36 items were inserted into computer (SPSS).

After completion of inserting data in the computer, various statistical analysis tools were utilized. Demographic variables and system information were measured using descriptive statistics and frequencies and percentage is used to interpret the data. They are presented using tabulation and the items developed to assess the opportunity and challenges of the company were also measured using descriptive statistics and frequencies. Percentage mean, and standard deviation are applied to interpret the data. Majority of the data are presented using tabulation.

For the data that collected by semi-structured interview questions and open ended questions, interpreted it manually.

Here mean score and frequency were calculated to determine the level of agreement of respondents to each question. With five point scales, the intervals for breaking the range in measuring each variable are calculated as follows:

Ranges= (Max-Min)/5= (5-1)/5=0.8=agreement level

The translation of level of ranking is analyzed based on the following criteria which was taken from Achilleas (2013).

- Agreement level 1.00-1.80 means strongly disagree
- Agreement level 1.81-2.60 means disagree
- Agreement level 2.61-3.40 means neutral
- Agreement level 3.41-4.20 means agree
- Agreement level 4.21-5.00 means strongly agree

4.8 Ethical Considerations

- ✓ The study will be in line with the organizations policy in relation to any intellectual property rights of the organization.
- ✓ It could not be ethical to access some confidential documents of the organization. So, the organization's code of ethics will take in to account without significantly compromising the findings of the study.
- ✓ It may not be ethical to ask employees to fill questionnaire while they are at their work duty. Therefore, longer time (one to three days) given to respondents so that either took the questionnaire to their home or used their break time.
- ✓ All the collected data will be confidential for both the participants (the data that they give based instruments) and company (some confidential document).
- ✓ The whole research project is undertake in accordance with consent and willingness of every participant

Chapter Four

Data Analysis and Interpretation

4.1 Introduction

This chapter presents the results of the study and interpretation of the findings. The chapter consists of three sections. The first section presents the profile of respondents showing gender, age group, level of education, work experience, and position of respondents using cross tabulation. The second section presents analysis of the study variables (opportunity and challenge) by using tables and consisting of mean, percentage and standard deviation. The third section discuss the results of the open ended question and overall responses specially the interview part.

4.2 Presentation of Respondents Background

To present background characteristics, percentage and tabulation is used. These characteristics included gender, age group, education level, work experience, and position of respondents respectively. The characteristics are presented based on the responses from the respondents. A sample of 96 employees from HR division who have used ERP have participated in this research.

The below table clearly shows that, out of 96 respondents, majority of the respondents (67.70%) are male and 32.3% are females. Since the majority of them are male employees, we can say that the gender balance is tending towards male staffs.

In the table 4.1 below, Item 2 concerning age group indicates , out of 96 respondents, 8.40% were between 21-25 years of age, 42.70 % were at 26–35, 28.10% were at 36-40 and 20.80% were 41 and above years of age. This shows that the human resources division of the company is populated by active work age. Since the age group is more of young staffs they demands modern life including modern system like ERP.

Item 3, in table 4.1 below, also indicates Out of 96 participants all of them are have above degree level of education and none of them are diploma and below diploma . Majorities (61.50%) of the respondents were having BA/BSC and the remaining 38.50% of the participants were post graduates. This shows that the workforce is educated and attained education up to university level at least. So they can easily be trained to enhance individual and/or corporate performance level

regarding system usage so this can be a great benefit for the organization. In addition it easy to implement and train them new systems like ERP.

As indicated by Item 4 of the below table, about 27.08% of the respondents who were part of the study were working 0–4 years, 18.75% at 5-9 years, 25% at 10-14 years and the remaining 29.17% were 14 and above years. Therefore, the work force of the company is a mixture of new entrants and experienced employees and has possibility to get the advantage of both.

Finally, on the last item of table 4.1 below indicates, majorities (82.29%) of the respondents were from non-management employees and 17.71% of the respondents were from the management group.

Table 4 Respondents background

Variable	Classification	Frequency	Percent
Employees gender	Male	65	67.70%
	Female	31	32.3%
	Total	96	100%
Age group	21-25	8	8.40%
	26-35	41	42.70%
	36-40	27	28.10%
	above 41	20	20.80%
	Total	96	100%
Educational status	Below Diploma	0	0%
	Diploma	0	0%
	Degree	59	61.50%
	Masters and above	37	38.50%
	Total	96	100%
Work experience	less than or equal to 4 years	26	27.08%
	5 up to 9 years	18	18.75%
	10 up to 14 years	24	25.00%
	14 and above years	28	29.17%
	Total	96	100%z
position they have in the organization	Staff	51	53.12%
	Supervisor	11	11.46%
	Specialist	28	29.17%
	Managers	6	6.25%
	Total	6	6.25%

Source: Survey questionnaire, (May 2017)

4.3 Presentation of Usage of Sub System

The ethio telecom ERP system have different function the below listed sub systems are used for day to day activities for the HR department. From the below table we can conclude that etho telecom distributes the work done across its HR staffs in addition to this staffs are using more than one sub system. Employee personal and extra information sub system is used by most of the respondents of this study because when the company creates ERP account for its staff it is the first sub system that will be given to most of the staff and it is the system that helps to check their profile data as well as others staffs information if the privilege is given to them.

The other sub system in ERP that have function for HR staffs are employees assignment sub system almost 46.90% of the respondents have the privilege to use this system and this system used to assign new staffs or to move existing staff to other locations (the location change can be within the same city or other city).

Employee compensation and benefit subsystem are used only by 24% of the respondents and it is the system used related with payments like monthly salary, bones and other benefits the company give to its staffs.

Employee training, competence and appraisal subsystem this sub system most of the time used by human development section and 24% of the respondents are using this system. Employees training sub system helps prepare when, where, by whom, for how many days, what kind of training will be given and help to send to participant as well as for the trainers the invitation with the same time. For appraisal sub system after objective set to each section it helps to evaluate employees by using the system. Employee absences subsystem used by 30.20% of the respondents and used to take daily attendances, annual leave, Sick leaves and others leaves by using the system. For the last one Recruitment subsystem help to check internal vacancies, on line application of vacancies plus help to invite the applicants for interview and inform the final result by using this sub system.

Table 5 ERP sub system in HR department

Sub system	value	Frequency	percent
Employee personal and extra information subsystem	yes	70	72.90%
	No	20	27.10%
Employee assignment subsystem	yes	45	46.90%
	No	51	53.10%
Employee compensation and benefit subsystem	yes	23	24.00%
	No	73	76.00%
Employee absences subsystem	yes	29	30.20%
	No	67	69.80%
Employee training, competence and appraisal subsystem	yes	23	24.00%
	No	73	76.00%
Recruitment subsystem	yes	34	35.40%
	No	62	64.60%

Source: Survey questionnaire, (May 2017)

4.3 Presentation of Variables

Since this study focus on the opportunity and challenge of ERP in the implementation process.so the discussion part detail and separately discuss both variables.

4.3.1 Opportunity of ERP

Implementation of an automated system have more opportunity for once company since it is more modernized and supportive system. This also showed in the collected data below. Regarding active participation in the ERP system implementation majority 34.40% and 20.80% of the respondents they agree and strongly agree respectively and the remaining 19.80%, 19.80 and 5.20% of the respondents strongly dis agree, disagree and neutral respectively By this, we can say that more that 50% of the respondent of this study actively participated but 39.6% of the respondents they are not participated. Any company when implementing new systems it have its own goal to achieve similarly ethio telecom have its own goal when the company implement ERP from the finding also show that the goal of the company include first to remove all manual work(paper work) which was more time taking, difficult to get urgent reports and have high cost. The Second goal was for better and on time decision making since ERP is more automated system it makes all decision making process more effective and HR module approval hierarchy were changed most of the

process shorten. Plus help to check the status of the organization if there is anything which was out of the line corrective action can be taken.

Generally there is changes in on organization and on the process after adapting ERP the response shows that there was changes in the organizational process after implementing ERP but when ethio telecom implement ERP the company use three strategies first fully adopt some part of the process which can work in the organization, the second one is customization after checking the system in detail some of the function customized based on our companies need and the third one was leaving the systems that does not work in context of our company.

In addition to what has been raised the other item was satisfaction of the staffs with ethio telecom ERP system and the response showed that 47.91% and 26% of the respondents agree and strongly agree which constitute more than 60% of the response on the other hand the remaining 15.62%, 6.30% and 4.17% of the respondents were neutral, disagree and strongly disagree respectively. Having this evidence in mind, most of the staffs who are working in ethio telecom are satisfied with the ERP system implementation.

On top of the directly imparted opportunities this study also asked that ERP has an opportunity to make their HR decision-making more effective, 57.29% and 23.96% which counts the highest share were agree and strongly agree respectively. Hence, it indicates that the ERP system have an opportunity for making on time and effective decision since the system is more automated one. In addition to this the system can give fast and organized data when needed. It is fact that it makes the decision making of the company more automated one.

In Addition to what has been raised just before, the respondents were asked if the ERP has an opportunity to minimize the time spent on recruiting 59.38% and 32.30 % of the respondents agree and strongly agree on this issue respectively and none of the respondents strongly disagree on this issue. By this, we can conclude that since recruiting is one of the function of ERP this can decrease time spent on recruiting. Because all activities that were done in recurring process stating from announcing vacancy, applying for vacancy, inviting for interview and informing results done by using ERP. In addition all information can reach to the participant at the same time for all of them so this can minimize time spent on recruiting.

Still focusing on the opportunity part the other issue raised were ERP has an opportunity to decrease the time spent on training the majority 59.38% and 25% of the respondents agree and strongly agree and only 1.04% and 1.04% disagree and strongly disagree. Based on this fact ERP

had decreased time spent on training because for whom, by whom, when, what kind of training and for how many days will be delivered would be send to the participant as well as for the trainers at the same time so this can decrease time spent on training.

To strengthen the above mentioned concept the researcher has raised a question that ERP has an opportunity to provided increased levels of useful information. Thus, the largest share 53.13% and 31.25% the respondents agree and strongly agree and none of them strongly disagree concerning this. From this fact we can understand that since ERP makes all work done more automating anyone who has the access can get on time and organized information in addition when top management wants information about the company they can easily extract from this system.

With similar fashion, the researcher has raised a question whether ERP has an opportunity for Effective management systems. Lion share of the respondents 56.25% and 26.04% of the respondents agree and strongly agree respectively on this issue and the remaining 1.04%, 4.17% and 12.50% strongly disagree, disagree and neutral. From this we can conclude that since management have the access to check everything within short period of time this helps them to take corrective action if things goes wrong in addition helps to know the status of the company.

To strengthen the above mentioned concept the researcher has raised a question that ERP has an opportunity for excellent planning 61.45% and 20.83% of the respondents agree and strongly agree and none of the respondents strongly disagree. Based on this finding we come up with ERP helps for excellent planning because the system help the company to plan and to check whether the company is going based on plan or not and to make corrective action.

Still focusing on the opportunity part the other issue raised were ERP has an opportunity for scheduling capability 48.95% and 27.08% agree and strongly agree on this issue and none of the respondents strongly disagree. The implication of this was that using ERP have the capacity to make some arrangements and to schedule it in addition to check everything is going based on the schedule.

With similar fashion, the researcher has raised a question whether ERP has an opportunity for new or improved procedure. 60.41% and 25% of the respondents agree and strongly agree respectively on this issue and none of the respondents' strongly disagree. This leads to conclude ERP have an opportunity for new or improved procedure because when the system was implement in the organization it helps to improve the existing working procedure in addition to this the system can bring new procedure which makes the work done more effective and efficient.

Regarding ERP has an opportunity for effective communication 58.34% and 27.10% of the respondents agree and disagree respectively and less than 15% of the respondents are neutral and disagree and none of them strongly disagree. Hence, from this fact we come up with ERP makes communication more effective because all manual work can be changed to automated one and communication can be easy and not time taking.

To strengthen the above mentioned concept the researcher has raised a question that ERP has an opportunity for enhance productivity.50% and 39.58% of the respondents agree and strongly agree on this issue and none of them strongly disagree this lead us to come up with ERP had increase productivity because it decrease time spent on doing activities plus all manual work can be automated this leads the organization to be more productive since it decrease cost spent by the organization.

Related with the opportunity of ERP the other issued raised were ERP has an opportunity for technological change.55.20% and 38.54% of the respondents agree and strongly agree respectively and 1% and 0% of the respondents disagree and strongly disagree on this issue. Based on this finding we can conclude that ERP is more modernized system software which can leads company's one step to the future and brings more technological change in addition it is easy to implement other systems too so this shows ERP have more opportunities concerning technological change in the organization.

Generally the response shows that adaption of ERP have created opportunities for the staff as well as for the company too. It have the opportunity to make easy and quick decision making since all decision making process done through system it can make on time and fast decision. In addition to this ERP have the opportunity for implementing (integrating) other systems in this case ERP could be used us a primary source of data since all information of the organization is included under this system. Still focusing on the above issue ERP have the opportunity to control resources the resource can be material, time and human. This helps the organization to make corrective action, to check whether the company going based on plan or not.in addition it have the opportunity for financial control. To support the above idea ERP have the opportunity to forecast about the future based on the past reports.

Table 6 Opportunities of ERP

Items	strongly disagree	Disagree	neutral	agree	strongly agree	Mean	Std. Deviation
1.I am actively participated in the ERP system implementation	19.80 %	19.80 %	5.20 %	34.40 %	20.80 %	3.17	1.47
2.Overall I am satisfied with our ERP system	4.17%	6.30%	15.62 %	47.91 %	26.00 %	3.85	1.02
3. Our ERP has an opportunity to make our HR decision-making more effective.	1.04%	2.08%	15.63 %	57.29 %	23.96 %	4.01	0.76
4. Our ERP has an opportunity to minimize the time spent on recruiting.	0.00%	3.13%	5.20 %	59.38 %	32.30 %	4.21	0.68
5. Our ERP has an opportunity to decrease the time spent on training.	1.04%	1.04%	18.75 %	54.17 %	25.00 %	4.01	0.76
6. Our ERP has an opportunity to provided increased levels of useful information.	0%	7.29%	8.33 %	53.13 %	31.25 %	4.08	0.83
7. Our ERP has an opportunity for Effective management systems.	1.04%	4.17%	12.50 %	56.25 %	26.04 %	4.02	0.81
8. Our ERP has an opportunity for Excellent planning.	0%	4.17%	13.54 %	61.45 %	20.83 %	3.99	0.72
9. Our ERP has an opportunity for Scheduling capability.	0%	8.33%	15.63 %	48.95 %	27.08 %	3.95	0.88
10. Our ERP has an opportunity for new or improved procedure.	0%	6.25%	8.33 %	60.41 %	25.00 %	4.04	0.77
11. Our ERP has an opportunity for effective communication.	0.00%	4.16%	10.40 %	58.34 %	27.10 %	4.08	0.74
12. Our ERP has an opportunity for enhance productivity.	0.00%	3.13%	7.29 %	50.00 %	39.58 %	4.26	0.73
13. Our ERP has an opportunity for technological change.	0%	1%	5.21 %	55.20 %	38.54 %	4.30	0.67
Aggregate mean and Aggregate sd. deviation						3.99	0.831

Source: Survey questionnaire, (May 2017)

General almost all of the respondents agree that ERP contributes for the success of HR department in different aspect It helps to have similar shared data, helps to updated data of employees, reduce a lot of paper work and make work very easy, reduce cost of paper, Minimize time spent, money and energy spent on manual work and extract information at any time which can be used for

different purpose. In addition to improve the effectiveness of ERP the company must improve Follow up of top management, Provide ERP Continuous On job and off job training, Improve the Support of vendors, must improve network since there is continuous interruption of network which is one of the major problem which hinders not fully benefits from the system, getting ERP privilege can take much time because the account was created by IS division and HR department is highly dependent on this department. In addition there is difference between training and actual work in ERP.

As shown in the table 4.3 above, the respondents overall mean rating regarding opportunities of ERP was 3.99 implies that opportunities of ERP were high (because this result lied 3.41-4.2). And standard deviation lies between 1.47 and 0.66 which shows most of the respondents response was not far from the mean except employee's participation in the ERP system implementation and satisfaction of the employees regarding ERP this two variable have the highest standard deviation which indicates that the individual response were a little over 1 point away from the mean. For the remaining items the standard deviation is less than one and the individual response did not deviate at all from the mean .Respondent's answers shows the mean lied (3.41-4.20). All opportunities under this category were high except active participated in the ERP system implementation. This response clearly indicates that, the company have benefited from the above listed opportunities by implementing ERP.

4.3.2 Challenge of ERP

As discussed by Goeun (2013) the companies can face challenges in the process of implementing ERP. Similarly from the finding of the interview ethio telecom also faced many challenged in the implementation process of ERP since it new to the organization there is resistance from both the management as well as from the staffs this is the big challenge for the company because without commitment of human resource it difficult for the company to adapt new system. The other challenge was difficult to customize some of the function as needed by the organization.

In addition since ethio telecom was the first organization in adapting oracle ERP it was a big challenge for the organization because the company does not have any bench mark organization in Ethiopia to share its experience to ethio telecom and the preparation to implement the system is not that much organized this leads the organization to spent more additional money more than the

planned one. The other challenge was lack of knowledge transfer and adequate training from vendors to the staffs. The response concerning this show that to get enough knowledge about the system the project team continuously read documents because they did not got enough training from vendors. To more detail finding it is better to see the challenges separately separately as human challenge and non-human challenge plus its helps to compare both variables this leads to know which variable have more significant challenge concerning ERP.

4.3.2.1 Human Challenge

For any company controlling human challenge is a big progress but most of the time most companies failed to do this. This issue also noticed by some of the below variables. In order to get the real challenge of ERP system the study asked different questions from the collected data concerning Ethio telecom has faced resistance from employees because they prefer traditional methods 25% and 27.08% of the respondents strongly disagree and disagrees that staffs does not prefers traditional methods but 31.25% and 9.37% of the respondents agree and strongly agree concerning this that there is staff resistance concerning ERP. Even if the largest share(52.08%) of the response shows the company is not faced a problem by its staffs for choosing traditional methods of working but near to this finding (40.62%) of the respondents agrees there is resistance this shows that most of the staffs did not resists by implementation of ERP but still there are staffs who resists.

Still focusing on human challenge of ERP the respondents were asked if there is no enough support from Top management the highest number of the respondents (36.45%) agree that there is no support from top management and 27.08% and 13.50% of the respondents are neutral and strongly agree concerning this issue. This shows that there is lack of top management support in ERP implementation.

Regarding Employees lack basic skill in using IT the response shows that 40.62%,22.84% and 20.84% of the respondents agree, neutral and strongly concerning employees lack basic IT skill this leads to conclude still this is one of the challenge for the company that some of its employees lack basic IT skill which makes the implementation of ERP more challenging.

In addition to the main question raised above the researcher also forwarded additional and relevant questions to triangulate the employee's response regarding whether there is adequate involvement of employees at the time of designing and implementing the system The lion share of the response (46.88%) agree and the remaining 17.70%, 20.84% and 12.50 % of the respondents strongly agree,

disagree and neutral concerning this. This leads to come up with there was lack of adequate involvement of employees at the time of designing and implementing the system.

For the question raised to assess if the employees have lack of communication and training to the users of ERP the response shows that the majority 41.70% and 31.25% agree and strongly agree and the remaining 15.60%, 8.32% and 3.13% of the respondent disagree, neutral and strongly disagree concerning the above issue. Hence, it indicates that the company doesn't deploy an intensive training program in order to equip those employees who are expected to work on the system as a main tool.

Regarding Exclusion of key people during design and implementation stage. Majority 36.45% and 25% of the respondent agree and strongly agree concerning this. The remaining 18.75%, 17.70 and 2.10% of the respondents neutral, disagree and strongly disagree respectively. This leads to conclude the company is exclude key people in design as well as implementation stage which can be a big challenge for the company since excluding key people have impact on full implementation of the system.

To strengthen the above mentioned human challenge of ERP the other issue raised were if there was Lack of commitment and dedication of project team members during design and implementation stage the finding shows that 26.04% which means majority of the respondents agree and the remaining 19.79%, 20.83% and 23.96% of the respondents strongly agree, natural and disagree. This shows that there was lack of commitment and dedication of project team even if some of the respondents did not agree on this but the largest response shows it was a big challenge.

Table 7 Human challenge in ERP Implementation

Source: Survey questionnaire, (May 2017)

Items	strongly disagree	Disagreed	neutral	Agree	strongly agree	Mean	Std. Deviation
1. Ethio telecom has faced resistance from employees because they prefer traditional methods.	25.00%	27.08%	7.30%	31.25%	9.37%	2.73	1.38
2. Not enough support from top management.	6.30%	16.67%	27.08%	36.45%	13.50%	3.34	1.10
3. Employees lack basic skill in using IT.	6.25%	20.84%	22.92%	40.62%	9.37%	3.26	1.09
4. In Adequate involvement of employees at the time of designing and implementing the system.	2.08%	20.84%	12.50%	46.88%	17.70%	3.57	1.07
5. Lack of communication and training to the users of ERP.	3.13%	15.60%	8.32%	41.70%	31.25%	3.82	1.13
6. Exclusion of key people during design and implementation stage.	2.10%	17.70%	18.75%	36.45%	25.00%	3.65	1.10
7. Lack of commitment and dedication of project team members during design and implementation stage	9.38%	23.96%	20.83%	26.04%	19.79%	3.23	1.28
Aggregate mean and Aggregate sd. Deviation						3.37	1.16

Aggregate mean=3.37

As shown in the table 4.4 above, the respondents overall mean rating regarding human-factor challenges was 3.37 implies that human factor challenges were high (because this result lied between 3.41-4.2). And standard deviation lies between 1.07 and 1.38. Respondent's answers shows that In Adequate involvement of employees at the time of designing and implementing the system, Lack of communication and training to the users of ERP and Exclusion of key people during design and implementation stage were the challenge since all the values of attributes it lies between 3.41-4.20. All the other challenges under this category were average. This response clearly indicates that, the company was challenged because of human factor challenges.

4.3.2.2 Non Human Challenge

The other challenge for any organization concerning new system implementation is non-human factor this also showed by the below collected data from the respondents. For the question raised to assess if there is not enough resource available in ERP implementation phase the response indicated that majority 37.50% of the respondents agree and the remaining 27.08%, 19.79% and 8.34% of the respondents disagree, neutral and strongly agree respectively this shows that there is shortage of resource (can be human or material) during ERP implementation.

In addition to what has been raised just before, the respondents were asked if they did not have adequate support from vendors the result shows that majority 41.67% agree and on the other side 23.96%, 15.62% and 16.67% of the respondents neutral, strongly agree and disagree respectively. From this we can conclude that there is lack of support from vendors plus to transform their knowledge at the expected level.

To strengthen the above mentioned concept of non-human factor of ERP the researcher has raised a question whether there is Network problem to use and fully benefit from the system surprisingly the response shows this is the big challenge for the company since majority 44.79% and 29.17% of the respondents agree and strongly agree respectively on the other hand only 2.08% of the respondents strongly disagree concerning this issue. Having this evidence in mind that this non-human challenge which is network problem have big impact not to use this system fully or at expected level.

Regarding the issue raised on whether the ERP of the company is too complex and make the work difficult majority of the respondents 36.45% disagree and the remaining 29.16%, 18.75% and 13.54% of the respondents agree, neutral and strongly agree from this we can conclude that more than 50% of the response shows that strongly disagree and disagree Based on these facts the ERP of the company is not too complex and made work difficult so it can be a system in which day to day activity the organization can be done and make the work easy and more automate one.

Still focusing on non-human factor to get sound data the other issue raised were organizations has faced a lot of paper work that is difficult to computerize the response showed that 34.40%, 17.70%, 27.08% and 17.70% agree, strongly agree, disagree and neutral and the remaining only 3.12% of the respondents strongly disagree this leads to conclude the company ethio telecom have faced a lot of paper work (that was done before implementing ERP) and difficult customize that.

Ethio-telecom by passing through the above challenges enjoyed all discussed opportunities. The company is not new to bring new system to the company including ERP system. Based on the lesson learnt they enjoyed many opportunities and passed a lot of challenges. As we discussed above the challenges are not one time challenges. They were at designing, implementing and even now the problem exist when they use the system. The company has to appreciate how to challenge the challenges. But the above facts shows that the company challenges are not settled and potential challenges are expected in the future also. So the company have a lot of assignments in order to overcome challenges to use the opportunities properly and timely. In addition there must be continuous monitoring process since to overcome existing challenges and to identify new challenges that can come near future.

Table 8None human challenge in ERP Implementation

Items	strongly disagree	Disagree	Neutral	agree	strongly agree	Mean	Std. Deviation
1. Not enough resources available.	7.29%	27.08%	19.79%	37.50%	8.34%	3.13	1.13
2. We did not have adequate support from vendors.	2.08%	16.67%	23.96%	41.67%	15.62%	3.52	1.02
3. Network problem to use and fully benefit from the system.	4.17%	14.58%	7.29%	44.79%	29.17%	3.80	1.14
4. The ERP of the company is too complex and make the work difficult.	2.10%	36.45%	18.75%	29.16%	13.54%	3.16	1.13
5. My organization's has faced a lot of paper work that is difficult to computerize.	3.12%	27.08%	17.70%	34.40%	17.70%	3.36	1.15
Aggregate mean and Aggregate sd. Deviation						3.39	1.11

Aggregate mean=3.39

In the table 4.5 above, the respondents overall mean rating was 3.39 implies that human factor challenges were average. And standard deviation lies between 1.01 and 1.138 which shows individual response deviates more than one. Respondent's answers shows that Network problem

to use and fully benefit from the system and we did not have adequate support from vendors were high challenges since the values of attributes lies between 3.41 and 4.20. On the other hand, the remaining other parameters were average since there value lied 2.61-3.40. This response clearly indicates that because of network problem and lack of adequate support from vendors were the main challenges that hindered the company didn't obtain the benefit as expected and the remaining factors also have its own share for not using the system fully.

4.4 What will be the Consequence if the Existing Challenges Continuous

The existing practice is discussed above in detail. That the opportunities and the challenges so the company should give high focus to improve or it can to eliminate the challenges by using the benefit gain from opportunities properly.

One of the big challenges the company is facing was network problem there is continuous system down. Which is one of the major hindrance not fully use the system at expected time and level. If the company is not practically solve this problem rather than the benefits the cost will be high because during system down all HR activities back to manual work and when the system recovers the HR staffs are forced to insert all the work that done manually during system down.in addition to this during system down the top management did not get on time reports to made valuable decision for the company. The other challenge the department is faced is that still the department is dependent on vendor and IS (information system department) when faced any difficulties and system problem. If this problem is not solved by assigning dedicated person who proactively bring new issues and settle division problem quickly because there will be delay of solving problem plus as discussed before to create ERP account for users it take much time which make the workers idle for sometimes.

To add point on the above issue the other challenge that has big impact is that Lack of capable internal staffs for ERP support. This is big challenge since when problems happen related to ERP most of the time the company ask support from vendors which is more time taking and still the company can incur cost so rather than depending on vendors the company must train and work on knowledge transfer from vendors to its staffs. Finally the company must give high focus to overcome its changes and to use the opportunities at excepted level.

Chapter Five

Conclusion and Recommendation

This chapter contains conclusions and recommendations that comes out of the research findings and objectives. The research has generated several findings. That can support the company to make some corrective action to use the system effectively and efficiently.

5.1 Conclusion

- The gender balance of the HR department tending to male employees. This division is populated with active age group this can be a benefit for the organization since they are interested to use more modernized system like ERP. The department is populated with educated staffs that have minimum of degree so this is a great benefit for the organization to train them about the system. The employees are combination of new entrants and existing staff this can help the organization to get benefit from both and the new entrants can share experience from the existing staffs.
- More than half of the respondents participate in ERP implementation process this shows that the company can give more chance to its staff during implementing new system. Most of the Staff who is using ERP was satisfied since this system makes the work done more automated one, effective, save time and energy too.
- ERP have many opportunities this also agreed or supported by the respondents. The opportunities include it makes HR decision making more effective , minimize time spent on training ,time spent on recruiting, increase level of useful information, have effective management system, excellent planning, scheduling capabilities, creates new or improved work procedure ,effective communication, enhance productivity and technological change. Overall, respondents had a very good view concerning opportunities of ERP. This response clearly indicates that because of implementing ERP the company obtaining almost all opportunities.
- Human factor is one of the big challenges in the implementation process of ERP. Human skill and attitude is the major factor for successful implementation of any system. In this regard the company under study has challenged by inadequate employee skill in using IT because of lack of training and attitude problem. This lead not only to don't benefit from

the system fully rather it leads to made repetitive human mistake which is more difficult to made corrective action.

- The collected data shows that there is no adequate training delivered to the staffs about ERP because still when problem happens the company was dependent on vendor. In addition the vendors were not transferred their knowledge to the staffs at expected level. So lack of knowledge transfer and adequate training from vendors to the staffs was also one of the big challenges.
- The other human challenge the company faced in the implementation process is that not enough support from top management because they are busy on other company activities. The organization also faced many challenged in the implementation process of ERP since it new to the organization there is resistance from both the management as well as from the staffs this is the big challenge for the company because without commitment of human resource it difficult for the company to adapt new system.
- From non-human factors the loin share covered by Network problem. This problem limited the company not to use and fully benefit from the system. There is continuous system down in addition it takes much time to solve the problem. Since the company is Telecom Company the organization has huge potential regarding network so the challenge for this is that lack of commitment because when there is system the problem it is not solved quickly even if the problem is easy. So there is lack of commitment from the concerned body.
- Still human resource department is highly dependent on information system department and vendors. This makes works difficult specially when there is system problem and privilege issue for the staffs the problem is not solved timely.
- In addition since ethio telecom was the first organization in adapting oracle ERP it was a big challenge for the organization because the company does not have any bench mark organization in Ethiopia to share its experience to ethio telecom and the preparation to implement the system is not that much organized this leads the organization to spent more additional money more than the planned one.

5.2 Recommendation

- One of the main challenges in ERP implementation is non-human factor so the company should give high focus and work on it to make improvements. Because this is one of the big hindrance that limits the company not fully use the system at expected level. In addition the company should deploy adequate amount of resource to overcome continuous system down and when the problem happens the concerned body should give high focus to get swift solution. Because most of the time there is delay in recovering or solving the problem during this time top management interferences is mandatory.
- To minimize the human challenge the company should give training to its staffs since there is lack of delivering enough amount training that is a big problem for not to use the system at expected level. So to overcome this the company should give continuous on job and off job training like how to use the system, how to solve simple problem that they face while using the system, self-service training and give practical training to its staff based on the competency assessment to fill the gap and fully benefit from the system. Since the company has its own training center it can help to deliver the training to its staffs when needed.
- It is recommended that since the finding detail shows that there is lack of support from vendors and they did not transfer knowledge to the internal asset at expected level. So the company should have on time checking mechanism to check whether the vendors are doing based on the agreement if not corrective action should be taken. So by defining some evaluation parameters the companies need to check how far the knowledge transfer has been achieved because once the company internal assets have got enough knowledge it is great benefit for the organization and save many resources.
- Implementation of ERP is vital for any organization to manage its resource properly and to know current status of the organization timely and continuously. So Top management support is mandatory to be a successful company and to achieve its objective at expected level. So top management should consider implementation of ERP as an investment that the company can get the return in the future. Successful implementation of ERP can change the company one step to the future so commitment and support of top management is essential to eliminate the existing problems related to ERP.
- The human resource department still dependent on the vendors support and IS(information system department) and most of the time there is delay in solving the problems especially

when there is system down and privilege issue so the company should assign dedicated specialties to get on time and urgent support when problem happens. Top management should to continually follow, monitor and take corrective action when the problem happens.

- Since ERP is more modernized, automated and time save system the company should give high and urgent focus to overcome all the challenges by using different strategies. Like deliver on time training, assign adequate resource to solve continuous system down and to work on the attitude of the staffs. If the challenges solved the company have the chance to use all opportunities the ERP implementation creates. So the company must overcome the challenges to use the opportunities.

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Appendix

Appendix A



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St. Mary's University, Ethiopia

Dear Respondent,

This is a research on the topic “The Opportunity and Challenges of Implementing ERP in ethio telecom case of human resource department”. The research is carried out in order to fulfill the requirement of Graduate Studies in St. Mary’s University, as the final year thesis for Masters in Project Management degree. You have been selected as a respondent to this questionnaire because I believe the information that you will provide will be very useful to realize the objectives of the study.

The information you avail in this questionnaire will be used for strictly academic purposes and confidentiality will be ensured. You don't need to write your name on it and nobody will ask you what and why you write. Please try to answer all of the questions and complete the questionnaire

Contact

Hilina Taddese

0911522261

Thank you very much!!!

Part I: Demographic Information – please put (√) in a given answer Box

1. Gender Male Female

2. Age Group

A. ≤ 25 B. 26-35

C. 36-40 D 41 and above

3. Educational status

A. Below Diploma B. Diploma

C BA/BSC D. Masters and above

E. Other please specify _____

4. How long you have been working Ethio telecom?

A. < 4 B. 5 – 9

C. 10 –14 D. 14 and above

5. Your position in the organization

A. Staff B. Supervisor

C. Specialist D. Manager

Part II: Information about the system

Please put a tick (✓) mark on the following ERP sub-system list that you currently use. If you use more than one sub-system you can mark more than one.

Sub-System list

- Employee personal and extra information subsystem
- Employee assignment subsystem
- Employee compensation and benefit subsystem
- Employee absences subsystem
- Employee training, competence and appraisal subsystem
- Recruitment subsystem

Other please specify _____

Please circle your choice of the numbers below. The numbers are defined with their respective equivalent meaning as follows;

1 = Strongly Disagree (SD) 2 = Disagree (D)

3 = Neutral (N) 4 = Agree (A)

5 = Strongly Agree (SA)

Section 1 Opportunity of implementing ERP	scale				
factor	SA	A	N	D	SD
1.I am actively involved with the ERP system					
2.Overall I am satisfied with our ERP system					
3. Our ERP has an opportunity to make our HR decision-making more effective.					
4. Our ERP has an opportunity to minimize the time spent on recruiting.					
5. Our ERP has an opportunity to decrease the time spent on training.					
6. Our ERP has an opportunity to provided increased levels of useful information.					
7. Our ERP has an opportunity for Effective management systems.					
8. Our ERP has an opportunity for Excellent planning.					
9. Our ERP has an opportunity for Scheduling capability.					
10. Our ERP has an opportunity for new or improved procedure.					

11. Our ERP has an opportunity for effective communication.					
Section 2 challenge of implementing ERP	Scale				
Factor	SA	A	N	D	SD
14. Ethio telecom has faced resistance from employees because they prefer traditional methods.					
15. Not enough resources available.					
16. Not enough support from top management.					
17. We did not have adequate support from vendors.					
18. Employees lack basic skill in using IT.					
19. Inadequate involvement of employees at the time of designing and implementing the system.					
20. Lack of communication and training to the users of ERP.					
21. Network problem to use and fully benefit from the system.					
22. The ERP of the company is too complex and make the work difficult.					
23. My organization's has faced a lot of paper work that is difficult to computerize.					
24. Exclusion of key people during design and implementation stage.					
25. Lack of commitment and dedication of project team members during design and implementation stage.					

Part III: 1. Do you think implementing ERP contribute to the success of HR division? How-----

2. From your experience what you do suggest to increase the effectiveness of ERP of the company and points to be improved?-----

3. If there is any other issue that you observed in relation to the opportunity and challenges of implementing ERP, please write down here-----

Thank you for your cooperation!

Appendix B

St. Mary's University

School of Business

Graduate program in Project Management

Interview questions:

- 1) What is your role in your organization, and your involvement with ERP?
- 2) What was the goal of the ERP implementation?
- 3) Has the ERP system led to a higher need for change of the organization and processes?
- 4) Can you explain the factors that have encouraged or hindered your organization for Adopting ERP? What kinds of technological/organizational/environmental Problems/issues/challenges were encountered during your organization's adoption of ERP?
- 5) Can you elaborate on lessons learnt during the adoption of ERP in your organization?
- 6) Can you explain the implication and/or organizational changes arising from ERP Adoption in your organization? Like change in decision making
- 7) What factors were key to implementing the ERP successfully?
- 8) What are the future trends of ERP in your organization?
- 9) What were stakeholders' responses after an ERP implementation? (Positive, Neutral, Negative)
- 10) Are there any other issues concerning ERP adoption that have not been covered in this interview and that you wish to bring to our attention?

Thank you for your cooperation