The Role of ERP (Oracle eBusiness Suite) on Procurement Practice: The case of CBE

By: Fikru Gemechu Tesema

Affiliate: Addis Ababa University; School of Commerce, Department of Logistic and Supply Chain Management
Addis Ababa, Ethiopia

Name of Advisor: Mengistu Bogale (PhD)

July, 2022
Addis Ababa, Ethiopia

Declaration

I, the under signed, declare that this thesis entitled '*The Role of ERP (Oracle eBusiness Suite) on Procurement Practice: The case of CBE'*, is my original work and to the best of my knowledge has not been presented for degree by any other person, and that all the sources of material used for the thesis havebeen duly acknowledged.

Declared by:

Fikru Gemechu Tesema

_____

Date & Signature

Statement of Certification

This is to attest to the fact that *'The Role of ERP (Oracle eBusiness Suite) on Procurement Practice: The CBE case'* is his original work, appropriate for submission for a Master of Art Degree in Logistics and Supply Chain Management.

Advisor: Mengistu Bogale (PhD)

_____

Date & Signature

Addis Ababa University
College of Commerce

This is to certify that the thesis carried out by Fikru Gemechu Tesema, entitled '*The Role of ERP (Oracle eBusiness Suite) on Procurement Practice: The case of CBE'* and submitted in partial fulfillment of the requirements of the Degree of Master of Art in Logistics and Supply Chain Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Examiner _____ Signature _____ Date _____

Examiner _____ Signature _____ Date _____

Advisor _____ Signature _____ Date _____

Abstract

This particular study was conducted to investigate the Role of ERP (Oracle eBusiness Suit) on Procurement Practice measured in terms of four dimensions; namely, (Improving Procurement Practice, Sharing of Information, Decision Making and Integrate Departments) and Procurement Practices in the case of the Commercial Bank of Ethiopia. Due to the small size of the entire population, the study relied on a census survey to compare the dependent and independent variables statistically. Quantitative data gathering is assigned to roles. A total of 150Questionnaires were employed as the official tool to make the response of them were filled and returned, rate of about 62%.The findings of the study suggested that all the dimensions of Role of ERP (Oracle eBusiness Suit) on Procurement Practice have statistically significant relationship with Procurement Practice though the strength of the relationship is relatively higher in the case of Improving Procurement Practice and Integrate Departments. Improvement of Procurement Performance and Integrate Departments has statistically significant beta values and their respective standardized coefficients (beta values) indicate the relative importance of both dimensions in predicting the dependent variable, namely Procurement Practice of the bank. The regression results also suggested that Improvement of Procurement Performance and Integrate Departments have significant impact on determining the bank's Procurement Practice. It is suggested that the Banks shall give special emphasis in the improvement of Procurement Performance and integration of departments.

Key Words: *ERP, Orcacle eBusiness Suit, Procurement Practice, Commercial Bank of Ethiopia, Census Survey.*

Acknowledgements

- ✓ The first of my appreciation goes to my advisor Mengistu Bogale (PhD) for the valuable insights he has given to me in the course of accomplishing this thesis.
- ✓ And next, I would like to forward my gratitude to all my family members, friends and colleagues that was not possible without their cooperation.
- ✓ I would also like to acknowledge the honored cooperation and dedication of those who have helped me during data collection and analysis phase.
- ✓ Most of all, I am indebted for the Almighty God for giving me the patience, strength and dedication to endure the walks of life.

Table of Contents

List of Figures

List of Tables

CHAPTER ONE

INTRODUCTION

1.1. Back Ground of the Study

Supply Chain Management is a methodology of improving the business processes, making them more resilient, more agile and as a result, more competitive. The main function of SCM is to improve the products' or services' competitiveness (Machowiak, 2012). Currently, businesses are under strong competition and try to fit and continue in business, to do so they have mobilized their resources and potentials. In order to stay and survive in a competitive market, firms are forced to speed up their production, reduce their cost and improve performance (Nemati S. 2013). Information Technology developments are basic means of paradigm shift in the competitive environment. Thus, organizations are investing a big deal of money and other resources in modernizing their operation, to maximize profit and get service excellence. Among information science developments ERP system is the one which transforms information flow methods and sharing information for decision purposes. This study tries to describe, understand and analyze Oracle eBusiness Suite and its relevance in Procurement Practices in the case of Commercial Bank of Ethiopia. Businesses evolve and they need to adapt to various changes in market scenario to remain agile. To this end, businesses need to automate and streamline their operations across various departments and functions such as finance, accounting, human resources, production, material management, quality management, distribution, and sales. Organizations use ERP software to manage business information, integrate various disparate systems, streamline workflows, and achieve efficiency.

Now a days, one of process automation system is ERP system. Over the past few decades, firms have been using ERP software to gain operational efficiency, enhance productivity, and achieve profitability. The purpose of this study is to assess the role of ERP on Procurement practices in the case of the bank. The researcher will review literatures, books, journals and article on the topic. We also interview processes owners or managers and users of the system and the implementation team. Information that is to be collected in the form of questionnaire will be analyzed by the Statistical Package for Social Science(SPSS)

Enterprise Resource Planning (ERP) took its start in the late 1980's and then properly extended in the 1990's whereas the large area of focus was the huge scale business organizations. These systems are considered as complex, they are expensive, and they are powerful while these systems were also considered as the key platform for simplifying the complex operations. (Nemati, 2013).

There are presently numerous vendors offering ERP solutions. Among these vendors, the first-tier players include SAP, Bann, Oracle, and PeopleSoft, while the second-tier players include J.D. Edwards, QAD, and Lawson

This study focused on understanding and analyzing the relevance of Oracle eBusiness Suite in Supply Chain Management in the case of Commercial Bank of Ethiopia (CBE) particularly focuses on the procurement function and processes. The bank was using legacy system of SCM. In the bank, the procurement process was implemented in manual base. Every process was worked out on paper and information, material and financial flows in traditional way. Supply Chain Management fundamentally looks into the interrelationship and inter- linkages between different functions, processes and chain members and analyses the impact of their interaction on value additions and profit maximization (Ballou,2007). There was no information integration at all in the bank, thus the legacy system slows decision making process and create service delay. As a result, it entails customer displeasure. After analyzing the problem, the bank has been implementing and using the ERP System for the last five years. This research paper would try to study the significance of the implementation of Oracle eBusiness Suite and try to assess the role of the system and that brought to the bank after fully implemented.

1.2. Back Ground of the Company

Commercial bank of Ethiopia is the largest state-owned bank in Ethiopia, with more than 2000 branches and outlets, registered and permitted by the National Bank of Ethiopia to give banking service. The bank has seven process owners lead by Vise Presidents, among which is the Facility Management under it, there is a procurement department. The department is a responsible for planning,coordinating, processing, approving and finalizing procurement activities of the bank. In the legacy system, the bank was performing the purchasing activity manually and using micro soft offices only. The system is believed basically transform the process starting from purchase requisition to effecting payments. Thus, the bank initiates and implements the system. The theory

of constraint has been used for the implementation of the system. First, the bank has automated the core businesses and evaluates its performance; it is found that it is not satisfactory since the support businesses were not automated and integrated with the core business. Thus, after identifying the gap, it starts implementing the ERP system for support businesses such as finance, procurement, human resource and others.

1.3. Statement of the Problem

ERP is basically a software that is now being used by multiple businesses to manage their accounts. Enterprise Resource Planning is the full form of ERP. This is extremely beneficial for the supply chain management due to a variety of reasons. It has a great role to play in bringing the better performance when it comes to supply chain management. The major component of the SCM is the procurement process that we are intended to study. According to *AdvantaInnovation* (2021), ERP brings improved efficiency to the organization and it enables companies to track their orders which will further help them a lot in managing the accounts. It helps in the decision-making process and minimizing the delay. One of the best benefits of using ERP for supply chain management is that it helps in improving the productivity of the whole business and it helps in reducing the errors and mistakes. In addition, inventory optimization also helps a lot for the business to grow in the right direction. The system is easy to use and also reduces the cost which further helps your business to get the best results and profits on the efforts made.

Assuming the above benefit and roles of the Oracle eBusiness Suite, the CBE implements the system in the procurement, finance, and human resource departments. The focus of this study is to verify that whether the bank is enjoying the above-mentioned benefits of the ERP. And also, to investigate the role of the system on the procurement process of the bank. This research is intended to reveal the improvements achieved in the performance of the procurement department after implementation of Oracle eBusiness Suite. The bank procurement method as we have mentioned earlier was manual base, i.e.Purchase requisitions were raised through a letter written by the requesting organ that specify the need and specification, and then this job will be assigned to the procurement officer and the rest of the process will continue manually until payment is effected to the supplier after delivery and inspection acceptance. The manual system delays the procurement process, sharing of information, receipt of goods and services, and also effecting payments. The bank took various measures to improve the efficiency and effectiveness of the

department such as organizational structural changes, empowering employees and providing extensive training. None of them brought the expected results. Despite all efforts done, performance of the department was changed with very little.

Thus, the bank determined and implemented the Oracle eBusiness Suite system to improve efficiency and effectiveness of the department, this study is focused to evaluate the improvements of procurement performance and the efficiency brought through implementing the ERP.

Some researchers claim that an ERP system offers the decision makers the way of enhancing the knowledge about the process which in turn helps to make dependable decisions more quickly and as well as collecting sources to maintain their decisions (Nemati, 2013). This study would attempt to confirm the claims of some researchers that the ERP system does offer decision making is quick and based on information

In the book Thinking About ERP, Pienaar, Toit, Viljoen, and Wessels (2008)state ERP is no longer a competitive advantage. It is now a competitive disadvantage not to have an ERP, or to select one that doesn't operate efficiently and effectively. Considering this advises of the authors, it seems that ERP module is a mandatory resource and solution in the business arena. Thus, to make sure the selection of an appropriate ERP system, industry decision-makers should reply what strategic business objective will be served with system; what, how much and when will ERP add to this particular objective; how do the answers to the last two questions influence what ERP system to select; and how to go about an ERP implementation, and how to function the ERP system once it is live.

In general outlook, the integrated procurement system provides the purchasing professionals with links to information across all of an organization's functions and departments that includes actions and information; consists of receiving transactions, order revision data, suppliers profile, account payable status, special order receiving and tracking of incoming purchase through receipt routing (Edward , 2000). This research also try to find out purchasing professionals is getting that link to information across the bank functions and departments.

According SYSPRO Ltd, (2008), making exact, quantifiable case for selecting, implementing and operating ERP in a particular situation has proven to be quite challenging; no doubt due to

the strategic nature of ERP and the difficulty in quantifying the payback. To demonstrate: some typical non-quantifiable benefits are improved alignment of business operations with the business strategy, reduced business risk, improved financial management and corporate governance, and increased information visibility. Thus, what we want to assess is such non quantifiable benefits are visible in the procurement practices of the bank.

Despite clear benefits to companies that integrate supply chains, there are concerns and drawbacks. Building any type of ERP system in a company that doesn't have a mutual culture is difficult. Division and department leaders often are doubtful of sharing processes and resources.

Supply chain is a system which consists of suppliers, manufacturers, distributors, customers and many others. There are three types of flow which needs close collaboration and organization that are material flow, information flow, and financial flow. (Silver, Pyke& Peterson, 1998).

All these networks are in turn supported by the three main pillars. They are: processes which determine the firm's ability to manage logistics develop new product and knowledge management; organizational structure which determines the relationship between the various members across the supply chain; and technologies used by the companies which help in easing out the operations related to process and organizational management (Hillier and Lieberman, 2005). Here we explore processes, structure and technology, our focus of the study is how well the three networks work together and integrated.

Wedeli (2019) states that there are many benefits of manufacturing ERP software, which include improved productivity, increased efficiencies, decreased costs and streamlined processes. Let's look at 15 of the most common benefits of enterprise resource planning systems that companies have reported after implementation. These are competitive advantages, improved process efficiency, accurate forecasting, department collaboration, scalable resource, integrated information, cost saving, streamlined process, mobility, customized reporting, increased productivity, regulatory compliance, flexible system, customer service and data reliability.

Wedeli, et el (2019) look at four of the most general disadvantages of ERP that companies have reported after implementation. These are cost of ERP system, success depends on software experience, not purchasing a customized system and ERP resistance.

Ultimately, even with these disadvantages, ERP software is still a key ingredient on the road to building a successful business. The benefits of implementing an ERP system in your business outweighs the negatives since the system gives your company a competitive and monetary boost while improving company output, teamwork and communication. The upside to the listed disadvantages is that with careful research, your business can keep away from making any of these mistakes (Wedeli, et el2019).

Investopedia, (2021) confirmed that integrating and automating business processes eliminates redundancies, improves accuracy, and improves productivity. Departments with interrelated processes can now coordinate work to achieve faster and better outcomes.

Related with information sharing some businesses benefit from improved reporting of real-time data from a single source system. Accurate and complete reporting assist companies adequately plan, budget, forecast, and communicate the state of operations to the organization and interested parties, such as shareholders.

This paper aims to investigate the ERPpermit the procurement processes to quickly access needed information for clients, vendors, and business partners, contributing to improved client and employee satisfaction, quicker answer rates, and increased correctness rates. Associated costs often decrease as the company operates more efficiently.

ERP allows departments are better able to work together and share information; a newly synergized workforce can improve productivity and employee pleasure as employees are better able to see how each functional group contributes to the mission and vision of the company. Also, menial, manual tasks are eliminated, allowing employees to allocate their time to more significant work(Investopedia 2021)

The research is being conducted following these research questions:

I. What is the role of Oracle eBusiness Suite on Procurement Practices?
II. What is the role of Oracle eBusiness Suite in improving procurement performance?
III. What is the role of Oracle eBusiness Suite in sharing information?
IV. What is the role of Oracle eBusiness Suite in decision making?
V. What is the role of Oracle eBusiness Suite to integrate departments?

1.4. Objectives of the Study

1.4.1. General objective

The general objective of the research is to explore the relevance of ERP (Oracle eBusiness Suit) on the Procurement Practices. Integration of various departments and activities as well as external partners are enabled with the Oracle eBusiness Suit. How well departments and functional processes are integrated each other and what benefits are achieved after implementing the ERP system on the procurement operation is the main objective of this research. The other major objective of this study is to explore the decision-making process, is the module helps to expedite the decision-making process.

1.4.2. Specific objectives

In doing this research; we need to assess changes happening in the bank procurement after implementation of the Oracle eBusiness Suite the value added activities that are incorporated in the procurement process is the system shortening procurement cycle, how much time and cost saved during each activity, shortening elongated processes, reducing number of employee for specific task, reducing lead time, and whether the ERP (Oracle eBusiness Suit) aligned with the bank business model.

1.5. Scope of the Study

This study was meant to assess the role of ERP on the procurement practices of the bank in its relationships and their association with the performance of the bank. The operationalization and measurement of the Oracle eBusiness Suite was made on the bases of four dimensions, namely (Improving Procurement Performance, Sharing of Information, Decision Making and Integrate Departments). Hence, Procurement Practice of the bank is assessed on the base of these factors/dimensions. Methodologically, the study is based to the quantitative and qualitative data. Information is to be gathered through questionnaire. The scope of the study was limited to Commercial Banks of Ethiopia; procurement, finance and warehouse departments. Geographically, all of the bank's procurement, finance and warehouse units are located in Addis Ababa, thus, the study data were collected from these unites corresponding to the study period.

1.6. Significance of the Study

This research will contribute in revealing the significance and importance of ERP system for improving service deliver, reduce lead time and cost, and prompt exchange of information for decision making. This study may also contribute for those companies that are planning to procure and implement the ERP system in analyzing and understanding the challenges and benefits of the system before spending money and time. In addition, this paper may have significance in contributing to the future research by adding knowledge on the role of the ERP on Supply Chain Management basically both look into the interrelationship and inter- linkages between various functions, processes and chain members and analyses the impact of their interaction on value additions and profit maximization (Ballou, 2007). This thesis may disclose researchable area of the ERP system over its role and implementation for more studies to the academic arena.

1.7. Conceptual Definition of Terms

Legacy system - A legacy system is old-fashioned computing software and/or hardware that is still in use. The system still meets the needs it was originally intended for, but doesn't allow for growth. What a legacy system does now for the company is all it will ever do. A legacy system's older knowledge won't permit it to interrelate with newer systems (talend.com)

Business model: A business model is the map your business has for making money.

ERP is a system; software standardizes, streamlines and integrates business processes across finance, human resources, procurement, distribution and other departments. Here's what you need to know about these key IT systems (Perkins, 2020). It is an explanation of how you bring value to your clients at an appropriate cost. This includes descriptions of the products or services you plan to sell, who your target market is, and any required expenses (Parsons,2021)

1.8. Organization of the Study

In Chapter one; the introduction shall contain background of the study, statement of the problem, basic research questions, objectives of the study, definition of terms, significance of the study, and delimitation/scope of the study.

In Chapter two; literature review, deals with the literature relevant to this study. It will have an introduction, theoretical review, empirical review and the conceptual framework of the study.

In Chapter three; research methodology, under this chapter, we are required to describe the type and design of this research; the subjects/participant of the study; the sources of data; the data collection tools/instruments employed; the procedures of data collection; and the methods of data analysis used.

In Chapter four; results and discussion/Data presentation, analysis &interpretation: - this chapter should summarize the results/findings of the study, and interpret and/or discuss the findings. Here, we are expected to make extensive use of the literature review.

In Chapter five; summary, conclusion, recommendation, this chapter comprises four sections, which include summary of findings, conclusions, limitations of the study and recommendations. The summary of findings should be drawn from the results discussed under chapter four; our conclusions should be drawn from the summary of findings; specify any limitations that could have effect on the conclusions. We make sure that our recommendations are realistic and practical.

CHAPTER TWO

LITERATURE REVIEW

2.1. Conceptual Underpinnings

The purpose of this chapter is to review the works that other scholars and researchers have done concerning ERP and procurement practices. In connection with procurement practices we also review some literature of SCM since they are highly related. Theoretical and empirical reviews are done leading to a conceptual framework which is proposed to guide the study. This chapter begins with review of the theories that underpin the concept of ERP and procurement Practices. The chapter then presents an empirical review of the role of ERP in SCM generally and specifically procurement practices. The research gap is identified and conceptual framework adopted is discussed.

2.1.1. Defining ERP (Oracle eBusiness Suit)

Oracle Database is a relational database management system (RDBMS) from Oracle Corporation. Originally developed in 1977 by Lawrence Ellison and other developers, Oracle DB is one of the most dependable and widely used relational database engines for storing, organizing and retrieving data by type while still maintain relationship between the various types.

The system is built around a relational database structure in which data objects may be directly accessed by users (or an application front end)throughout Structured Query Language (SQL). Oracle is fully scalable relational database architecture and is often used by global enterprise which manages and process data across wide and local area networks. The oracle database has its own network constituent to allow communiqué across networks (Buttice C. 2021)

Information technology has transformed the way we behave and the way we do business. ERP software consists of multiple software modules that join together activities across functional departments - from production preparation, parts purchasing, inventory control and product delivery to order tracking. Most ERP software systems include application modules to support common business activities like finance, accounting and human resources (Rao, Y.V 2011). ERP is a high-end sophisticated software solution that reduces the force and workload of the users of the system and provides correct, timely information for taking appropriate business decisions.

2.1.2. Defining Procurement Practices

Procurement management is also referred to as the source-to-settle process. It encompasses the evaluation, selection, and creation of formal contractual agreements as well as managing the company's continuing supplier relationships.

Procurement is a complex discipline spanning many interconnected activities. The procurement management practice includes the transactional purchasing of goods and services, and integrates with accounts payable to complete the source-to-settle cycle by provided that supporting documents to help with the processing of supplier invoices for payment.

Supply Chain Management (SCM) is a term used in business literature to refer to the control of materials, information, and finances as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer. According to the Council of Supply Chain Management Professionals (CSCMP, 2007). Supply chain management encompasses the planning and management of all activities concerned in sourcing and procurement, conversion, and all logistics management actions. It also consists of coordination and collaboration with channel partners, which can be suppliers, mediators, third party service providers, and customers.

Procurement & SCM research domain draws on a very diverse range of disciplinary bases, theories and models. Consequently, it is difficult to identify a single, coherent and dominant body of thought relating to Procurement & SCM such that it might start to take on a disciplinary status**.**

2.1.3.Conceptual Theory of Constraints (TOC) on Procurement and ERP

According to Dr. Goldratt, E (2021) states the TOC is a process improvement methodology that focus on the benefits and the importance of finding out the "system constraint" or bottleneck. Controlling this limitation allows companies to meet their financial objectives while delivering outs in the supply chain, minimizing lead time-to-full (OTIF) to consumers, and avoiding stock-in-time-out, among other things; better control over operations, less inventory, reduced conflicts between team member and drastically reduced firefighting are common advantage of implementing the Theory of Constraints. Often, additional capability gets exposed without further capital investment or hiring additional workers.

The Theory of Constraints (TOC) is being one of the easiest, most influential procurement and supply chain concepts. Generally, it is that every process is limited by some kind of *constraint* (think of the saying, "A chain is only as strong as its weakest link"). Theory of constraints is about regulating the whole supply chain to run at the similar pace as the slowest step in the process (S. Daniel, 2018).

According to S. Daniel, et al 2018; "the most restrictive step in a process is the one that constrain the whole system". Theory of constraints assist you focus on improvement efforts on the constraints because that is where you can have the greatest outcome on the procurement and supply chain.

After you find the constraint, you have two choices:

- Slow all the other steps down so that they run at the similar speed as the constraining pace. This will keep away from the buildup of inventory between the steps in your process.
- Improve the constraint so that the entire system moves faster. As you go on to improve the constraint (perhaps by using Six Sigma), ultimately, it reaches the position where it's no longer the slowest step in your process. In other words, it stops being your constraint. As a result, some other steps will turn into the constraint that's limiting your process, and the cycle starts again.

Generally, the theory of constraints assumes that every system has a limiting factor or constraint. Normally the fastest and most effective way to improve productivity is to focus on improvement efforts to better utilize constraint.

In the book Thinking about ERP , 2008; the authors advocate "ERP is no longer a competitive advantage. It is now a competitive disadvantage not to have an ERP, or to choose one that doesn't function efficiently and effectively".

Business decision-makers should respond the following questions to make sure the selection of appropriate ERP, that are, what strategic business objective will be served with ERP? What, how much and when will ERP contribute to this particular objective? How do the answers to the last two questions influence what ERP system to select? How to go about an ERP implementation and how to operate the ERP system once it is live?

The best method of answering these questions is throughout the application of Eli Goldratt's Theory of Constraints (TOC), which is a change-management philosophy and methodology that companies can employ to consistently attain their goals. Theory of Constraints helps to clarify the linkage from a business's constraints to its performance – as measured on the bottom line. This can also make sure the ERP selection process is a business decision based on targeted objectives, and that the benefit will be verifiable.

Constraints according to (Noreen, Smith & Mackey, 1995) comprise occurrence as constraints such as equipment, policy and regulation, and lack of skilled people that can be external or internal to the system. The theory of constraint has been used in the procurement to supply solution towards superior availability and flow of inventory by identifying constraints and contributions management techniques to reduce replenishment time, lead time, and late deliveries (Herman, 2000).

2.1.4. General Systems Theory of ERP

Historically, the early phases of ERP systems can be tracked to the manufacturing systems in the 1960s. During those years the development focus on software to design software specifically for manufacturing operations, which led to the existence of material requirement planning (MRP) systems. Since 1975, the MRP system has been extended from a simple MRP tool to become the standard manufacturing resource planning tool (MRPII).

The gurus of ERP such as Gable seems to share many aspects of his definition by defining ERP as a comprehensive package software solution seeking to join together the complete range of a business processes and functions in order to present a holistic view of the business from a single information and IT architecture point of view (Gable, Scott & Davenport, 1998).

The definition of the ERP phenomena has been developing during the last years. The rather new phenomena have been defined from several different point of views including software package, enterprise system, enterprise business-system, vendor software and enterprise application point of views. Rosemann, (1999) typically defines ERP system as customizable, standard application software which includes integrated business solutions for the core processes (e.g. production planning and control, warehouse management) and the main administrative functions (e.g., accounting, human resource management) of an enterprise.

In general view; the integrated procurement system provide the purchasing professionals with links to information across all of an organization's functions and departments that includes; data of receiving transactions, activities and information, suppliers profile ,order revision data, account payable status, special order receiving and tracking of incoming purchase through receipt routing (Edward, 2000)

2.1.5. General Theory of Procurement and Supply Chain

Matured stage of development of a comprehensive supply chain model has not as yet been achieved, as significant number of current and representative frameworks and model's evaluation of a supply chain management indicates. In addition, any real convergence to a generally accepted normative model of supply chains and their management does not appear to exist (Caddy and Helou, 2006). Current studies examine the application of the theories and principles of general systems theory to ascertain whether a more general and fundamental supply chain framework can be developed. Furthermore, current studies aim to address the question as to whether the application of general systems theory to this field would provide additional approach in terms of the effective management of supply chains.

Supply chains are considered as systems of providing flow of good, product or services to consumers (Chopra & Meindl, 2004). The contribution of the general systems to supply chain can be seen from this view point that the supply chain is a system with inputs and predictable outputs, to notify management of supply chain. Handfiled & Nicholas (1999) explains that the supply chain includes the management of information systems, sourcing and procurement systems, logistics systems, order and customer service systems and integration of these activities within the context of the general systems theory, through improved relations between these systems can be used to gain competitive advantage. The general systems theory provides chance to distinguish subsystems and variables.

The general theory of the procurement process is the method of obtaining products and services from suppliers, that includes decision about how much and when to purchase goods and services, the actual quantity of goods and services, and the process of receiving the requested goods and services. Edwards (2000) states the purchasing cycle ensures that the right quantity and quality of equipment, materials, supplies, or services are acquired at the best price and from the most

proper sources. The purchasing department is not the only department that is affected and concerned in procurement process there are other departments.

Procurement decisions are often about much more than risk mitigation, however. Where there is an interest in the benefits that can flow from Procurement &SCM practice (value appropriation, value-creating innovation, or improved efficiency and responsiveness), then the mechanisms associated with the inter-organizational relationships literature or the integrated SCM literature are the appropriate focus.

The former literatures focused attention on the mechanism of the buyer–supplier relationship and its position in a wider network of relationships and suggest that value appropriation, and potentially value creation, are a function of understanding and cultivating these interactions. The integrated SCM literature has a similar interest in buyer–supplier relationships, but sees these in mechanism terms as an integrated extended supply chain operating on the basis of close co-ordination and collaborative effort to deliver a more efficient or responsive outcome (Sanderson J, Lonsdale C, &Mannion R, 2015)

2.2. Empirical Review of Procurement

As Logistics bureau (2012) states procurement has never played such an important position in the increasingly globalized economy. Has procurement fundamentally changed itself in the past 10 years? The answer is yes. Strategic Procurement can indicate completely diverse things in different industries and sectors. People's search for bottom-line improvement will significantly impact the way we conduct our business in the local market, the efficiency we deliver through the supply chain, and the return we produce from our investment (ROI).

The time when procurement was almost a synonym to Purchasing has long gone. Smart organizations try to get rid of the functional siloism, by encouraging cross-functional coordination with clear responsibilities and effective system supports. Such a cultural change in turn encourages managers and employees to actively take part in the procurement activities with clear guiding principle. Do we really care about centralization or decentralization as a strategy? No. It all depends on an organization's maturity in skill, infrastructure and culture.

What does procurement include within a supply chain organization? A capable procurement organization should at last be able to stand for the whole supply organization (inbound supply

chain). Depending on the design of an organization's supply chain, today's procurement activities can permeate into just about every corner of the business. For example, BPO (Business Process Outsourcing) in logistics, manufacturing, IT and HR requires an organization to not only know how to procure or acquire an external resolution through cross-functional effort, but also be capable to control vendor performance and make sure the value of the outsourcing solution is sustainable.

Supply chain is a network which consists of suppliers, manufacturers, distributors, customers and many others. (Silver, Pyke & Peterson, 1998)

Clearly, procurement decisions are more and more based on total supply chain cost, carbon footprint impact other ethical, social and economic factors, rather than just purchase prices.

2.3. Empirical Review of ERP System

Wedeli (2019) states that there are many benefits of manufacturing ERP software, which include improved productivity, increased efficiencies, decreased costs and streamlined processes. Let's look at fifteen of the most common benefits of enterprise resource planning systems that companies have reported after implementation. These are competitive advantages, improved process efficiency, accurate forecasting, department collaboration, scalable resource, integrated information, cost saving, streamlined process, mobility, customized reporting, increased productivity, regulatory compliance, flexible system, customer service and data reliability.

Investopedia, (2021) states that integrating and automating business processes eliminates redundancies, improves correctness, and improves efficiency. Departments with interconnected processes can now coordinate work to attain faster and improved outcomes.

Connected with information sharing some businesses profit from enhanced reporting of real-time data from a single source system. Accurate and complete reporting help companies adequately plan, budget, forecast, and communicate the status of operations to the organization and interested parties, such as shareholders.

This paper aims to describe that ERP allow businesses to rapidly access needed information for clients, vendors, and business partners, contributing to improved customer and employee satisfaction, quicker response rates, and increased exactness rates. Associated costs often decrease as the company operates more efficiently.

ERP allows departments are better able to work together and share knowledge; a newly synergized workforce can improve productivity and employee satisfaction as employees are better able to observe how each functional grouping contributes to the mission and vision of the company. Also, tedious, manual tasks are eliminated, allowing employees to assign their time to more significant work (Investopedia, 2021)

Common ERP challenges are, according to Biel (2021), poor project management, inability to control implementation costs and duration, inside resistance to new systems, software integration issues and poor data quality. These problems stem from uncertain ERP implementation goals, choosing the wrong ERP seller and purchasing software that's not correct for your company.

ERP system can supercharge your business, but you must decide the right platform and implementation team to avoid appropriate another unfortunate ERP statistic. Data collected over the years on ERP implementations found that 50% fail the first time around. Most implementations cost three to four times what was originally budgeted.

Implementation can take 30% longer than anticipated. 51% of companies experience operational disruption when they go live. System modifications needed to improve usability cause overspending 65% of the time. Data correctness, client experience and analytics are the top three places ERP systems fall short for users. The two most commonly cited challenges during implementation are insufficient testing and not enough process reengineering.

Like other open-source applications, open-source ERP is an inexpensive, and sometimes free, alternative that's suitable for some companies. Many open-source ERP providers allow businesses to download their software for free and charge a low annual fee only if the customer wants cloud access. These solutions have improved, with more modern web-based interfaces and a growing number of modules, but companies need to understand what they're taking on with an open-source ERP. Support from the provider will be minimal, and configurations and system improvements be inclined to fall on the client that means you require technical staff with a deep knowledge of how to build up and configure the software.

Cloud-based ERP runs on remote servers managed by a third party. Users typically have right to use a cloud ERP through a web browser, giving them greater flexibility — they can dig into

information and reports from anywhere with an internet connection. There are multiple deployment options for cloud ERP, including single-tenant and multi-tenant. Adoption of cloud technology continues to increase worldwide as businesses move from on-premises technology to achieve business efficiencies, on-demand service, network elasticity and expanded network access. Statistics on the increase of cloud technology show the dramatic growth of cloud applications as they relate to the ERP market

According to Bein , (2021), to perform a successful ERP implementation, companies must have unambiguous vision of new system requirements to generate alignment throughout the organization. Choosing the right vendor and assigning an internal implementation team increases the chance of project success.

The top three benefits businesses said they gained from an ERP system are reduced process time, increased teamwork and a centralized data system. An average for ROI time in a group of companies that implemented ERP was just over 2.5 years.

ERP software is advancing to meet the demand for more customizable features and broader integrations as business needs become more multifaceted. Current ERP trends demonstrate a shift towards superior cloud adoption and intelligent systems that streamline and computerize processes.

2.4. The Variables/dimensions of ERP system

According to Linton (2019); types of procurement structures range from a single person with accountability for purchasing, to a large, centralized department or decentralized organization with procurement professionals working in divide locations or business units. Since procurement typically accounts for half of an organization's expenditure, getting the right structure is essential; in addition to that procurement also plays an important part in a company's competitive strategy.

Procurement is undertaken in the following structures that are Individual Purchasing Responsibility, Central Purchasing Department, and Centralized Purchasing in Companies, Decentralized Procurement Structure and Strategic Sourcing Model.

Effective procurement necessitates the employment of sound business practices that maximize value to the organization throughout the acquisition of goods and services. This follows the old

adage that the Procurement Department's role is to bring the right material (or service) in the right amount to the right place at the right time and at the right price. To do this, Organization are required to employing well-conceived strategies- a plan to enhance competitive bidding, for example, that influence clearly defined processes to administer the supply base. As a procurement expert, we will be expected to imagine and put into practice strategies that utilize best practices (Sollish & Semanik, 2012).The followings are the four major variables/dimensions

2.4.1. Improve Procurement Practices

According SYSPRO Ltd, 2008; the wide implementation of ERP across the world proves that the payback that organizations gain from these systems. But ERP costs money – typically a lot. These costs are for the initial acquisition of an ERP system, the implementation project and the continuous operation of the system. Is it worth it? Making a specific, quantifiable case for selecting, implementing and operating ERP in a particular situation has proven to be pretty challenging; no doubt due to the strategic nature of ERP and the difficulty in quantifying the payback. Improved arrangement of business operations with the business strategy; reduced business risk; improved financial management and corporate governance and increased information visibility are some typical non-quantifiable benefits.

The traditional approach used by organizations which are considering spending a large amount of money necessitate business benefits to be quantified in financial value and compared to the costs.Trying to quantify the non-quantifiable benefits of ERP; however, necessitate calculations and extrapolations that often result in endless circles of debates about questionable assumptions and hypotheses. Sometimes a benefits case is compiled during the initial stages of an ERP project, but once completed it is almost impossible to separate the benefits – and occasionally even the costs – related to ERP for before-and-after type comparisons.

ERP software is still a key ingredient toward building a successful business. The benefits of implementing an ERP system in the organization outweigh the negatives because ERP gives company a competitive and financial boost while improving company productivity, collaboration and communication. The upside to the listed disadvantages is that with careful research, business can avoid making any of these mistakes (Wedeli, 2019).

Procurement processes using information technology are capable to shorten the time taken to share and process information. Use of information technology in procurement enables the

coordination of business processes both within and outside the organization. Examples include; electronic ordering, online catalogue and online payment. Organizational performance is enhanced by improved productivity and quicker response times. Real time connections also allow faster transactions and saves on time. Electronic procurement allows ordering and approval of all transactions in a shorter time span compared to manual requisitions (Lewis and Roehrich, 2009).

2.4.2. Sharing of Information

Information sharing/exchange is the extent to which a firm shares a variety of relevant, correct, total and secret ideas, plans and procedures with its supply chain partners in a timely manner (Cao, 2009;Simatupang and Sridharan, 2004). Information sharing has been described as the heart, lifeblood, nerve center, essential ingredient or base of supply chain collaboration (Cao et al., 2009). Supply chain partners who exchange information regularly are capable to work as a single entity and can recognize the desires of the other partner better and, hence, can react to market change quicker (Li ., 2006). By building up on the result of prior studies, Li et al, (2006) suggested that simplified material flow, including streamlining and making highly noticeable all information flow throughout the chain, is the key to an integrated and effective supply chain.

Information sharing becomes crucial in these unstable economic times as it drives the firm into becoming a collaborative structure (Krishnapriya, and Rupashree, 2014). It has been revealed that buyer and supplier strategic information flows positively impact the relationship-specific performance of both sharing and receiving parties, among which delivery time, quality and flexibility are prevalent (Klein and Rai, 2009). However, to understand the streamlining effect of information, the information shall be more proprietary, tacit and holistic than the data traded in arm's length relationship, given the fact that levels of information sharing as well as quality and relevance of information shared become critical aspects in deciding success in collaborative efforts in buyer-supplier relationships (Krishnapriya, and Rupashree, 2014; Cao et al., 2009).
With information sharing some businesses benefit from enhanced reporting of real-time data from a single source system. Accurate and complete reporting help companies adequately plan, budget, forecast, and communicate the state of operations to the organization and interested parties, such as shareholders.

This is due to rapid advances in technology as well as the increased customer demands. Willingness to adopt ICT rests on a number of reasons including, requirement by customers that their suppliers link their system as a condition for doing business, reduction of transaction costs, improvement of customer service quality and defensive reaction to competitor's adoption, Thong, (1999).

Adoption and implementation of e-procurement may be hindered by cost of investing in compatible systems, unwillingness to have open approach to tendering and cost of training employees, Davilla, (2003). Suppliers with old systems will meet difficulties in adapting to the new system because of be short of the necessary skills and training to handle the new system. Employees used to the old-fashioned way of direct communication will find it hard fitting in the new indirect way of doing things, replacing paper work with online communication. The nature of relationship is also a major factor as the new ICT system will make sure that transparency is kept in the front.

2.4.3. Decision Making

ERP software is a triple risk: This platform helps businesses make more efficient core processes, manage growth and inform decisions, making it a potent weapon for companies in almost every niche. Many small brands now use ERP for decision-making and forecasting, something that could save them cash, improve sales and optimize day-to-day operations. This integrated move toward to decision-making ensures that companies make better judgments at every stage of supply chain management, which can help them grow their business. Twenty-seven percent of enterprises that don't have an ERP system reveal that "company growth" is the motivating factor for wanting to use one(SYSPRO Ltd, 2008)

2.4.4. Integration of Departments

Supply chain management (SCM) is a coordinated system of managing the transportation and logistics activities in a manufacturing, wholesale or retail business. Optimizing efficiency in supply chain distribution activities is the primary rationale of SCM. Historically, each supply chain component took a concentrated view of its role in moving goods to the next phase. All chain members are assumed to work jointly with the end goal of delivering the best value to consumers in the integrated supply chain model.

Also, integration necessitates a strong technology infrastructure and the sharing of critical company data with trusted suppliers. Sharing of information to suppliers which don't care for inventory data and company operations information confidentially shall exposure the company data to competitors.

In general view, the integrated procurement system provides the purchasing professionals with links to information across all of an organization's functions and departments that includes activities and information; consists of receiving transactions, order revision data, suppliers profile, account payable status, special order receiving and tracking of incoming purchase through receipt routing (Edward , 2000). This research tries to find out purchasing professionals is getting that link to information across all of the bank functions and departments.

Integration is a method of connecting ERP software to other systems to make sure that consistent information is shared while also automating workflows. It is useful because it affects relationships between ERP software and other vendor systems so that businesses can customize and choose the specific tools they want to have in their solutions (Lindsey Jenkins, 2022)

Lindsen, et al 2020, declared that key benefits connected with ERP system integration are centralized data, automated process, work flow visualization, decrease in human error and additional time for labor intensive projects.

According SYSPRO Ltd, (2008); making a specific, irrefutable case for choosing implementing and operating ERP in a particular situation has confirmed to be quite challenging; no doubt due to the strategic nature of ERP and the difficulty in quantifying the benefits. To illustrate: some typical non-quantifiable benefits are improved arrangement of business operations with the business strategy, reduced business risk, better financial management and corporate governance, and increased information visibility. Thus, what we desire to assess is such non quantifiable benefits are observable in the supply chain of the bank.

2.5. The Variables/dimensions of Procurement Practices

Procurement activities become one of the common activities that occur in a company. The companies that need large supplies must act immediately to fulfill the procurement so that business is not hampered. In addition, the nature of procurement is an activity involving

two or more parties. Therefore, how can companies optimize the procurement process to be efficient? The answer is ERP system procurement.

ERP system procurement is a system to control the cost of procurement of goods in companies to be more efficient. This system regulates the procurement process of goods, from inventory requests to inventory and invoice receipts. The function of this system is to complete and correct the recording during the procurement process. There is usually a lot of fraud in the procurement process. Thus, you need this system to avoid those problems.

According to Resdifianti, F. (2022), ERP system procurement for business activities will offer many benefits and uses those firms can't find it from other systems. This can provide the procurement process in an integrated way. It also can demonstrate the development of the company and the financial prospects of the businesses. There are four reasons that make this system beneficial for businesses:

- **Full traceability**: ERP system procurement will provide you advantage to track products easily. Some notifications will appear automatically when the order has been sent and received.
- **Easy backorder management**: Tracking shipments and payment of goods from vendors will match the number of items you've already received.
- **Controlled procurement costs**: Procurement activities become more controlled with budgeting management and cost centers per department or project. These benefits will prevent businesses from misusing data and provide them with better financial planning.
- **Timely payment**: In this system, there is an automatic notification for invoices from vendors that you have not paid. These notifications can help you increase procurement efficiency in business so that there are no obstacles.

Procurement practices aim at ensuring that organizations get value for money when committing their expenditure. This involves the firm meeting its strategic objectives by purchasing the required goods and services from the right suppliers in an efficient manner. Timeliness, user integration and process efficiency are used as indicators to measure efficient purchasing. Procurement plans in the long run helps organizations save costs and organizations that purchase items without a procurement plan in the end incur a lot of costs.

Money spent to boost service levels in the long run increases market share and business performance. Cost savings are achieved through procurement of quality goods and services, economies of scale and the reduction of products in stock. The use of information technology in procurement quickens order fulfillment and improves purchaser-supplier relationship. Procurement practices reduce the amount of resources allocated, increases profitability and improves the quality (KipkemoiR. T, (2017)

While procurement processes vary from organization to organization, they tend to follow similar patterns as follows: identify internal needs, research suppliers, pick a supplier, initiate procurement negotiation, create a purchase order, approve purchase order, send purchase order to the supplier, receive goods, receive supplier invoice, pay invoice and maintain records.

According to Frevvo , (2022) There are 8 Ways of Procurement Best Practices to Streamline Procurement :Automate Procurement Processes, Have Well-Defined Processes, Practice Process Transparency, Have a Centralized Contract and Documentation Hub, Use Data to Optimize Inventory, Have a Multi-Sourcing Strategy, Build Strong Supplier Relationship andTrain Procurement Team. The followings are the variables/dimensions of procurement practices:

2.5.1. Automate Procurement Processes

Procurement automation software removes the need for manual processing. Instead, repetitive tasks such as data entry, record updates, approvals, and document hand-offs are automated to speed up processing, boost cost savings, and reduce errors.There are three main reasons to automate procurement are to save time, reduce human error, and reduce processing cost.

In fact, the only thing the companies need to get started is a well-defined workflow that you want to automate. Firms are simply building out their dynamic procurement workflow, create digital forms to support the workflow, and add business rules that determine the automation functions.

This creates a streamlined, automated procurement process where forms automatically route through each step to the correct approver at the right time.

By connecting the SQL database to your procurement workflow, you can save time on data entry as digital forms automatically populate and validate. Not only that, but all data will automatically upload to your database to keep records up-to-date.

2.5.2 Have Well-Defined Processes

Processes should be efficient and create operational efficiency.The problem is that inefficiency commonly occurs because the company lacks clearly defined processes. Without well-defined processes, teams can't be sure which tasks are essential at any given time or what actions to prioritize to complete the work. Plus, employees may struggle to streamline communications and manage project delivery between various stakeholders. Most damagingly, poorly defined processes lead to chaotic operations. While things still get done with inefficient processes, you're likely to incur notably higher costs in terms of money, efficiency, productivity, morale, etc.

Without clear procurement processes, duplicated requests amass unnecessary costs, while poor record-keeping results in lost time, delays, and other delivery disruptions.

2.5.3. Practice Process Transparency

Transparency in procurement means giving all process stakeholders access to the relevant documentation and information to help them complete their respective parts seamlessly.The benefits of transparency include: faster processing, cost reduction, accountability, and responsible sourcing practice.

2.5.4. Have a Centralized Contract and Documentation Hub?

Have a Centralized Contract and Documentation Hub: Most contract issues are a result of one simple problem: not having a centralized destination where employees can find, access, and retrieve contracts and other necessary documentation. Having all documentation — from operational processes to contract templates — in a single, easily accessible location ensures: consistency of contracts and communications, fewer errors and less time wasted dealing with remedial work.

2.5.5. Use Data to Optimize Inventory

Given the constant push to cut costs and streamline spending, ensuring optimal stock levels is a prime focus. Too much stock and you're paying excess logistics fees. Not enough stock, and you won't meet customer demands. Leverage advanced insights and the power of AI to determine optimal inventory levels at any given time and predict the company's needs for stock into the future. While the process involves implementing additional technological solutions, data gathered in the process will help you accurately predict demand, avoiding either overstocking or undersupplying an item.

2.5.6.Have a Multi-Sourcing Strategy?

It's not smart to rely on one supplier for any element of your supply chain. If you're only buying goods from one vendor, you risk delays and bottlenecks if that supplier fails to produce these goods on time.You'll also run into delays if you have problems with supplier management and the relationship breaks down. If you've only got one supplier in the pipeline, you won't be able to produce your end results until you've located a replacement vendor.

Not only that, but you should also consider selecting suppliers from different geographical regions. Uncontrollable variables such as war, pandemic, geopolitical problems, and climate issues can wipe out suppliers in a whole region.

2.5.7. Build Strong Supplier Relationships

This is because top-notch supplier management increases transparency between you and the vendor so that both parties are aware of what's happening on each end. The supplier will let you know of issues and changes ahead of time, and you'll keep them informed on process alterations or payment problems. This means you can deal with potential bottlenecks early before they become crisis points. That's why over half of organizations are boosting their supplier communication strategy. It enables them to identify potential disruptions early. Not only that, but strong communication helps you to mediate any issues that may arise before the relationship turns sour. You may also find that a good working relationship with your supplier puts you at the front of the queue. If your supplier is struggling to accommodate all their buyers, they're more likely to help buyers that they work well with. Make sure that's you by building firm relationships.

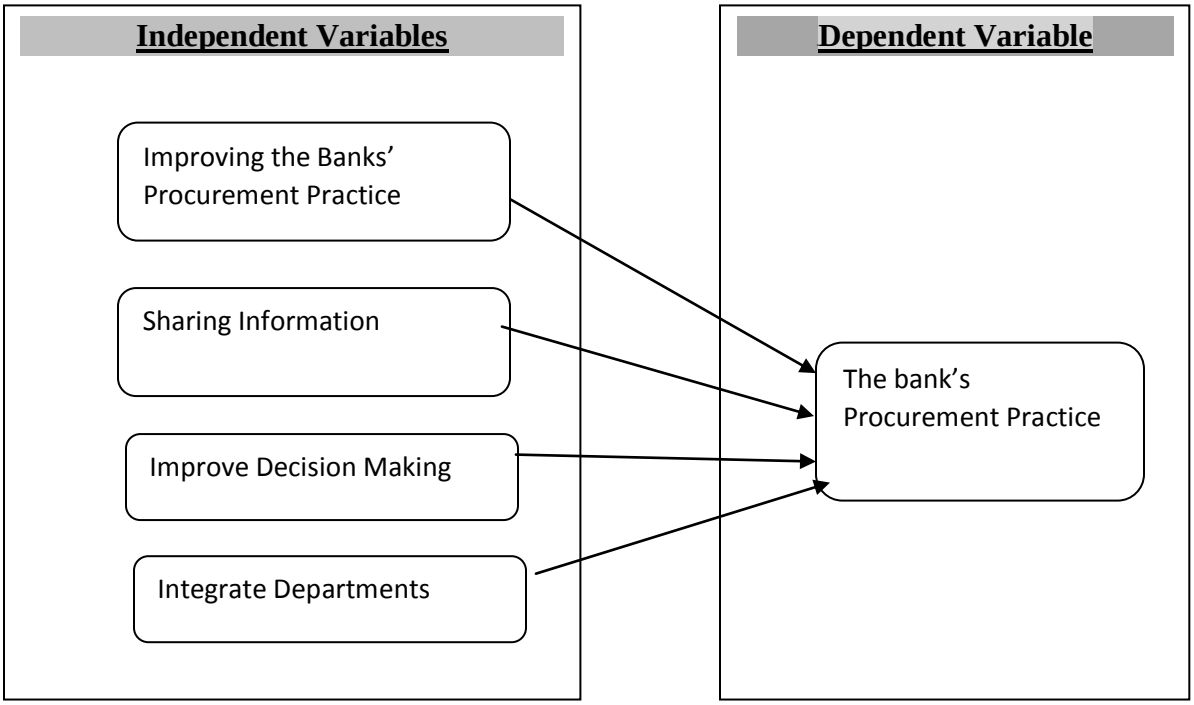
2.5.8. Train Your Procurement Team

According to a recent report by Deloitte, "The overall effectiveness of teams and their ability to sustainably deliver on the organization's biggest priorities, such as cost and risk management, requires CPOs to build and deploy effective talent strategies."

In this sense, it's up to your organization's procurement leader to ensure that your procurement team is up to snuff on all policies and processes. A well-trained team is far better equipped to carry out processes effectively and efficiently. Plus, they'll be in a better position to identify and deal with obstacles that arise before they get out of hand. That's why CPOs say that enabling teams is their number one priority in challenging times. Make sure you provide formal

procurement training and clearly communicate any changes to processes as they occur. Centralize procedural documentation so that staff knows where to find training resources.If you have a well-trained team, you'll find it easy to hold your procurement staff accountable for any mistakes along the line.

2.6 Conceptual Framework



.

Figure 1: ConceptualModel (a modified adoption from Sanchez- Rodriguez (2009); Prajogo (2011); Chen etel. 92009)

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Research Approach

Quantitative research is the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations (B. Pritha, 2021). The authors believe that the research is intended to follow a quantitative and qualitative approach for collecting, analyzing and interpreting the data collected. The sources of the data can be classified into two types: statistical and non-statistical. Statistical sources refer to data that is gathered for some official purposes, incorporate censuses, and officially administered surveys. Non-statistical sources refer to the collection of data for other administrative purposes or for the private sector.

3.2. Design of Research

The researchers select descriptive research design since the data collected shall describe better the population accurately and systematically. Descriptive research aims to accurately and systematically describe a population, situation or phenomenon. It can answer what, where, when and how questions, but not why questions. Descriptive research design can use a wide variety of research methods to investigate one or more variables (M. Shona, 2020). Inferential statistics are often used to compare the differences between the treatment groups. Inferential statistics use measurements from the sample of subjects in the experiment to compare the treatment groups and make generalizations about the larger population of subjects. The researcher may use inferential statistics methods based on collected data and information through questionnaire and interview to make generalization and create a picture of the population.

3.3. Sampling Design

The study intends to use stratified random sampling method, in which we can generalize the output to the population as a whole and particularly to find out and understand behaviors of various groups such as managers, experts and officers who are using the system currently for the procurement practices of the bank. The population is to be 131 employees (includes experts) and 19 managers who are working with the ERP system. The sample frame is a census survey; that

comprises all employees who are using the ERP system for daily procurement activities, officers at warehouse management, finance operation and procurement; and managers of the procurement, warehouse and finance operation. There are 57 employee and 10 managers in the procurement division; at the ware house, there are 35 employees and 4 managers; at finance department, there are 9 employees and 1 manager and; at evaluation and inspection department there are 27 employees and 3 managers. There are also 3 ERP experts and 1 manager in the ERP implementing team. The researchers plan to collect data through questionnaire and interview from the total population of 150 respondents. Thus, the researchers are using census survey for small population. Totally, there are 19 managers and 131 employees in the procurement operation, warehouse management, evaluation and inspection teams and ERP implementing team, the researcher plan to collect data from all managers and experts as well as employees. Although cost considerations make this impossible for large populations, a census survey is attractive for small populations (e.g., 200 or less). A census survey eliminates sampling error and provides data on all the individuals in the population (Israel G.D, 2003). Considering the above advantages of census sampling and since it is small population, the researchers decide to investigate the population and use census survey as a sample.

Table 3. 1: Population and Sample

Population	Group	Number of Group Members	Sample Size/Census Survey
150	Managers	19	19
	ERP Experts	3	3
	Officers	128	128

Source: Research Result (2022)

3.4. Sources of Data Collection

The sources of data can be classified into two types: statistical and non-statistical. Statistical sources refer to data that is gathered for some official purposes, incorporate censuses, and officially administered surveys. Non-statistical sources refer to the collection of data for other administrative purposes or for the private sector. In our research, we set to collect primary data in the form of questionnaire filled by respondents and will conduct interview with managers and

ERP experts about the role of ERP system in the procurement processes. We also plan to review annual reports, bulletins and data stored in the bank system.

3.5. Research Instrument

Questionnaire is developed to gather relevant, accurate, sufficient and reliable information pertaining to ERP relevance to the procurement practices and supply chain of the bank such as reduction of cost, information and material flow and also expedite decision making. The questionnaire consists of the inter-linkage among departments such as sourcing, contract administration and supplier relationship, evaluation, inspection, warehouse and finance departments. Information in the form of questionnaire, interview and review also assessed regarding to the procurement activities of the bank.

3.5.1. Validity

Validity refers to the degree to which a study accurately reflects or assesses the specific concepts that the researcher is attempting to measure. It is the degree to which the result obtained from analysis of data actually represents the phenomenon under study. To enhance the validity of the instrument, the researchers will seek the study supervisor consent and also, the researchers plan to distribute questionnaire to managers, ERP implementers, and users which increase the appropriateness of the questionnaire and the investigation is desirable.

3.5.2. Reliability

Reliability, according to (Shanghverzy, 2003) refers to the consistency of measurement and frequency assessed using test-retest method. Reliability is concerned with question of whether the result of the study is repeatable. Reliability is increased by including many similar items on a measure, and testing a different sample of individual and using same testing procedures. However, one factor that might affect the reliability of the study respondents lack of knowledge. Tired or stressed respondents with negative attitude towards the questionnaire can impact negatively on the reliability of the study (Eriksson &Wiedersheim-Paul, 2001). Thus, in order to check the reliability of the result, this study will use Cronbach's alpha methodology; which is based on internal consistency. Overall scales of reliability of the present situation and the desirability situation are to be tested by Cronbach's alpha, which is supposed to be above the acceptable level of 0.70 (Hair, 1998)

3.6. Method of Data Collection

The method of data collection will be conducted on a face to face method and the questionnaire will be collected by the researcher. The questionnaire is to have a 5-point rate scale and it is found to be reliable and valid than shorter or longer scales (Krosnick&Fabrigar, 1997). Thus, in this study, a 5-point rate scale is used in measuring responses from respondents by ticking from points 1-5; 1 for very strongly disagree, 2 strongly disagree, 3 for agree, 4 for strongly agree and 5 for very strongly agree.

3.7. Procedures of Data Collection

As it is described above in the method of data collection section, we use questionnaires, interview and review for collecting data, To do so, the investigator distribute the questionnaire to respondents and will briefly describe the purpose of the study and remind them to fill the questionnaire with maximum care and return it to the investigator up on expected time. And the interview and review of source of information will be performed by the researcher.

3.8. Data Analysis Method

Data analysis tools make it easier for users to process and manipulate data, analyze the relationships and correlations between data sets, and it also helps to identify patterns and trends for interpretation (J.Daniel, 2021). The data analysis for this research will follow the following phase: data requirement gathering, data collection, data cleaning, data analysis, data interpretation and data visualization (J.Daniel et el, 2021).

The quantitative and qualitative data collected through the questionnaire and other means will be analyzed by descriptive method. Tables are used to summarized and give a clear view of distribution of response given by respondents to each question through the questionnaire. The researcher plan to use SPSS version 20 is used to computing the quantitative data.

For inferential statistics, we use statistical techniques such as t-test, correlation analysis, regression analysis, Chi-square, factor analysis, ANOVA, cluster analysis, discriminate analysis etc. we will use the statistical techniques to analyze and test the hypothesis we put earlier and get interpretation thereof and come up to conclusion and recommendation.

3.9. Ethical Considerations

Ethical considerations are of utmost importance while trying to advance knowledge through scientific inquiry. This is due to the fact that scientific studies usually involve human participants

and, hence, if due care is not given to the manner as to how information is obtained from these participants and while disclosing such information, some sort of damage might be inflicted on the study participants. Considering this reality, the study has attempted all the necessary precautions to protect the study participants from such sort of problematic encounters by applying certain measures. Accordingly, the respondents were notified not to mention their identity, particularly their names while filling the questionnaire. Moreover, they have been assured that no meaningful damage would be inflicted on them because of their participation in this particular study by boldly explaining to them the apparent purpose of the study (which is actually for academic purpose) and ensuring the confidentiality of their identity and whole part of the information they provided for the purpose of undertaking this study.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1. Introduction

This chapter covers the analysis and discussion of two major parts. Part one involves the descriptive analysis of the demographic characteristics of sample population involved in the study. Hence, the respondents are discussed in terms of gender and age, years of service and educational level.

Part two deals with the analysis of the findings of the study in light of the theoretical background stated in chapter II. This part involves descriptive report of the responses provided by the respondents; statistical analysis of the major variables four components of ERP (Oracle eBusiness Suite) using Pearson's Correlation, multiple regressions and the reliability test for the actual study. A total of 150 questionnaires were distributed out of which 93 completed questionnaires were returned. This represented a response rate of 62%, which is valid and used for analysis. The collected data were analyzed using SPSS (version 20) statistical software.

As it is mentioned above, the study used correlation analysis, specifically Pearson's correlation to measure the degree of association between different variables under consideration. Regression Analysis was also used to test the influence of the independent variables on dependent variable.

4.2. Reliability Test

Internal consistence of the items constituting the dimensions of the independent and dependent variables was checked by using Cronbach's Alpha . Accordingly, the reliability of the study instrument has been determined by evaluating the average correlation among items in the scales of the respective dimensions representing the independent and dependent variables as suggested by Chen et al, (2004). The resulting Cronbach's alpha values of the dimensions are presented in the subsequent table.

Table 4. 1: Cronbach's alpha

Cronbach's alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.927	.929	5

Source: Survey Result, 2022

The above table implies that the value of alpha of the five items for respective dimensions were well above the suggested cut-off value of 0.7 (Cronbach, 1951). This; therefore, it implies the reliability of the instrument that measures the study constructs,

4.3. Characteristics of the Respondents

Based on the responses obtained, as shown in table I, the characteristics of the respondents were examined in terms of gender, age, years of service, educational and professional level. We also classify the respondents as juniors, professionals (senior officer and experts) and managers.

Table 4.2, Item A and B, reveal gender and age distribution of the sample population of respondents, respectively. Respondents who account for 61% were male respondents. Female representation in this study was 39%. Therefore, majority of the respondents were male. As regards to age, it can easily be understood that the workforce population is largely dominated by the age group 21-30 comprising 44%. However, the least group respondents were 51 years old and above which only covers 2% of the respondents. On the other hand, respondents in the range of 31-40 years old are 39%. And respondents in the range of 41-50 years old is 15%

Respondents, as employees of Commercial Bank of Ethiopia, have been working there for a diversified number of years. As indicated in Table I, Item C, respondents who had general experience with length of service 5 years and above category made up the majority which comprised 63% of the respondents, followed by 17% of respondents who served 3-5 years in the bank. However, 18 respondents accounting for 19 % had 1-3 years of experience in the bank. It would, therefore, be possible to generalize that such a relatively longer year of services might have helped the respondents to possess rich experience and better understanding about the various issues related to the bank service and practice and the role and advantages of the ERP System.

With regard to the specific experience on procurement operation the majority of respondents which account for 50% had experience for 1-3 years. Those who serve in the procurement for 3-5 years account for 28% of respondents. 19% of respondents served for 5-10 years and only 2% of respondents have service for 10 years and above on the procurement department.

The majority of respondents which account for 59% of the respondents are serving at professional and expert level. The junior and management level accounted for 26% and 15% of the respondents, respectively.

Table 4. 2: Respondents' demographic information

Item	Frequency(n)	Percentage (%)
A. Gender		
a. Male	57	61.30
b. Female	36	38.70
Total	93	100.00
B. Age		
a. 21-30	41	44.10
b. 31-40	36	38.70
c. 41-50	14	15.00
d. 51 and above	2	2.20
Total	93	100.00
C. Years of service- General Experience		
a. Less than a year	-	-
b. 1-3 years	18	19.40
c. 3-5years	16	17.20
d. 5-10 years	30	32.20
e. Above 10 years	29	31.20
Total	93	100
D. Years of Experience- Specific experience		
a. Less than a year	-	-
b. 1-3 years	47	50.50
c. 3-5 years	26	28.00
d 5-10 years	17	19.30
E. Professional Level of Respondents		
a. Junior	24	25.80
b. Professional	55	59.10
c. Management	14	15.10
F. Educational level		
a. Diploma/Level IV	-	-
b. BA/BSC	69	74.20
c. MA/MSC	24	25.80
Total	93	100.00

(Source: Survey Result, 2022)

It was also the matter of concern for this study to examine the educational distribution of the respondents. As it has been recorded in Table I, Item F, 69 respondents (74%) had first degrees which dominate the population sample, and 24 respondents (26%) had master degree. There is no diploma holder among the respondents.

4.4 Descriptive Analysis

Descriptive statistics was assessed in an effort to examine the mean scores and the corresponding standard deviations under the respective scales of both the dimensions of the independent variable; namely Improving Procurement Practice, Sharing of Information, Decision Making and Integrate Departments and the dependent variable Procurement Practice.

Hence, this particular endeavor has the merit of answering some of the research questions on the basis of the perceptions of the respondents on the level of the procurement practice. Composite scores of mean and standard deviations were calculated. The resulting composite scores of mean and standard deviations are presented on Table 4.3 as follows:

Table 4. 3: Composite scores of mean and standard deviations

Variables	Mean	Std. Deviation	N
Improving Procurement Practice	3.6505	.62597	93
Sharing of Information	3.5238	.75720	93
Decision Making	3.4497	.69653	93
Integrate Departments	3.4774	.79456	93
Procurement Practice	3.5766	.73906	93

(Source: Survey Result, 2022)

4.4.1. Respondent's Perception on the Role of ERP on the Bank Procurement Practice/performance

Respondents were asked to give their opinion on what they thought the current procurement practice of the bank looks like and the importance of the ERP (Oracle eBusiness Suit) to the bank supply chain. The five-point Likert scale was used by the researchers to acquire direct responses from the respondents and the mean score and standard deviation is presented in the table 4.3 above.

According to Amal Mohammed, 2016 stated it can be seen from the above table the mean score for all the variables stated under ERP system are more than cut-off point of 3.41- 4.20 (agree)

which means respondents has agreed that the established ERP system has positive effect on Improving Procurement Performance mean score of (3.6505); Information Sharing mean score of (3.5238) ; Decision Making mean score of (3.4497) ; Integrate Departments mean score of (3.4774) and Procurement Practices/performance on the mean score of (3.5766) of the bank's supply chain.

Aman (2016) has calculated the cut-off by (5-1=4), then divide by five as it is the greatest value of the scale (4 / 5= 0.80). Afterwards, number one which is the least value in the scale was added in order to identify the maximum of the cell. The length of the cell is: from 1 to 1.80, strongly disagree; from 1.81 to 2.60 do not agree; from 2.61-3.40 true to some extent; from 3.41 to 4.20 agree and from 4.21 to 5.00 strongly agree.

4.4.2. Respondent's Perception on the Role of ERP in Improving Procurement Performance

The research reveals that with the score mean of (3.6505) for the variable Improving Procurement Performance; the respondents agree on the ERP System or Oracle eBusiness Suit has improved efficiency to the CBE's Procurement Practices , helps minimizing the delay , decreases associated costs often as the bank operates more efficiently, aid in reducing errors and mistakes , and helps a lot for the business to grow in the right direction. In addition to that; the most respondents believe that Oracle eBusiness Suit is easy to use, enables value added activities in the procurement process, shorten procurement cycle, reduce number of employee and lead time. This result agrees with Investopedia, (2021) that stated tedious, manual tasks are eliminated, allowing employees to allocate their time to more meaningful work. The bank ERP system has contribution on aligning with the bank business model; improve supplier and employees satisfaction; increase response rates. This result of the report is supported by Rao, (2011). He suggested that most ERP software systems include application modules to support common business activities like procurement, finance, accounting and human resources.

4.4.3. Respondent's Perception on the Role of ERP on Information Sharing

As it can be seen above on table 4.3, the mean score of the variable of sharing information is (3.5238) which means that Oracle eBusiness Suit has enable sharing of information among various departments. Respondents agree on that the system supports truck orders

which will further help a lot in managing the accounts, connect with external partners, integrates accounts payable, stock control systems, order-monitoring systems, and customer databases into one system. Furthermore, the applications integrates and automates business processes and eliminates redundancies, connects with external partners, enhance reporting of real-time data from a single source system and allows the bank to quickly access needed information for clients, vendors, and business partners.

4.4.4. Respondent's Perception on the Role of ERP on Decision Making

According to SYSPRO Ltd, 2008, integrated approach to decision-making ensures that companies make better judgments at every stage of supply chain management, which can help them grow their business. Our study for the variable decision making has a score mean of (3.4497) which is above the cut-off 3.41 reveals that respondents agree that Oracle eBusiness Suite has important role in decision making of the Bank's Procurement Practices. Thus, the respondents Oracle eBusiness Suite expedite the decision making process, enable to interact with external partners for decision making , helps in competitive advantages, assist in accurate forecasting, assisting scalable resource and supports mobility; supportive to customizing report , assists regulatory compliance, improves customer service delivery and data reliability and helps to increase employee satisfaction since they better able to perform. Successfully implemented and integrated ERP system and SCM practices provide advantages in planning, decision-making, execution and increases the performance of firms (HuseyinInce, SalihZekiImamoglu, HalitKeskin, AllekeberAkgun, & Mehmet NaciEfe, (2013)

4.4.5. Respondent's Perception on the Role of ERP on Integration of Dept.

Integrated procurement system provide the purchasing professionals with links to information across all of an organization's functions and departments that includes; data of receiving transactions, activities and information, suppliers profile ,order revision data, account payable status, special order receiving and tracking of incoming purchase through receipt routing (Edward, et el 2000). Our study reported that the variable integration of departments has a score mean of (3.4774) which is above the cut-off 3.41 reveals that the respondents agree that Oracle eBusiness Suite has important role in integrating departments of the Bank's procurement practices and the system also enable all data in a one accessible location/centralized data. The research find out that procurement department streamline

process across various departments and work flows such as warehouse, finance and human resource and others. The system empowered to visualize the work flow to what their peers are working on and it reducing human error. Most respondents agree on that the ERP system creates more time for essential tasks.

4.5. Analyzing the Correlation between the Role of ERP and Procurement Practice

Correlation analysis was conducted to determine whether a statistically significant relationship exists between the dimensions of the role of ERP namely (i.e. Improving Procurement Performance, Sharing of Information, Decision Making and Integrate Departments) and Procurement Practice. Correlation analysis helps to determine the relationship among variables by giving insight on the strength and direction of relationship. The coefficient of correlation could take values ranging from -1 to +1, where the signs signifying the direction of relationship. A correlation value of 0 implies the absence of relationship among variables, a result between 0.1 and 0.3 indicates weak relationship, whereas a result between 0.4 and 0.6, and 0.7 and 0.9 imply respectively moderate and strong relationships among variables, while a correlation coefficient of 1 suggests a perfect relationship (Dancy and Reidy, 2004).

The result of the correlation analysis conducted to assess the association between the dimensions of the role of ERP system and procurement practices is presented on the subsequent table:

Table 4. 4: Compounded Correlation Matrix

		Procurement Practice
Improving Procurement Performance	Pearson Correlation	.678**
	Sig. (2-tailed)	.000
	N	93
Sharing Information	Pearson Correlation	.630**
	Sig. (2-tailed)	.000
	N	93
Decision Making	Pearson Correlation	.670**
	Sig. (2-tailed)	.000
	N	93
Integrate Departments	Pearson Correlation	.760**
	Sig. (2-tailed)	.000
	N	93
**. Correlation is significant at the 0.01 level (2-tailed).		

Source: Survey Result, 2022

As clearly indicated on the above table 4.4 a moderate positive relationships have been identified between improving procurement performance and procurement practice (r=0.678, p=0.01), between sharing information and procurement practice (r=0.630, p=0.01) and between decision making and procurement practice (r=.670, p=0.01). Whereas, strong positive association have been identified between integrate departments and procurement practice (r=0.760, p=0.01), All the relationships are statistically significant at 99% confidence level.

The results suggested that all the dimensions of the role of ERP system have positive relationship with the procurement practice of banks. This implies that the ERP system has positive contribution on improving the procurement performance of the bank and it has also supported sharing of information among various users and departments. In addition to that the system expedites decision making process by providing key information. The research verified that various departments of the bank are integrated through the Oracle eBusiness Suite. The procurement department has access to see the inventory level at warehouse and could also ascertain the payment is made by the finance department. The purchase requisition raised by the user organ also sent through the system and processed by the procurement department.

4.6 Regression Analysis

In an effort to determine how the dimensions of the independent variable predict the dependent variable, multiple linear regression analysis was conducted. Multiple linear regression analysis is a method of estimating or predicting a value on some dependent variable given the values of one or more independent variables. Unlike correlations, the primary purpose of regression is prediction (Marczyk G, DeMatteo D, and Festinger D, 2005). Hence, through the analysis of multiple linear regressions, an attempt has been made to determine the magnitude of the predicting power of the dimensions of the independent variable (i.e. Improving Procurement Practice, Sharing of Information, Decision Making and Integrate Departments) on the dependent variable (i.e. Procurement Practice).

4.6.1. Multicollinearity Analysis

Multicollinearity refers to the situation in which the independent variables are highly correlated in a way that has undesirable implication on the outcome of regression analysis. According to Robert (2006), if collinearity is discovered then one can either remove one of the variables or create a new variable that combine the previous two that were highly intercorrelated because

when the predictor variables are highly correlated, they share essentially the same information and together, they may explain a great deal of the dependent variable, but may not individually contribute significantly to the model. Thus, the impact of multicollinearity is to reduce any individual independent variable's predictive power by the extent to which it is associated with the other independent variables (Beyan, 2014).

Accordingly, Tolerance and Variance Inflation Factor (VIF) values were calculated to check multicollinearity and the result is presented on table 4.5 below. The Tolerance value is an indication of the percentage of variance in the predictor that cannot be accounted for by the other predictors implying the fact that very small values indicate overlap or sharing of predictive power (Robert, 2006).

Table 4. 5 : Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Improvement of Procurement Practice	.299	3.340
	Information Sharing	.313	3.196
	Decision Making	.278	3.602
	Integrate Departments	.280	3.575

Source: *Survey Result, 2022*

As shown on the table, the Tolerance values for all the independent variables are within the acceptable level of greater than 0.1, whereas the VIF values are also less than the cut of value of 10. If the VIF values of independent variables are beyond 10, then it is suggested that further investigation is required (Robert, 2006). As implied by the Tolerance and VIF values, in this particular case, multicollinearity is not a serious problem.

4.6.2. Multiple Regression Analysis Result

In a multiple linear regression analysis of such sort, ANOVA test shows the acceptability of the model from statistical perspective. Accordingly, the regression row indicates the extent of variation explained by the model, whereas the residual row indicates information about the variation that is not accounted for the model, i.e. variation on the dependent variable explained by factors not included in the model.

Table 4. 6: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.908	4	7.727	35.154	.000[b]
	Residual	19.343	88	.220		
	Total	50.251	92			

a. Dependent Variable: Procurement Practice

b. Predictors: (Constant),Improvement of procurement practice, Sharing Information, Decision Making, Integrate Departments

Source: *Survey Result, 2022*

In the case of this particular analysis, it has been identified that the computed F statistic is 35.154 with an observed significance level of 0.000, suggesting the statistical fitness of the regression model to the data.

Table 4. 7: Model Summary and Coefficients

Model summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.784[a]	.615	.598	.46883

a. Predictor: (constant) Improvement of procurement practice, Sharing Information, Decision Making, Integrate Departments

Coefficients	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.559	.294		1.902	.060
	Improvement of procurement practice	.318	.143	.270	2.231	.028
	Sharing Information	.005	.115	.005	.045	.964
	Decision Making	.014	.133	.013	.106	.916
	Integrate Departments	.514	.116	.553	4.421	.000

a. Predictors: (Constant), Improvement of procurement practice, Sharing Information, Decision Making, Integrate Departments

Source: *Survey Result, 2022*

The Adjusted R Square value on the model summary table is a representation of the correlation between the observed values of the dependent variable, i.e. procurement practice of the bank, and the values of the same dependent variable predicted by the multiple regression models. Hence, it suggested that larger value of the Adjusted RSquare represents a large correlation between the predicted and observed values of the dependent variable (Chandan, 2011). As clearly depicted on the model summary, the value for Adjusted R Square is 0.615 suggesting that 62% of the variation in the dependent variable (i.e. Procurement Practice of the bank) is explained by the model, i.e. by the combined variance in the dimensions of the independent variable. The remaining 38% of the variation on the dependent variable is, therefore, explained by factors not incorporated in the model. This implies that majority of the independent variable is assessed for the purpose of the study.

Though the model is fit to be used for further interpretation (as shown on the ANOVA table), a closer look at the coefficients of the independent variable shows that only Improvement of procurement practice and Integrate Departments have statistically significant (at $p<0.05$ and $p<0.01$ respectively) beta values and their respective standardized coefficients (beta values) indicate the relative importance of both dimensions in predicting the dependent variable. This implies that the remaining two dimensions of the independent variable, namely Sharing Information and Decision Making couldn't make statistically significant contribution in predicting the Procurement Practice of the bank. As far as the strength of the predicting power of the two statistically significant dimensions is concerned, it is revealed that Integrate Departments has the strongest positive predicting power on the dependent variable with standardized coefficient of 0.553, followed by Improvement of Procurement Practice, with a standardized coefficient of 0.270.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This research was conducted in an attempt to reveal the role of ERP system on the procurement practices of the Commercial Bank of Ethiopia. Making particular emphasis to the measurement of the level of role of Oracle eBusiness Suite and the association and impact relationship between the two. The following conclusions have been drawn on the bases of the findings of the data analysis effort.

A total of 93 respondents had filled and returned the survey questionnaire making the response rate about 62%. About 74.1% of the respondents had served as a professional level and above implying that the major portion of the response was obtained from respondents who had relatively better information regarding the role of ERP on the procurement practices of the bank. The composite mean scores of the scales of the dependent variable revealed that the respondents perceive that the banks exerted relatively higher efforts to achieve Improvement of Procurement Performance, Sharing Information, Decision Making, and Integrate Departments. From this we can conclude that the implementation of the ERP system in the bank procurement practice has great role in improving procurement operation, sharing of information, decision making and integration of departments.

Consistent with the findings of other studies, the association between the dimensions of role of ERP on the procurement practices has a statistically significant positive relationship with the compounded measures of procurement practices of the banks. This implies that working on the implementation of the ERP would improve the procurement performance of the bank and it can increase efficiency and effectiveness of the procurement process.

The research reveals that and we conclude with the score mean of (3.6505) for the variable Improving Procurement Practices; ERP System has improved efficiency to the bank Procurement Practices, helps minimizing the delay, decreases associated costs often as the bank operates more efficiently, aid in reducing errors and mistakes, and helps a lot for the business to grow in

the right direction. In addition to that Oracle eBusiness Suit is easy to use, enables value added activities in the procurement process, shorten procurement cycle, reduce number of employee and lead time. This result agrees with Investopedia, et al, (2021) that stated tedious, manual tasks are eliminated, allowing employees to allocate their time to more meaningful work.

In addition to that we conclude from data assessed that the bank's Oracle eBusiness Suite has enable sharing of information among various departments. Respondents agreed on that the system supports truck orders which will further help a lot in managing the accounts, connect with external partners, integrates accounts payable, stock control systems, order-monitoring systems, and customer databases into one system.

Furthermore, the software integrates and automates business processes and eliminates redundancies, connects with external partners, enhances reporting of real-time data from a single source system and allows the bank to quickly access needed information for clients, vendors, and business partners. This research reveals that as Edward , (2000) stated the integrated procurement system provides the purchasing professionals with links to information across all of an organization's functions and departments that includes activities and information.

Our study for the variable Decision Making has a score mean of (3.4497) which is above the cut-off 3.41 reveals that respondents agree that Oracle eBusiness Suit has important role in decision making of the Bank's Procurement Practices. Due to this fact, we conclude Oracle eBusiness Suite expedite the decision making process, enable to interact with external partners for decision making , helps in competitive advantages, assist in accurate forecasting, assisting scalable resource and supports mobility; supportive to customizing report , assists regulatory compliance, improves customer service delivery and data reliability and helps to increase employee satisfaction since they better able to perform. This conclusion agreed with HuseyinInce, SalihZekiImamoglu, HalitKeskin, AllekeberAkgun, & Mehmet NaciEfe, (2013) as they stated successfully implemented and integrated ERP system and SCM practices provide advantages in planning, decision-making, execution and increases the performance of firms.

Our study reports that the variable Integration of Departments has a score mean of (3.4774) which is above the cut-off 3.41 reveals that the respondents agree that Oracle eBusiness Suit has important role in integrating departments of the Bank's Procurement Practices and the system

also enable all data in a one accessible location/centralized data. The research finds out that procurement department streamline process across various departments and work flows such as warehouse, finance and human resource and others. The system empowered to visualize the work flow to what their peers are working on and it reducing human error. Most respondents agree on that the ERP system creates more time for essential tasks.

As clearly indicated on the above table a moderate positive relationships have been identified between improvement of procurement performance and procurement practice (r=0.678, p=0.01), between sharing information and procurement practice (r=0.630, p=0.01) and between decision making and procurement practice (r=.670, p=0.01). Whereas, strong positive association have been identified between integrate departments and procurement practice (r=0.760, p=0.01).

From the Compounded Correlation Matrix, we conclude that all the dimensions of the role of ERP system have positive relationship with the procurement practice of banks. This implies that the ERP system has positive contribution on improving the procurement performance of the bank and it has also supported sharing of information among various users and departments. In addition to that the system expedites decision making process by providing key information. The research shows that various departments of the bank are integrated through the Oracle eBusiness Suit. The procurement department has access to see the inventory level at warehouse and could also ascertain the payment is done by the finance department. The purchase requisition raised by the user organ also sent through the system and processed by the procurement department.

Though the model is fit to be used for further interpretation (as shown on the ANOVA table), a closer look at the coefficients of the independent variable shows that only Improvement of procurement practice and Integrate Departments have statistically significant (at $p<0.05$ and $p<0.01$ respectively) beta values and their respective standardized coefficients (beta values) indicate the relative importance of both dimensions in predicting the dependent variable, namely Procurement Practice of the bank . This implies that the remaining two dimensions of the independent variable, namely Sharing Information and Decision Making couldn't make statistically significant contribution in predicting the Procurement Practice of the bank

Generally, the study findings have suggested that the dimensions of the role of ERP system on procurement practice of the bank are agreed as the perceived evaluation of the respondents imply. The research also reveals that though all of the dimensions of the role of ERP system

(Oracle eBusiness Suite) have statistically significant positive relationship with procurement practice, the strength of relationship is higher in the case of Improvement of procurement practice and Integrate Departments relative to that of Decision Making and Sharing Information.

As far as the strength of the predicting power of the two statistically significant dimensions is concerned, it is revealed that Integrate Departments has the strongest positive predicting power on the dependent variable with standardized coefficient.

5.2 Recommendations

The study discloses that the bank is enjoying the benefits of the Oracle eBusiness Suite and it has significant contribution for the performance of the procurement process. Thus, it is advisable to continue using the system.

As revealed by the findings of the study, the level of role of ERP system on procurement practice of the banks are at best rated as agree. The bank should enhance this performance to strongly agree by updating, customizing and increasing the usage capacity of the system.

5.3 Limitation and Suggestions for Future Studies

Like many research works, this particular study is also subjected to some limitations. First and for most, this study does not comprehensively capture all aspects of supply chain practices as applicable to the role of ERP system rather it made emphasis in revealing the associations and impact relationships with that of the four dimensions (Improvement of procurement practice, Sharing Information, Decision Making, and Integrate Departments). Thus, future studies shall consider more dimensions that have not been considered in this particular study as suggested by Prajogo et al. (2012).

Based on the findings in the research, Sharing Information and Decision-Making variables couldn't make statistically significant contribution in predicting the procurement practice; it shall be studied to the future, why this happen?

The research unable to study the actual performance of the procurement department in relation with the role of the ERP system due to the fact that the procurement department did not compile and analyze its performance in connection with the role of ERP system. Thus, the research bases

on its analysis and findings on the perception of the respondents, literatures and case studies by consultants, toward the role of ERP system on procurement practices.

.

Reference

- Advanta Innovation, 2021
- Ballou R.H , (2007) , The Evolution and Future of Logistic and Supply Chain Management , *European Business Review, Volume 19 issue 4*, 332-348 , Retrieved from https://www.emerald.com/insight/content/doi/10.1108/09555340710760152/full/htm
- Bahandri P., (2021), What Is Quantitative Research? | Definition, Uses and Methods, Scribbr Retrieved from: https://www.scribbr.com/methodology/quantitative-research/
- Beil, J. (2021**)** 60 Critical ERP Statistics: 2021 Market Trends, Data and Analysis. *ORACLE netsuite.* Retrieved from https://www.netsuite.com/portal/resource/articles/erp/erp-statistics.shtml
- Bhandari P. (2021), A Guide for Ethical Consideration in Research,*Scriber,* Retrieved from http:www.scribbr.com/methodology/research-ethics/
- Chopra, S. &Meindl, P. (2004) Supply Chain Management: Strategy, Planning, and Operation. 2nd ed. New Jersey: Person and Prentice Hall
- Christopher, M. (2004) Building the Resilient Supply Chain**.** The International Journal of Logistics Management**,15(2):1-13.** DOI:10.1108/09574090410700275
- Collins, J.D, Worthington, W.J, Reys, P., & Romero, M. (2010) Knowledge management, supply chain technologies, and firm performance. *Management Research Review, 33(10),* 947-960**DOI:10.1108/01409171011083969**
- D'amours,S.Ronnqvist, M. &Weintraub, A. (2008) Using Operational Research for Supply Chain Planning in the Forest Product Industry. *INFOR: Information Systems and OperationalResearch*Vol. 46, No. 4 Retrieved from https://doi.org/10.3138/infor.46.4.265
- Edwards, J.D (2000) JD Edwards EnterpriseOne Applications Procurement Management Implementation Guide. *Oracle help center*Release 9.1.x / Supply Management
- ERP desk,(2016) How ERP Enhances Decision Making for Small Businesses. Retrieved fro, https://www.toolbox.com/tech/erp/blogs/how-erp-enhances-decision-making-for-small-businesses-121916/

- Fekete J. D, (2021), Visualization and inference, *HDSR*, Issue 3.3, DOI 10.11.62/99608f92.049ac564
- Gable, G., Scott, J., Davenport, T. (1998). Cooperative ERP Life-Cycle Knowledge Management. *Proceedings of the 9th Australasian Conference on Information Systems*, Sydney, Australia Retrieved from ISBN: 0 7334 0498 7
- Goldratt, E. (2021) Theory of Constraints. *Theory of Constraints Institute*.Retrieved fromhttps://www.tocinstitute.org
- Gumaer, R. (1996), Beyond ERP and MRP II. IIE Solutions**,** *Institute of Industrial and Systems Engineers (IISE)* **,**28(9), 32-35 link.gale.com/apps/doc/A18684213/AONE?u=anon~dab18ab1&sid=googleScholar&xid=dffec644
- Helou, M.M,Caddy, I. N (2006) Definition Problems and A General Systems Theory Perspective in Supply Chain Management. *Problems and Perspectives in Management*, 4(4)
- Hillier, F. S., & Lieberman, G. J. (2005). Introduction to Operations Research, 9th. *International) edn. McGraw-Hill, Boston*.
- HuseyinInce, SalihZekiImamoglu, HalitKeskin, AllekeberAkgun, & Mehmet NaciEfe, (2013)
- Investopidia (2021) Enterprise Resource Planning (ERP), *Investopidia*.Retrieved from http//www.investopedia.com/terms/e/erp.aspby
- Israel G.D, (2003) A Series of Agriculture and Education Communication: University of Florida. Retrieved from http://edis.ifas.ufl.edu
- Kanda, M. K**&**Irav, M. A (2015) Access Factors Affecting Supply Chain Efficiency of Medical Supplies in public Health Centres in kenya: A Case Study of Public Health Centres in ElgeyoMarakwetCount.*International Journal of Academic Research in Accounting, Finance and Management Sciences* Vol. 5, No.2, pp. 32–41. Retrieved from E-ISSN: 2225-8329, P-ISSN: 2308-033
- Krosinick&Fabrigar, (1997), Survey Measurement and Process Quantity. In L. Lyberg, P. Biemer, M. Collins, E. de Leeuw, C. Dippo, N. Schwarz, &D.Trewin (Eds), Designing Rating Scale for Effective Measurement in Surveys , (pp. 141-159) New York , John Wiley and Sons. Inc.

- Lee, H.L & Billington, C. (1995) The Evolution of Supply-Chain-Management Models and Practice at Hewlett-Packard .*Econpapers* ,Vol. 25, Issue 5, 42-63.Retrieved from http://dx.doi.org/10.1287/inte.25.5.42
- Linton, L. (2019) Structure of Procurement in an Organization. *bizfluent. Retrieved from* //bizfluent.com/facts-7294395-structure-procurement-organization.html
- Machowiak, W. (2012), Risk Management – Unappreciated Instrument of Supply Chain Management Strategy,*Scientific Journal of Logistic*, LogForum8 (4), 277-285, Retrieved fromhttp://www.logforum.net
- *McCombes , S. , (2021),* How to Create a Research Design , *Scriber.* Retrieved fromhttps://www.scribbr.com/author/shona/
- L, (2022) What is ERP (Enterprise Resource Planning)? *ORACLE Netsuite. Retrieved from* https://www.netsuite.com/portal/resource/articles/erp/what-is-erp.shtml
- Makhanu, E.K, Onkware, K. & Were. E (2014). Influence of Knowledge on the Management of Typhoid Fever in Bungoma County in Kenya, *International Journal of Academic Research in Business and Social Sciences,* Vol. 4, No. 6 Retrieved from http://dx.doi.org/10.6007/IJARBSS/v4-i6/933
- Nemati, S. &MangaladuraiD. (2017) Impact of Enterprise Resource Planning in Supply Chain Management, *HOGSKOLAN BORAS, INSTITUTIONEN Ingenjorshogskolan*
- Parison, N. (2021) What is Business Model? Business Model Explained, *Bplans.* Retrieved from https://articles.bplans.com/what-is-a-business-model-business-models-explained/
- Perkins, B. (2020, APR 28). *What is ERP? Key Features of Top Enterprise Resource Planning System, CI0.* We retrieved from https://www.cio.com/article/272362/what-is-erp-key-features-of-top-enterprise-resource-planning-systems.html
- Pienaar, A. Toit, J. Viljoen, A. &Wessels, W. (2008). Thinking About ERP, 3rd ed. © SYSPRO Ltd
- Paul C.P., (2013) Research Methods of Psychology, 2ed : California State University, Fresno Retrieved from https://opentextbc.ca/researchmethods/front-matter/about-this-book/
- Prajogo D, Chowdhury M, Yeung A.C.L, ChengT.C.E, (2012), The relationship between supplier management and firm's operational performance: A multi-dimensional

perspective, International Journal of Production Economics, Vol. 136, (2012), pp. 123–130,

- Quesada, H. Gazo, R.& Sanchez, S. (2011) Critical Factors Affecting Supply Chain Management: A Case Study in the US Pallet Industry. IntechOpen Book Series from DOI: Retrieved 10.5772/33635
- Rao Y. V (2011*) Enterprise Resource Planning*. Retrieved from **Error! Hyperlink reference not valid.**
- Rosemann, M. (1999) ERP-software-characteristics and consequences. *In proceeding of the 7 th European Conference on Information Systems, (ECIS)*, Copenhagen, Denmark
- Sanderson J, Lonsdale C, &Mannion R, (2015)Health Services and Delivery Research, NIHR Journals Library No. 3.18. Southampton (UK)
- Shamoo, A. andResnik, D. 2015. Responsible Conduct of Research, 3rd ed. New York: Oxford University Press
- Silver, E.A, Pyke, D.F & Peterson, R. (1998) Inventory Management and Production Scheduling**.** *John Wiley and Sons* Retrieved fromhttps://www.researchgate.net/publication/229124356
- Spiller, A. (2009) The effect of institutional innovations on food chain governance: A case study on the shifting role of the German QS system from certification to supply chain coordination**.** Journal on Chain and Network Science 9(2):89-103. Retrieved from DOI:10.3920/JCNS2009.x173
- Sollish, F.&Semanik, J. (2012) The Procurement and Supply Manager's Desk Reference, 2ND ed. *John Wiley & Sons, Inc Retrieved from* |DOI:10.1002/9781119205098
- Tan , K. C, Kannan V. R & Leong G. K (2008) Supply chain management practices as a mediator of the relationship between operations capability and firm performance.*International Journal of Production Research* 47:3, 835-855, DOI: 10.1080/00207540701452142
- Wedel, W. (2019). Benefits of ERP: Advantages and Disadvantage of Enterprise Resource Planning, *Workwise Software*, Retrieved from www.workwisellc.com/blog/15-benefits-implementing-erp-software/

APPENDIX: A

QUESTIONNAIRE

Addis Ababa University: School of Commerce

Thesis Title :The Role of ERP (Oracle eBusiness Suite) on Procurement Practices: The case of CBE

Questionnaire Draft

Dear Sir/ Madam,

We are conducting a study used for academic purposes only and the information collected from you will be treated with utmost confidentiality. Please answer the required information freely with the answer that you think is most appropriate.

Thank you for your time and cooperation.

Part One: General Information

In this section, you are kindly requested to put a tick mark (√) on the appropriate alternative response and fill the blank space, when needed.

1. Gender Female ☐ Male ☐

2. Age ----------

3. Higher Education Level Diploma ☐

B.A degree ☐

M.A / M.S degree ☐

4. Years of Experience ----------

5. Years of experience in CBE's Procurement Practices ----------

6. Professional Level Junior Level ☐

Professional Level ☐

Management Level ☐

Part Two: ERP (OracleeBusinessSuit)in the Bank's Procurement Practices

Instruction: Answer the following questions by putting a tick (√) mark and rate the frequency using scales from 1 to 5. All the ratings will be made as follows;

1= Strongly Disagree 2= Disagree 3= Moderate 4= Agree 5= Strongly Agree

2.1 The role of ERP / Oracle system in improving the Bank's Procurement Practices	1	2	3	4	5
The ERP System or Oracle eBusiness Suite has improved efficiency to the CBE's Procurement Practices					
The Oracle eBusiness Suite helps in minimizing the delay					
The module decreases associated costs often as the bank operates more efficiently					
The Oracle eBusiness Suite helps in improving the performance of the procurement Practice					
The Oracle eBusiness Suite aid in reducing errors and mistakes					
The Oracle eBusiness Suiet supports Inventory optimization					
The Oracle eBusiness Suite helps a lot for the business to grow in the right direction					
The Oracle eBusiness Suite is easy to use					
The Oracle eBusiness Suite enables value added activities in the procurement process					
The system shortens procurement cycle					
The module enables to reduce number of employees for specific task					
The system assists reducing lead time					
The ERP system (Oracle eBusiness Suite) has aligned with the bank business model					
The ERP system contributing to improve supplier satisfaction					
The ERP system contributing to improve employee satisfaction					
The system contributing to improve quicker response rates					

2.2 The role of ERP / Oracle eBusiness Suite in sharing information in the Bank's Procurement Practices	1	2	3	4	5
ERP System supports truck your orders which will further help you a lot in managing the accounts					
The Oracle eBusiness Suite is enable to connect with external partners					
ERP application can eliminate costly duplicate and incompatible technology					
The ERP system integrates accounts payable, stock control systems, order-monitoring systems, and customer databases into one system.					
Oracle eBusiness Suite integrate and automate business processes and eliminates redundancies					
The bank benefits from enhanced reporting of real-time data from a single source system due to implementation of Oracle eBusiness Suite					
ERP software allows the bank to quickly access needed information for clients, vendors, and business partners,					

2.3 The role of ERP / Oracle eBusiness Suite in decision making in the Bank's Procurement Practices	1	2	3	4	5
The Oracle eBusiness Suite helps in decision making process					
The system helps to expedite the decision-making process					
The Oracle eBusiness Suite is enable to interact with external partners for decision making					
The ERP system helps in competitive advantages					
The system assists accurate forecasting					
The ERP system helps scalable resource					
The ERP supports mobility					
The system is supportive to customizing report					
The software assists regulatory compliance					
The Oracle eBusiness Suite improves customer service delivery and data reliability					
The ERP helps to increase employee satisfaction since they better able to perform					

2.4 The role of ERP / Oracle eBusiness Suite to integrate various departments in the Bank's Procurement Practices	1	2	3	4	5
The bank's Oracle eBusiness Suit enable all data in one accessible location/ centralized data					
The bank's Oracle eBusiness Suite streamline processes across various departments and workflows/ automate processes					
The bank's Oracle eBusiness Suite enable work flow visualization / employees to see what their peers are working on.					
The bank's Oracle eBusiness Suite reducing human error					
The bank's Oracle eBusiness Suite creates more time for essential tasks that are more labor intensive					

Part Three: CBE's Procurement Practices

Instruction: Answer the following questions by putting a tick (√) mark and rate the frequency using scales from 1 to 5. All the ratings will be made as follows;
1= Strongly Disagree 2= Disagree 3= Moderate 4= Agree 5= Strongly Agree

3.1How does CBE's Procurement Practice is performed	1	2	3	4	5
CBE's Procurement Practice help to Automate Procurement Processes,					
CBE'S Procurement Practice is basically have Well-Defined Processes.					
CBE'S Procurement Practice have done Process Transparency					
CBE'S Procurement Practice have a Centralized Contract and Documentation Hub					
CBE'S Procurement Practice use Data to Optimize Inventory					
CBE'S Procurement Practice have a Multi-Sourcing Strategy,					
CBE'S Procurement Practice build Strong Supplier Relationships					
CBE'S Procurement Practice Train Procurement Team					

Please provide your ideas and observations on the banks Oracle eBusiness Suite that you think will affect the procurement practice of the bank.

_____
_____
_____

***************THANK YOU FOR YOUR COOPERATION********************

APPENDIX: B

REGRRATION TABLE

Model Summary

Model summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.784[a]	.615	.598	.46883

a. Predictor:(constant) Improvement of procurement practice, Sharing Information, Decision Making, Integrate Departments

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.908	4	7.727	35.154	.000[b]
	Residual	19.343	88	.220		
	Total	50.251	92			

a. Dependent Variable: Procurement Practice

b. Predictors: (Constant),Improvement of procurement practice, Sharing Information, Decision Making, Integrate Departments

Coefficients

Coefficients	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.559	.294		1.902	.060
	Improvement of procurement practice	.318	.143	.270	2.231	.028
	Sharing Information	.005	.115	.005	.045	.964
	Decision Making	.014	.133	.013	.106	.916
	Integrate Departments	.514	.116	.553	4.421	.000

a. Dependent Variable: Procurement Practice