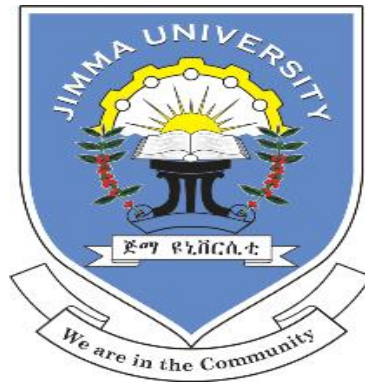*The Effects of Management Information System on Organizational Performance: In case of Commercial Bank of Ethiopia, Hossana town*

Thesis Submitted to the School of Graduate Studies of Jimma University in Partial fulfillment of the Requirements for the Award of the Degree in Masters of Business Administration (MBA)

BY:-

ASHENAFI ABERA DARSEBO

JIMMA UNVERSITY

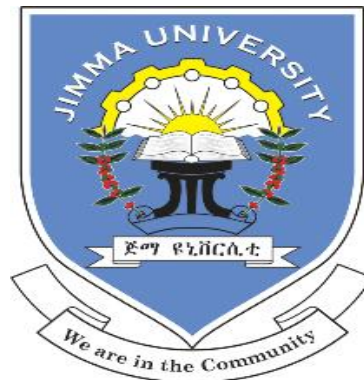**COLLEGE OF BUSINESS & ECONOMICS**

MBA PROGRAM

JUNE, 2021

JIMMA, ETHIOPIA

The Effects of Management Information System on

Organizational Performance: In case of Commercial Bank of

Ethiopia, Hossana town

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ASHENAFI ABERA DARSEBO

Under the guidance of

Mr. Wubishet Mengesha (Asst. Prof)

And

Mr. Firew Mulatu (MBA)

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DECLARATION

I declare that this research entitled *"The Effects of Management Information Systems on organizational performance: In case of Commercial Bank of Ethiopia, Hossana town"* has been carried out by me under the guidance and supervision of **Mr. Wubishet Mengesha (Asst. Prof)**, and **Mr. Firew Mulatu (MBA)**. The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

Mr. Ashenafi Abera Darsebo

Researcher's Name   Date   Signature

CERTIFICATE

This is to certify **Mr. Ashenafi Abera Darsebo** has carried out his thesis on the topic entitled *"The Effects of Management Information System on organizational performance: In case of Commercial Bank of Ethiopia, Hossana town"* and submitted to Jimma University College of Business and Economics Department of Management in Partial Fulfillment of the Requirements for Masters Degree in Business Administration with the Regulations of the University and Meets Accepted Standard with respect to Quality and Originality.

Approved by the Advisors:

Mr. Wubishet Mengesha (Asst. Prof)

      Main Advisor   Date   Signature

Mr. Firew Mulatu (MBA)

      Co Advisor   Date   Signature

APPROVAL SHEET OF THESIS

As members of the Examining Board of the Final Open Defense, we certify that we have read and evaluated the thesis prepared by **Ashenafi Abera Darsebo,** entitled *"The Effects of MIS on organizational performance: In case of CBE, Hossana town",* and recommend that it be accepted as fulfilling the thesis requirements for the award of the degree in Master of Business Administration.

Name of Chairman	Signature	Date

Name of External examiner	Signature	Date

Name of internal examiner	Signature	Date

ABSTRACT

The main aim of this study was to examine the effects of Management information system on the organizational performance of CBE, Hossana town. The descriptive and explanatory research design was used and analyzed quantitatively by SPSS (V23). All (10) branches of CBE were used to take an adequate sample size and 156 employees selected by Yamane's (1967) formula from the total of 255 employees through systematic sampling method. Primary sources of data were used through questioner based on a 5point Likert scale that range from strongly disagree to strongly agree. Descriptive and inferential analyses such as standard deviation, mean, Pearson correlation and linear regression analysis were used. All MIS indicators have a positive and strong effect on organizational performance of CBE, Hossana town at $\alpha = 0.05$ and the developed hypothesis confirmed that MIS has an effect on organizational performance. Further, system quality, intension to use, net benefit, and user satisfaction were found to have a high significant effect on organization performance of CBE, Hossana town at a p-value of .000 while the left of two variables information quality and service quality has an effect on organizational performance of CBE, Hossana town at $\alpha = .05$ with a p-value of .012 & .010 respectively. Based on the research result it is recommended for CBE, Hossana town should make MIS of the bank always available to system users, hiring and training MIS specialists, providing material and human resources supporting MIS and assess the overall practice of MIS from time to time.

Keywords: - Management information system (MIS), organizational performance, CBE, Hossana town, SNNPR, Ethiopia

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ACRONYMS AND ABBRIVATIONS

AMOS – Analysis of moment structures

BSC – Balance score card

CBE- commercial bank of Ethiopia

DSS – Decision support system

EFQM – European Foundation for quality management

ESS – Executive support system

IS – Information system

IT – Information Technology

ISSM – Information system success model

MIS – Management information system

ROA – Return on Asset

ROE – Return on equity

SEM – Structural equation modeling

SNNPR- South Nations Nationalities and peoples region

TAM – Technology acceptance model

TQM – Total Quality Management

TTF – Task technology fit

TPS – Transaction processing system

PLS – Partial least square

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

The world is in the era of information in which peoples are highly dependent on computerized technology to perform whatever task they need with a fraction of time than ever. Information is a weapon used to achieve the desired personal and business goal with low cost and a high degree of quality. Organizations need information about internal operations to ensure internal performance and effectiveness, as well as external information to understand what is happening outside of the organization to react to changes and adapting to the actions (Kaye, 1995).

Information should be managed and disseminated to provide the right information for the users to ensure the effectiveness of its use. This can only do with the successful implementation of management information systems (MIS) which determines organizations operating in today's world through providing valid information from different sources. And such information-aware organizations respond to any change timely and accurately as much as needed. MIS is an integrated hardware and software system that collects information from both internal and external parts of the organization to support the decision-making tendency of the managers, (Djilali, 2017). According to, Kalhoro et al., (2019) MIS provides timely and useful information that is free from delays and error and improving management jobs, improving and reducing labor costs. Availability of information alone has no meaning unless it is available at the right time as required and free from error to support management with information leads to forward. And Georgescu and Jeflea, (2015) stated because of growing cost pressure, resource management, and security issues the organizational information system plays a tremendous role in regards to making a timely and efficient decision.

Organizational performance is determined by the degree of management knowledge and existing information with the coordination and collaboration of information system users determine the success or failure of the organization (Dandago and Rufai, 2014).

Any Organizational performance is affected by the degree of IS utilized and measured in different ways from organization to organization; even it is different from authors to authors that make it a more complicated concept.

According to, Al Khajeh, (2018) organizational performance is measured by actual output against planned output. Also, Šehić, Šašić, & Džigal (2021),noted that organizational performance is determined by leadership styles followed by managers that involve financial and product market performance. Meanwhile ,Bikker, (2010), explained that organizational performance is determined by financial, Marketing & operational performance.

Companies and organizations operating in developing countries face the challenge of adapting, adopting, and installing information systems, which might seem difficult due to the expensive expertise required to prevent any risks. Alwahaishi and Snasel, (2012), stated that the practice and implementation of current technologies need training and huge costs for installation and repairing.

The banking sector is one of a sector which fully relies on MIS to perform day-to-day business to deal with a large amount of data for better decision making purpose than any other business sectors, (Elshalom, 2016 ; Djilali, 2017).

Vannirajan and Manimaran, (2015), Stated that the presence and use of MIS in banks is more responsive and allows them to be more competitive and productive by providing information on deposits, loans, advances, foreign exchange, customer information, competitor strategy, salaries, benefits, provident funds for bank employees, market analysis, profit position, and service quality.

According to, Fikru, (2014), CBE plays an important role in economic development by promoting domestic and foreign trade by approving and discounting bills of exchange, as well as allowing deposits, loans, and investment securities purchases.

The researcher's interest is to examine the effects of MIS on organizational performance of CBE, Hossana town by using MIS indicators and the BSC model to measure organizational performance.

1.2. Statement of the problem

To achieve strategic business goals, today's companies invest heavily in information systems. The ability to access data stored at various locations on a range of hardware and platforms has improved thanks to significant technological advancements in communication such as Multimedia, Graphical User Interfaces (GUI), Internet, Web, and so on, making MIS a more appealing and effective proposition,(JNU, 2013, p .17). A management information system (MIS) is a set of interconnected components that gather (or retrieve), process, store, and distribute data to help decision-making and control in an enterprise. Information systems can help managers and staff evaluate problems, envision challenging problems, enhance organizational excellence, competitive advantage, and survival, and achieve higher levels of quality and productivity in business operations, in addition to promoting decision making, planning, and control, (Kenneth & J.Laudon, 2008, p. 42-46).

Study conducted by Kalhoro et al., (2019), at Sindh Province, telecommunications companies found that management information system has positive effects on the performance of telecommunications companies. And, Azeez and Yaakub, (2019a) Conducted a study in Iraq at Missan Oil Company by using MIS indicators to measure the effect of MIS on organizational performance. The study found that information quality, user satisfaction, and net benefits were positively related, however system quality, service quality, and intention to use were negatively related to organizational performance. Also, Azeez and Yaakub, (2019b) Conducted a study in Iraq at Missan Oil Company by using MIS indicators with mediating role of TQM to measure the impact of MIS on organizational performance. The study found that information quality, user satisfaction, and net benefits were positively related, however system quality, service quality, and intention to use were negatively related to organizational performance, positive relationship among MIS indicators and TQM except for service quality, positive relationship between TQM and organizational performance and TQM mediates the relationship between all MIS indicators and organizational performance

except for service quality. While, Bahari and Mahmud, (2009) in their study at Kota Kinabalu, Sabah, Malaysia revealed that the company's performance is positively and significantly affected by information quality, service quality, and system quality.

Omiunu, (2015), in his study conducted in Nigeria, found that the use of the system and overall MIS has an insignificant effect on organizational performance.

Here there is a contradiction in findings related to MIS and organizational performance particularly with MIS indicators such as - system quality, information quality, service quality, intention to use (use) of system, user satisfaction, and net benefits. However, these variables are determining the performance of the organizations, especially for service-providing organizations like banks. And it is difficult to conclude that findings revealed in the case of one organization might not be similar for all organizations because information system success is determined by technological, organizational, and environmental factors, (Ghobakhloo and Tang, 2015).

The banking sector is one of a known sector that fully influenced by the use and implementations of MIS to satisfy their customers because satisfaction is the direct replica of quality service provided (Elshalom, 2016).

When it comes to the case of Ethiopia studies in banks conducted by Shegaye, (2018) founds that MIS in CBE used for only transaction purposes and fails to do the expected result concerning providing information for decision-making purposes. Similarly, Dereje, (2019), founds utilization and availability of MIS in CBE are characterized by different factors such as highly interrupting networking service, the minimum utilization rate of Existing MIS components, lack of effective and efficient IT infrastructures, and incompleteness of decision process. Elshalom, (2016), on his study of selected 5 banks from both private and public banks the study concluded IS had a strategic impact on commercial banks of Ethiopia and software and database were neither high nor low impact which needs further research. As it is seen in Ethiopia few studies were done in MIS, and most of them were done on utilization and availability of MIS in relation to decision making by focusing only on administrative or managerial

positions by excluding non-managerial employees in their studies and even though the existing studies result implies that still there is a problem with successful implementation and use of MIS in Ethiopian banks.

This study conducted based on the effects of MIS on organizational performance of CBE by using MIS indicators such as; system quality, information quality, service quality, intention to use (use), user satisfaction, and net benefit and organizational performance is measured by the BSC model which includes financial perspectives, customers perspectives, internal operation, and employees learning and growth.

The student researcher has been searched for existing literature on the effect of MIS on organizational performance in Ethiopia generally and particularly in Hossana town. There is no any adequate evidence that directly linked with an entitled topic "The effects of MIS on organizational performance" based on evidence of a search for published and unpublished documents on different sites available online. Based on listed evidence this study conducted to examine the effects of MIS on organizational performance of CBE, Hossana town.

This study has aimed to answer the following questions:

- ✓ What is the effect of system quality on organizational performance?
- ✓ What is the effect of information quality on organizational performance?
- ✓ What is the effect of service quality on organizational performance?
- ✓ What is the effect of intention to use on organizational performance?
- ✓ What is the effect of user satisfaction on organizational performance?
- ✓ What is the effect of net benefits on organizational performance?

1.3. Research objective

1.3.1. General objective of the study

The general objective of the study was to examine the effects of MIS on the organizational performance of a commercial bank of Ethiopia, Hossana town.

1.3.2. Specific objective of the study

- ✓ To examine the effect of system quality on organizational performance.
- ✓ To examine the effect of information quality on organizational performance.
- ✓ To examine the effect of service quality on organizational performance.
- ✓ To examine the effect of intention to use (use) on organizational performance.
- ✓ To examine the effect of user satisfaction on organizational performance.
- ✓ To examine the effect of net benefits on organizational performance.

1.4. Research hypothesis

In order to address the objectives of this study, the following six hypotheses were developed for this research that are:

H1: System quality has significant and positive effects on organizational performance.

H2: Information quality has significant and positive effect on organizational performance.

H3: Service quality has significant and positive effects on organizational performance.

H4: Intension to use has significant and positive effect on organizational performance.

H5: User satisfaction has significant and positive effect on organizational performance.

H6: Net benefit has significant and positive effects on organizational performance.

1.5. Significance of the study

The effect of the Management information system is tremendous for the banking industry through making the system easy to internal and external users of the system. In regard to this, the study provided critical information about the nature of information quality, service quality, system quality, user satisfaction, intention to use, and net benefit of the system generally to the commercial bank of Ethiopia and particularly to CBE Hossana town which will help to modify the implementation and practices of MIS. Also, the study will be used as a reference for other researchers interested in conducting studies in the same and related study topic by providing relevant information.

Finally, the study forwarded important suggestions and recommendations to managers of the banks which will help them to cross-check what is and what should be.

1.6. Scope of the study

This study conducted on the effect of MIS on organizational performance commercial bank of Ethiopia, Hossana town. The analyzed and interpreted result of the data was the direct outcome of the data collected from CBE, Hossana town due to the fact it is difficult to generalize the result of this study to all CBE branches in Ethiopia. MIS is measured by different types of variables based on organizations' nature, this study used system quality, information quality, service quality, intention to use, user satisfaction, and net benefits to examine the effects of MIS on organizational performance. And the data used in this study was collected through questioner based on sample size. Generally, this study is geographically limited to SNNPRS, Hadiya zone, Hossana town, and institutionally limited to CBE.

1.7. Structure of the Thesis

The study was organized into five chapters. The first chapter presents the introduction part which contains: background to the study, a statement of the problem, research hypotheses, general and specific objectives of the study, the significance of the study, the Scope of the study, and the structure of the thesis. The second chapter is about literature review, which incorporates: theoretical review, empirical review, and conceptual framework of the study. While the third chapter contains a brief description of the research design, as well as the methods in which the data were collected, presented, and analyzed. The fourth chapter presents, analyzes, and interprets the data related to the objective of the study. Finally, the fifth chapter was about conclusions, recommendations, and suggestions to future researchers.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Theoretical framework

2.1.1. Concept Of Management Information System

MIS stands for a management information system, which is made up of three words: management, information, and system (s).Management is a group of professionals in managerial positions who have responsibilities and expertise in management functions to control all of an organization's resources, including money, materials, people, and other resources. Information is the meaningful collection of data from different sources that are used for specific organizational day-to-day requirements in different levels and functions. A system is a collection of hardware, software, people, and networks; that is used to monitor, capture, process, and disseminate data for organizational purposes for individuals and groups both within and outside the organization (McLeod, 2010).

Yusuf Munirat et al., (2014), define a Management Information System (MIS) as a subset of a company's overall internal control that covers management accountants' use of people, records, technologies, and processes to solve business issues like costing a product, service, or a company's overall strategy. Also, Soni,(2020) defines management information system (MIS) as a backbone of digitalized management that having both hardware and software, which is used for analyzing companies' profit and goals from time to time and has an aim of providing valuable information regard to tasks performed by employees and departments. MIS is "a part of information system (IS) that used in an organization to manage processes, people, resources, finance, technologies, and services" (Kengatharaiyer S .et, al., 2009).

2.1.1.1. Importance of management information system

Since the result that is perceived from MIS is based on internal and external influences that an organization has, there is no widely agreed application of MIS for all

organizations while MIS helps organizations to achieve their overall pre-planned goals by inspiring, tracking, and monitoring the organization's efforts, (Naranjo-Gil, 2010).

MIS internally provides business controlling procedures that are needed by management accountants to solve business problems such as costing and business strategies with an application of people (managers and employees), documents, technologies like ICT, and other procedures (Roman, 2011). MIS act as a benchmark in deciding for managers, business owners, and other key decision-makers. Unless appropriate the decision will be made is meaningless due to lack of confirmed quality information. So, MIS helps to check an existing business whether on the right track or not.

According to, AL-Adwan,(2016), MIS allows organizations to recognize their strengths and weaknesses based on sales reports and staff performance records, provide a comprehensive image of the business, serve as a tool for communication and planning, provide customers with data, gain a competitive advantage, and improve timely decision-making. Also as noted by Saani, (2020, pp. 45-49) management information system (MIS) is important for a business organization through Supporting decision making, Enhancing competitiveness, improving productivity, enable to prefer customers, achieving strategic advantage, provide quality technology, and enables a business to Cope with globalization.

2.1.1.2. Different types of Information system

There are many types of information system that practiced in organizations however here the four major types of IS are discussed below:-

Transaction-Processing Systems (TPS)

TPS is used to record, process, validate, and store transactions that occur across a company's various functional areas for future retrieval and use.

A TPS's data capture and storage serve two purposes. First, to begin with, they should be made available to those parts of the organization (as well as external entities) where they are required to support day-to-day, routine operations. Second, it is used to inform

the management reporting system with data and generate performance reports on the operations' effectiveness and productivity (Rahmatian, 2003).

Decision Support Systems (DSS)

A decision support system (DSS) is a sub-discipline of information systems (IS) that focuses on assisting and strengthening managerial decision-making. Personal decision support systems (PDSS), group support systems, executive information systems, internet analytical processing systems, data warehousing, and business intelligence are all examples of DSS in modern professional practice (Arnott and Pervan, 2005).

Management information system (MIS)

MIS serves managers by providing important information by taking important data from TPS to generate periodic data reports about historic and current information. Objectives of MIS vary according to the needs of individual organizations and different from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods that support managerial decision-making (Kenneth & J.Laudon, 2013, p. 45-46)

Executive support system (ESS)

Executive Support Systems are intended to provide necessary information to executives and senior management to take non-routine and strategic decisions.

ESS important to drive strategic planning, facilitate change management, identify new business opportunities to empower employees, and Enhance understanding of the basic objective of the organization (Chichernea, 2009).

2.1.1.3. MIS and commercial bank of Ethiopia

MIS assists managers in making decisions and motivates workers in the workplace by making working environments easier, providing a space for knowledge coordination and control, and allowing complicated activities to be completed with the most efficient use of resources to become more productive and efficient in the overall organization efficiency (Olumoye, 2013).

Banks are the most dominant sectors that play a great role in the development of the economic growth of the nations. According to Nsour, Shobaki and Alizoubidi,(2019) number of reasons why MIS is used in the banking industry. Here are a few of them: IS practices are legally binding and expensive, but they come with some benefits, such as sourcing a structural environment, services, and active administrative staff that help to promote intellectual development through internet marketing.

It is expected that the system will meet the knowledge needs of a person, a group of people, management functionaries, managers, and top management.

Olumoye, (2013) "Information does not serve as the only alternative for the success of management in the same saying there is no management if there is no adequate information". It means that information and management must go parallel to provide a meaningful performance of the organization with supporting one another.

Management information system (MIS) is used to manage the information flow to be meaningful that provide the right information at the right time to the right person with the right quality.

Human resource information systems, for example, play an important role in areas such as personnel management; pay administration, leave of absence recording, ability inventory, medical history, performance assessment, training and growth, HR planning, recruiting, job planning, negotiations, and others by providing information. The reason for its failure is the lack of sufficient training for employees in addition to the poor practice of IT to all departments of the bank (SB, 2016).

In any organization, information system practice is critical for managing the flow of information among departments and ensuring the free flow of information from a centralized common source known as the database management system. In this regard, CBE faced difficulties in implementing IS, including a shortage of qualified manpower, inadequate infrastructure, and information quality, restricted network capacity or system disconnection, a lack of technical innovation, unauthorized access to the

system, poor information available for decision-making, service quality, and errors during data recording (Kechema.T,et al. 2019).

CBE plans and executes MIS well, but due to dynamic changes in service requirements and a failure to go through the process of changing and updating personnel capability, the MIS is not fully operational. Furthermore, the bank is attempting to provide service per customer standards, but this is not always effective in the case of CBE (Animaw, 2013).

As indicated by Shegaye, (2018), MIS in the commercial bank of Ethiopia, assists in Strategic Planning, Management Control, Operational Control, and Transaction Processing by offering a range of systems such as Query Systems, Research Systems, Modeling Systems, and Decision Support Systems.

MIS assists in the decision-making process by providing information, communication, and problem identification. The quality of service offered by CBE is disrupted by power outages, weak internet connections, and system maintenance issues, causing bank customers to be unhappy with the bank's service, and the bank's management to pay attention (Mesfin, 2019).

2.1.1.4. Models of information system

A. Technology acceptance model (TAM)

Davis (1989) established the Technology Acceptance Model (TAM) as an adaptation of the Theory of Reasoned Action (TRA) to quantify the level of technology acceptance and acceptance of using the Internet to conduct online transactions. TAM assumes that users' behavioral intentions to utilize a specific system may be used to predict actual system utilization. The original level of consumer technology acceptance can be measured using four dimensions: perceived usefulness (measure the degree to which the system enable the system user to perform the job), perceived ease of use (the extent to which using system reduce users effort to perform a certain task), attitude toward new technology usage (an individual evaluation of behavior on performing

performance), and intention toward new technology usage (refers the motivation to use and usage frequency of the technology provided by the organization) (Ariffin, 2017). The theory indicates that an individual behavioral intention to use is the most important factor of an information system which is determined by attitude towards to use (determined by perceived usefulness and perceived ease of use) and perceived usefulness (indicated by perceived ease of use) (Huang, 2017).

B. Task Technology Fit (TTF)

It is a model for evaluating how information technology contributes to performance by assessing the task and technology aspects. Consumers' ability to use technology is believed to be determined by both task and technology characteristics. Despite the fact that the model has been widely used in many information technology studies, research that combines TTF and TAM is lacking and ambiguous. Individual-technology fit (IT) and task-technology fit (TTF) are two dimensions of TTF (TT). Individual-technology fit is depicted in this scenario (IT). The more familiar a person is with a system, the more he or she understands how it operates (Ariffin, 2017).

C.   Information system success model (ISSM)

Several authors proposed their model to measure information system success. In the end, the model proposed by DeLone and McLean gets acceptance by most of the researchers. The model for the first time introduced by Delone and McLean, (1992) , and the model include six information system success measurement dimensions like system quality, information quality, use, user satisfaction, individual impact, and organizational impact. In 2003, the model was updated because of some criticism, and later it was modified through adding service quality, and Intention to Use was added and the original dimensions of Individual and Organizational impact were combined into a Net benefit. Delone and McLean, (2003) information system success model includes information quality, system quality, service quality, use (use of the system), net benefit, and user satisfaction.

As it is suggested by, Urbach & Muller, (2012), More research using the complete model ISS model of DeLone and McLean, (2003) will help to extend an understanding of the model's overall validity.

Researchers like Azeez and Yaakub, (2019a) ; Azeez and Yaakub, (2019b) conducted a Management information system by using the ISS model of DeLone and Mclean, 2003. Let see each dimensions of ISSM of DeLone and McLean, (2003)

A. System quality

It refers to measures of the information system and compatibility of hardware and the software work together, (Pérez-Mira, 2010). Where , Ojo, (2017) defines system quality as the measure of desirable characteristics of an information system such as:- perceived ease of use system features, response time, and flexibility.

According to DeLone and McLean(2003), System quality is measured in terms of ease-of-use, functionality, reliability, flexibility, data quality, portability, integration, and importance while, Sedera and Gable, (2004) listed nine attributes of system quality such as – ease of use, ease of learning, user requirements, system features, system accuracy, flexibility, sophistication, integration, and customization.

 According to Gorla, Somers and Wong, (2010) System quality have two categories of attributes; system flexibility feature and system feature (end-user flexibility or system sophistication). Further, the flexibility dimension of the system reflects the fact that the system is designed with useful/required features (and without unnecessary features) and the fact that the system designer can make software modifications easily while, the sophistication of the system refers to a user-friendly system that is easy to use, well documented, has a short processing time, and uses modern technology to make systems user-friendly. Therefore, System quality is a user's evaluation of the technical capabilities of the system and its usability.

B. Service quality

In today's competitive environment, consumers are increasingly aware of alternatives on offer concerning services and expected standards of service the reason is they have

many options to switch (Vannirajan and Manimaran, 2015). This forces organizations to increase service quality to maintain their customers.

Service quality is considered a multidimensional construct; most researchers have used the SERVQUAL model to measure service quality and customer satisfaction and the model consists of five dimensions: reliability, responsiveness, assurance, empathy, and tangibles, (Pakurár et al., 2019). These dimensions are used to imply a service quality gap (the difference between customers' expectations and perceptions of the service).

According to, Addisalem,and Desta, (2019), Service quality is the overall effect of service performance which determines the degree of satisfaction perceived from the provided service by the user,   meanwhile, Li et al., (2021) assume that service quality will have an affirmative effect on user satisfaction which characterized by cost-effectiveness, user-friendliness, and technical support.

IS services will become better aligned with organizational goals, resulting in improved quality of decision making and improved profitability (internal organizational efficiency), better anticipation of customer demands, and more accurate sales forecasting (Gorla, Somers and Wong, 2010).

Information system specialists play a major role for the organizations by maintaining communication with business units of the organization; understand users need well, prompt provision of services to end-users by IT units to identify better business idea.

C. User satisfaction

Satisfaction depends on different factors, such as psychological, economic, and physical factors.

However, satisfaction is considered as a set of negative and affirmative reactions to a collection of elements and a type of emotional attitude, Li et al., (2021). Satisfaction has been defined as the difference between expectation and performance, but there are differences between quality and satisfaction (Verbeke et al., 2010). Satisfaction is the perception that resulted from the service delivered or product is used while quality has its standards before it is provided or produced, which means one can easily identify the

quality before using the product or service. The concept of satisfaction is an abstract concept than the case of quality.

Expectancy-disconfirmation theory stated that satisfaction is the result of subjective comparisons between expectation and perceptions.

The concept of satisfaction is more important in the case of service-providing organizations like banks and all banking channels must have to develop a strategy in achieving high customer satisfaction to increase perceived qualities to customers (Li et al., 2021).

In these cases, user satisfaction is the satisfaction perceived by employees of the company especially with the advantage of IS. This user (employee satisfaction) is measured based on the flexibility, accuracy, reliability, and timeliness of the system provided by the companies. That is why employees in today's business are more dependent on the availability and quality of information systems.

D. Information quality

Quality of information has been discussed a great deal in the information system literature. Information Quality is a user's evaluation of the system's delivery of communication of knowledge. The value of an information system is estimated by the managers and other concerning bodies who directly engage in decision-making.

DeLone and McLean, (2003) used five dimensions to measure information quality such as - accuracy, timeliness, completeness, relevance, and consistency.

Information is important in today's business world; businesses without information are like fishes out of water. The existence of information by itself has no meaning but it has to be shared among the members of the organization for organizational work and its flow is should be multidirectional and manageable. Unless the information is like a military person in the field of war who holds a gun that has no bullet.

To increase the quality of information it is mandatory to increase ease of use to users, reducing noise, improving data quality, adapting information to increase its pertinence, and saving users time and money (Choo, 1995) . Organizations expected to have the

ability to assess the information quality to assess the status of their organization's information quality and monitor its improvement (Gorla, Somers and Wong, 2010).

So the organizational system to be opens to taking information resources outside of the organizational environment and must transform this information resource into knowledge, processes, and structures (Choo, 1995)

The amount and quality of information flow determine the decisions and objectives predetermined by the organization.

E. system Use (Intension to use)

The degree and manner in which staff and customers utilize the capabilities of an information system may be determined as the amount of use, frequency of use, nature of use, appropriateness of use, the extent of use, and purpose of use, (Petter, Delone & McLean, 2008).

This is all about the interaction between the system and the users of the system in day-to-day activities to perform tasks. Generally, it determines the productivity of the organization with a degree of intimacy created between the organizational information system and the organization's employees or information users.

F. Net benefit

According to Petter, Delone & McLean, (2008) Net benefit is the "extent to which IS are contributing to the success of individuals, groups, organizations, industries, and nations. For example, improve decision- making, improve productivity, increased sales, cost reductions, improved profits, market efficiency, consumer welfare, creation of jobs, and economic development". This indicates that the overall benefits resulted from MIS to the organization and its Stakeholders.

It has been measured by sometimes assessing the individual impact or organizational impact. This indicates that the net benefit of the Information system the combined merit perceived by both the organization overall and system users.

2.1.2. Organizational performance

The literal meaning of performance is "the mood or function of operation quality" (Azeez and Yaakub, 2019a ; Azeez and Yaakub, 2019b)

Organizational performance is quantitative information and must provide detailed descriptions of the organization's pre-planned accomplishment of targets, priorities, values, strategies, schedules, policies, and procedures to achieve economic objectives such as sustainability or continuity (Almansoori, 2021).

However, only measuring quantitative aspects of the organization is not acceptable because organizations have their assets that could not be measured numerically, because performance is the outcome of both quantitative and qualitative factors. So, focusing only on financial/quantitative/ aspects has a negative impact on the organization's competitive advantage. So, Organizational performance "is not one-dimensional theoretical construct nor is it likely to be characterized with a single operational measure" (Tetyana and Popa, 2009).

Al-Taai, (2021), describe organizational performance as overall performance based on performance resources (the value of resource utilization), output performance (the ability of an organization to deliver the highest quality product or service to ensure customer satisfaction), and flexibility performance (organization ability to coup up when changes occur within and outside of the organization).

And concern for employees and customers is a contemporary business issue to that organization's focus (Tetyana and Popa, 2009 ; Ishaq Bhatti and Awan, 2013) based on the fact that they are driving forces of any organizations performance.

Organizational performance is measured with different dimensions such as financial perspectives, market, and shareholder value, and sometimes production capacity performance may be analyzed (Mohamed, A.O. and Mohamud, 2021)

Organizational performance is the achievement of measurable goals that are dependent on leadership decisions and strategies that contribute to benefit, profitability, and

organizational learning, as well as employee engagement and dedication to the organization's performance (Abubakar et al., 2019).

Measuring input, activities, output, and the result is all part of measuring organizational performance. It is important to understand what resources were used to manufacture a specific product or service (input), what steps were taken in the manufacturing phase (process), what product or services were generated in what quality (output), and what effect did the produced product or service have (Nalwoga and Van Dijk, 2016).

Generally, organization performance measurement into two dimensions like: - objective and subjective measurement. An objective measure of performance is focused on financial aspects such as - ROI (return on investment), ROA (Return on Asset), NI (net income), and others. Even this measurement is called Accounting measurement which depends on the accounting rule of GAAP (General accepted accounting principle). When it comes to a subjective measure of performance, it measures organization performance based on information gathered from leaders, managers, and other concerning bodies in each business unit of the organization (Nalwoga and Van Dijk, 2016).

Authors such as; (Tetyana and Popa, 2009 ; Kaplan, and Norton, 1992) criticize the objective (financial) method because of its focus only on the current performance of the organization than a long run condition of the organization and even all organizations may not have objective data which is based on accounting or financial perspectives in such cases it is mandatory to use subjective measure.

Performance measurement is depending on the nature of the organization we are going to deal with. For example, a performance measure for private and public organizations is different. In the case of private organizations, we can measure through models such as EFQM (European Foundation for quality management) excellence and BSC (Balance sore card). But, the performance measurements used to measure

organizational performance in case of public organizations are like the value chain model and the framework for performance assessment (Nalwoga and Van Dijk, 2016).

A. European Foundation for quality management (EFQM) excellence model

EFQM excellence model is developed by EFQM in 1996 which focuses on continuous improvements on nine components such as leadership, employee management, policy and strategy, resources, processes, employee satisfaction, customer satisfaction, impact on society, and business result to provide a systems perspectives to understand organizational performance based on TQM concept (Wongrassamee, Simmons and Gardiner, 2003). EFQM excellence model has both strength and weakness in regard to measuring organizational performance. For example, some of its strengths are: - provides support to management on the way how to achieve changes in an organization through TQM concept, facilitate organizations to assess against criteria of the model and enables organizations to understand their current performance position and to use the bench mark to implement continuous improvement (Wongrassamee, Simmons and Gardiner, 2003). However, EFQM model has also its own weakness such as :- it can't clarify what strategies should be implemented to achieve Continuous improvements and it fails to mention directly target performance (Wongrassamee, Simmons and Gardiner, 2003; (Nalwoga and Van Dijk, 2016).

B. The value chain model

It refers to an organization that is receiving inputs which are deployed in particular processes, procedures and programs which produce outputs. Contributions from stake holders (partners and co-producers) could emerge spontaneously without any encouragement from the organization. Further the organization prepare written contract with partners to motivate private individuals and organizations to contribute to public goals (Nalwoga and Van Dijk, 2016) . Theories and practices in organizations show that a relationship between employees and customer satisfaction and customers, relationship with bottom lines. An improvement in employees' attitude and behavior leads to an improvement in attitudes and behaviors customers and an improvement in

customers attitudes and behaviors leads to growth and profits (Rapcevi, 2014). There are two main value flows such as: - primary activities (service concept design, physical resources procurement, human resources selection and management, service creation and delivery) and support activities (strategic planning, financial management, and brand management) (Rapcevi, 2014) .

C. The framework for performance assessment

Worthington and Dollery ,2000 ; Ancarani (2009) as cited by Nalwoga and Van Dijk, (2016) the frame work is based on the assumptions to analyze performance set of outcome indicators should be considered separately. Accordingly performance is categorized in to 3 components such as; efficiency (how an organization uses resources wisely in the process of producing output), effectiveness (indicated by appropriateness, accessibility and quality) and customer satisfaction.

D. Balanced score card (BSC)

Implementing a balanced scorecard (BSC) in measuring organizational performance is get acceptance by researchers of management ,(Mafini and Pooe, 2013 ; Nalwoga and Dijk, 2016 ; Abubakar et al., 2019; Dastmalchian *et al.*, 2020). BSC for the first time developed by, Kaplan, and Norton, (1992) comes with four different perspectives such as- financial, customer, internal business, and learning and growth. BSC is becoming a popular performance measurement system that combines the use of financial and non-financial measures such as financial perspectives, customer perspectives, internal business perspectives, and learning and growth (Crabtree and DeBusk, 2008).

  In a current time organization divert their attention from focusing on financial aspects because it is not an efficient way of performance measurement and modern performance measurement methods were later developed tends to be better, which is called BSC, (Dinçer, Hacıoğlu, and Yüksel, 2017).

BSC is a short document briefly summarizing loading and lagging performance indicators that deal with four perspectives which include financial, customer, internal process, and learning and growth (L&G) which answer four basics, such as How do

customers see us? What must we excel at? Can we continue to improve and create value? And how do we look to shareholders? Kaplan, and Norton, (1992)

BSC measures are based on the premise that each measure has its cause and effect relationship with leading (non-financial, future financial performance drivers) and lagging (financial performance indicators) (financial, results of past actions). It is simple to conduct for workers following company plans once these leading and lagging indicators are established by distinguishing bad performance from measurement lists, (Malagueño, Valeiras, and Conde, 2018).

Within this context, the balanced scorecard approach can be used for a multi-dimensional analysis of performance measurement.

Let can see each perspective of the BSC model.

i. Financial perspectives

Financial performance measures show whether a company's strategy implementation and execution to meet financial targets has to do with profitability, growth, or shareholder value, and those goals stated simply to survive, to succeed, and to prosper (Kaplan, and Norton, 1992).

Historically, financial measures are the best measures to evaluate the company's performance, such as the physical values of sales and profits or percentage return on equity and assets, (Bhatti and Awan, 2013). According to authors like, Eltayeb and Osman, (2020) financial performance is called as traditional performance that measure performance based on return on assets (ROA), return on equity (ROE), or liquidity ratio (LQTY).

According to, Kefe, (2019) financial measures consist of three aspects: business growth, value creation, and profitability. And defines the terms as; Business growth is measured by the Revenue to assets ratio, rise in revenue and assets, and revenue from new goods and services. The value creation is measured by Economic value added (EVA), market value added (MVA), stock price, and dividends are all used to calculate value creation and Profitability is measured by profit margin, ROE, ROA, ROI, etc.

This measure is criticized by some researchers, Richard et al., (2009) for its weakness that only focusing on the current situation than focusing on the long-run objective to enhance the existence of the organization to in line with local and internal variables. But it can be important to measure performance together with another BSC perspective to measure the overall performance of the business.

ii.   Customer Perspectives

Customer is a driving force in any business world ever. The success of an organization is the outcome of what is invested in customers. Organizations focus on determining the need and choices of customers through a different market survey to understand the perception and attitudes towards certain products or services. Since the ultimate goal of any business is serving customers according to their request and expectation to satisfy their desire it is better to focus on their needs and wants as per their expectation. Customer perspective refers to an organization's ability to keep customers by winning and maintaining long-term relationships with them than rivals do (Boadu, 2019).

Managers play an important role in this regard by ensuring that the organization's policies and objectives are aligned with the needs of customers, with a focus on customer satisfaction, customer complaints, customer loss/gain, loyalty and trust, sales of new products, and so on, Al-Najjar and Kalaf, (2012).

iii.   Internal business process Perspectives

Organizations must translate their plans and policies into specific actions that help them to fulfill their customers' needs from processes, decisions, and actions until they have developed a plan that leads to greater results with driving forces of customers. Internal business perspective, according to , Kaplan and Norton,(2001) involve four organizational activities:

1) Encourage innovation in the development of new products and services.

2) Improving and reinforcing existing customer relationships to boost customer loyalty.

3) Enhancing supply chain management, internal procedures, asset utilization, resource-capacity management, and other processes, achieve operational excellence.

4) Developing productive fasten with external stakeholders become a good corporate citizen.

Internal balanced scorecard measures should begin with the business processes that have the greatest impact on customer satisfaction, such as cycle time, quality, staff skills, and productivity, (Kaplan & Norton, 1992).

To be effective, companies must provide training for their employees to increase productivity and decrease deficiency of resources, reducing working time wastage by providing quality materials and types of equipment as needed as per the nature of the job.

Generally, trained employees and existing updated know-how to ensure the best performance of the organization.

Managers need to focus on those critical internal operations that enable them to satisfy customer needs by identifying and measuring their core competencies, technological requirements and identifying processes that can satisfy customers.

iv. Learning and growth (L&G) Perspectives

The learning and growth measures were aimed at improving the quality of the workforce and improvement of other perspectives to increase skills and loyalty. Employees need a quality working environment and job security in addition to company growth and objective.

As Kaplan and Norton, (2001), noted that Managers should identify the employee strengths and skills, technologies, and organizational working environment required to sustain a plan in the learning and growth perspective. These priorities allow a company's human resources and information technology to align with the strategic needs of its vital internal business process, differentiated value proposition, and customer relationships.

Companies provide a full strategy map through the four main perspectives after discussing the learning and development perspective.

Explaining consumers' preferences, enhancing market procedures, and achieving and sustaining overall financial training and development are all part of the perspective, (Kefe, 2019).

These perspectives deal with the commitments, motivations, educations, and satisfaction among employees of the organization. Employees are driving forces to the organization's long-term and financial objectives. Unless employees are satisfied, the organization's productivity, efficiency, and long-term strategy are questionable, (Richard et al., 2009).

Massingham, Massingham and Dumay, (2019), identified four quadrants that represent organizational learning and growth such as Sharing (capturing and sharing best practices and lessons learned), Competency (internal development, acquisitions, and collaborations to fill human capital gaps), Cultural alignment (Creativity, versatility, adaptability, and openness to change) and Process: (speed of decision making and learning growth). Organizations must build an appealing working atmosphere that encourages workers to be creative, dedicated, intellectually curious, and open-minded to learn and positively affect the company and themselves.

Generally, L&G determined as Human capital (skills, talent, and knowledge), information capital (databases, information systems, networks, and technology infrastructures such as safety systems, data protection systems, and infrastructure investments and organizational capital and Organizational capital (culture, leadership, employee alignment, teamwork, and knowledge management).

In this study, the BSC model was used to measure organizational performance because of:-

i. BSC is better in which focus on corporate strategy (Nalwoga and Van Dijk,2016).

ii. BSC allows firms to focus on multiple strategic objectives and agendas at once, such as being more customer-centric, reducing response times, increasing efficiency, emphasizing teamwork, speeding up new product launches, and managing for the long term (Kaplan, and Norton, 1992).

iii. BSC forces managers to consider all critical organizational measures together, allowing them to see if one area's progress was accomplished at the cost of another (Kaplan, and Norton, 1992).

iv. It links business performance across different classes , such as- financial and non-financial, internal and external that has direct linkage with the strategy (Valmohammadi and Servati, 2011; Kaplan, and Norton, 1992).

v. According to Kaplan, and Norton, (1992) "it is a stop-down representation of the company's mission and strategy, forward-looking, combines internal and external interventions, and assists managers in focusing resources on activities that will perform."

2.1.3. MIS and organizational performance

The continuous emergence of new and sophisticated innovative technologies in Information Technology enables entrepreneurs and technology know-how firms to create new business models, build new business processes, and transform the day-to-day conduct of business (Sarveswaran, Nanayakkara, and Perera, 2009).

The information system is not concerned with IT only but also deals with business systems, processes, and people to manage the information effectively. Including information system, the management of the organization has a responsibility to manage resources, which requires an effective management information system (MIS) (Aydiner et al., 2019).

A management information system is one of the modern and important methods that provide reliable, accessible, and understandable information timely to the users of the system. Telecommunications, computer systems, and global trade of intense competition all play a role in the information system's increasing intensity. Information

is critical for improving an organization's internal performance and effectiveness, as well as becoming aware of its external environment to react to and adapt to changes in actions, attitudes, and decisions (Kaye, 1995).

An organized MIS is critical for maintaining quality service to customers by supplying quality information that depicts business success over time periods, allowing managers to react quickly to changes that arise both inside and outside the organization. So MIS assists managers of organizations with high achievements in business management through providing reliable, accurate, relevant and complete information to enhance organizational performance (Azeez and Yaakub, 2019a).

MIS assists organizations through improving employee communication, delivering complex materials within the organization, providing an object framework for tracking and aggregating data, minimizing costs associated with labor-intensive manual tasks, and support the organization's strategic goals and direction (Yusuf Munirat et al.,2014).

2.2. Empirical review

This part of the literature indicates a detailed explanation of previous researches done on MIS and organizational performance by many authors to develop hypotheses and conceptual framework of the study. There are many studies done in MIS discussed as follows:-

Yusuf Munirat et al., (2014); the study was conducted in Abuja, North-Central Nigeria with the title of "The Impact of Management Information System (MIS) on the Performance of Business Organization in Nigeria" to examine the impact of Management Information System on corporate performance. The data collected from randomly selected five government areas was analyzed by using non-parametric simple percentage and Z-test statistical technique employed to test hypothesis. Further the study found that the performance of business organization influenced by lack of management skill which reduce both effective MIS performance and organizations market competition ability.

Khresat, (2015); the main aim of the study was examining the relationship between management information system and organizational performance telecommunication

companies of Jordan. The study used the data collected from 100 employees of 10 branches of telecommunication companies. The study result shows that employees of telecommunication companies have positive attitude on MIS and they use MIS in work place. Finally, the study concludes that the telecommunication companies of Jordan were fully depending on MIS and found statistically significant relationship between MIS and organization performance.

Young-Harry _et al._, (2018); The study conducted to examine the relationship between management information system and organizational performance of Seven Up bottling company in Aba and Port Harcourt. Based on Likert scale ranges from 1 to 5 questionnaires were distributed to the sample of 117 respondents from randomly chosen seven up company analyzed through descriptive statistics and Spearman's rank correlation. The study finding suggests that MIS and organizational performance has strong positive significant relationship between seven up bottling company and organizational performance.

Emmanuel, Mary , and Nkiru, (2019); the study aimed to examine the effect of management information system on organizational performance of in selected deposit money banks in south east Nigeria. Multiple linear regression analysis method was employed to analysis the data collected from 384 employees of seven selected banks in a study area. The result of analysis confirms that MIS has a significant effect on organizational performance of selected banks of south east Nigeria. Even the study recommended the selected banks of the study area to update MIS continuously and top management should support MIS to improve organizational performance.

Azeez and Yaakub, (2019a); the study was conducted in Iraq with the title of "Effect of MIS on organizational performance at Missan Oil Company."

A study aimed to examine the relationship between Management Information System (MIS) and organizational performance at Missan Oil Company. MIS indicators proposed by DeLone and McLane, 2003 such as information quality, system quality, service quality, user satisfaction, use of the system, and net benefit were used to

measure the MIS effect and the BSC model was used to measure organizational performance in terms of financial perspectives, internal perspectives, customer's perspectives, and learning and growth. Likert scale questioner was distributed to 250 respondents.

The study used a quantitative research method and SEM (structural equation model) to test the measurement and a study analyzed by AMOS 21 software. Six hypothesis questions were developed based on the ISS model of M&D 2003 to measure the relationship between MIS and organizational performance. The confirmatory factor analysis (CFA) was performed to test the overall validity of the model and Convergent validity was also tested by utilizing item loadings, average variance extracted (AVE), and composite reliabilities (CR) of the construct. All validities tests in an acceptable range of model validity.

Finally, the study indicated that information quality, user satisfaction, and net benefits positively influence organizational performance while system quality, service quality, use of system indicated a negative relationship with an organizational performance at Missan Oil Company.

Azeez and Yaakub, (2019b); the study was conducted in Iraq with the title "The impact of management information systems on organizational performance with total quality management as the mediator on organizational performance at Missan Oil Company." the main objective of the study was investigating the relationship of MIS & organizational performance along with mediating role of TQM at Missan Oil Company. The study used six MIS indicators such as system quality, information quality, service quality, intention to use (use), user satisfaction, and net benefit with mediating of TQM and organizational performance was measured by the BSC model.

The study used a quantitative research method and SEM (structural equation model) to test the measurement and a study analyzed by AMOS 21 software.

Finally, the study came up with a finding of independent variables such as information quality, user satisfaction & net benefit had directly linked with the organizational

performance of the Oil Company meanwhile TQM mediates with all of the independent variables except for service quality.

2.3. Conceptual Framework of the Study

According to Yusuf Munirat et al.,(2014), MIS enhances good communication among workers, record and store information, disseminate gathered information throughout the institution, reduce expenses incurred for manual activities and support the organization's strategic goal by showing the direction.

It is known that the concept of MIS is important to the organization, but the only thing we have to be aware of is how MIS affects organizational performance whether it is positively or negatively that is the reason why most of the researchers of IS deal with it. Urbach &,Müller, (2012) suggested that to understand the effect of MIS in an organization it is better to use the information system success model proposed by (DeLone and McLean, 2003).

This study attempted to study the effect of MIS on organizational performance of CBE, Hossana branch with six dimensions provided by DeLone and McLane (2003) such as information quality, system quality, service quality, user satisfaction, system use, and net benefits.

The study used the Balanced Score Card (BSC) model which includes four components that are discussed in detail in the theoretical part; those are financial perspectives (FP), customer's perspectives (CP), internal perspectives (IP), and Learning and growth (L&G) , Robert, and Norton, (1992) to measure the organizational performance of CBE, Hossana town.

The dependent variable for this study was organizational performance (FP, CP, IP &L&G), and the independent variable was MIS (information quality, system quality, service quality, user satisfaction, system use, and net benefits).
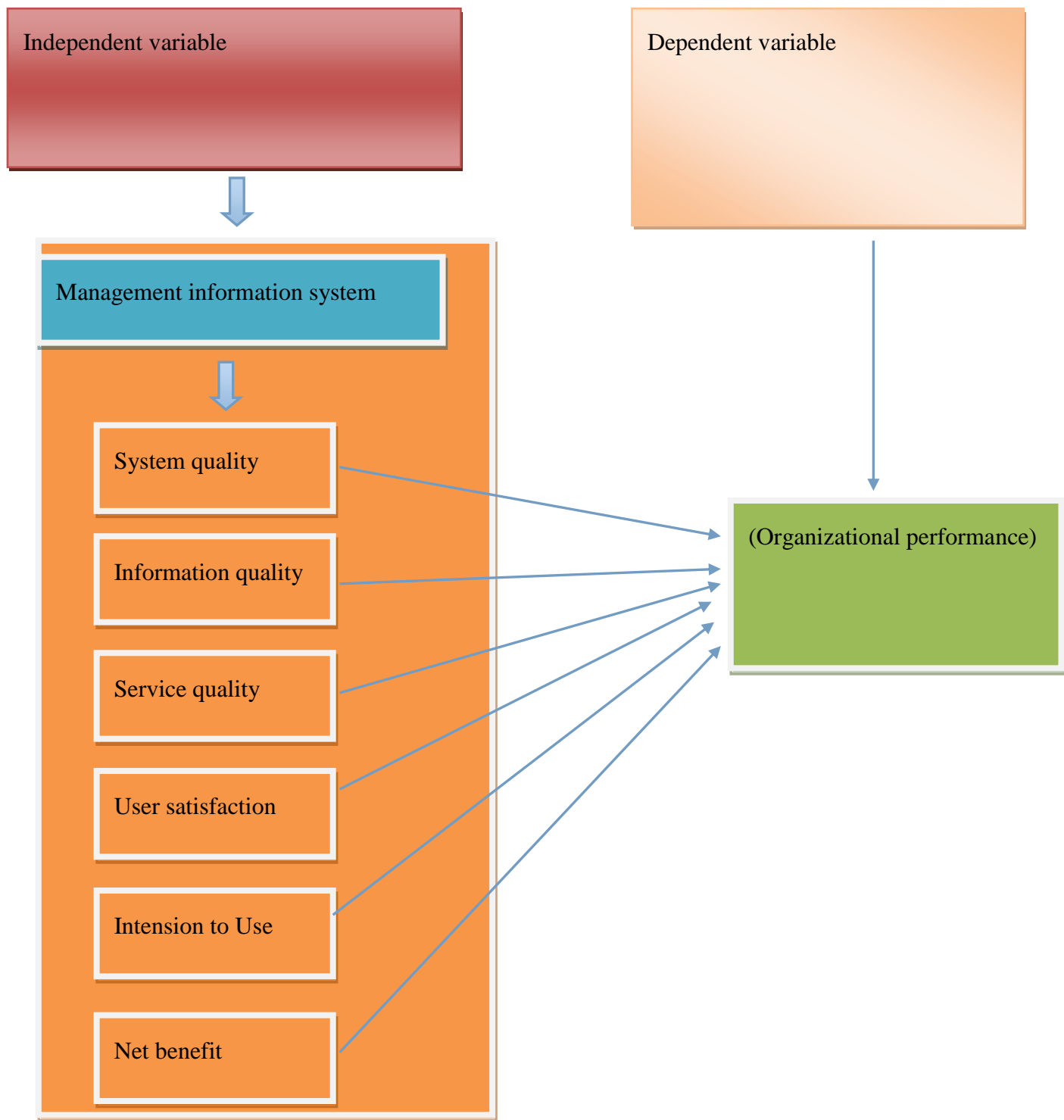
Figure2.1: conceptual frame work of the study

Source : Azeez ansd Yaakub, (2019a) & Azeez and Yaakub, (2019b)

CHAPTER THREE
RESEARCH METHODOLOGY

Outline of the research methodology includes- Research approach and design, data source and collection method, validity and reliability of the study, the target population of the study, sampling technique and sample size, method of data analysis, model specification, and description of study variable going to discuss.

3.1. Research design

Research design is the overall plan for combining conceptual research problems with relevant empirical research (Tesfaye, 2018).

The purpose of this study was to examine the effect of the Management Information System on the Organizational performance of CBE, Hossana town. This study used both descriptive and explanatory research design to examine the effects of MIS and describe what effect does MIS on the organizational performance of CBE, Hossana town.

The explanatory research design offers a modern framework that goes beyond the traditional descriptive and explorative case study approaches, allowing cases to be used more systematically in research to fail to reject or reject hypotheses and construct theoretical models (Fisher and Ziviani, 2004). Explanatory research design helps to examine the cause and effect relationship between dependent and independent variables. In this study, an explanatory research design was used to test six developed hypotheses whether it fails to be rejected or rejected, and a kind of relationship among independent and dependent variables. Descriptive studies can be purely descriptive, or they can be descriptive comparative to describe and compare naturally occurring groups, such as gender, education, or age groups. Further, it focuses on describing people, events, or things in their natural setting to which the researcher does not change any of the variables; instead, he or she simply describes the sample and/or variables, (Siedlecki, 2020).

The quantitative approach focuses on gathering new data from a broad population under the issue and analyzing the data which focuses on the goal and measures it through actions and opinions, which aids the researcher in describing the results, (Rahi, 2017). In this regard, the study used questioner as the tool to collect data from respondents.

3.2. Data source and collection tool

3.2.1. Data source

The study used primary sources. The primary source was obtained from employees of the commercial bank of Ethiopia of Hossana town.

3.2.2.Data collection tool

This study used questioner to collect the data to achieve the desired objective of the study. A five-point Likert scale questioner was used and distributed to respondents (employees) of the commercial bank of Ethiopia, Hossana town. A five-point Likert scale questioner was used for the accomplishment of this study because it is important in reducing confusion during questioner filling and it is easy for a researcher to analyze the research once the questioner is returned, (Rahi, 2017).The scale ranges from strongly disagree to strongly agree. 1, stands for strongly disagree, 2, stands for disagree, 3, stands for neutral, 4, stands for agree, and 5 stands for strongly agree. The questioner used in this study has three parts. Part one questioner about respondents' demographic information, part two questioners about MIS dimensions and the last part are about a questioner on organizational performance.

The study adopted 24 Questionnaires of MIS indicators from, Azeez and Yaakub, (2019a) & Azeez and Yaakub, (2019b) and 12 questionnaires of organizational performance adopted from, Mafini and Pooe, (2013) ,and (Blackmon, 2008).

At the end questioner was distributed to each 10 CBE. Hossana town based on their sample frame identified.

3.3. validity and Reliability of the instrument

3.3.1. Validity of the instrument

Validity is concerned with whether the researcher is studying the phenomena he claims to be researching or not. Validity is compromised if the researcher's research strategy is unintentionally more or less than the reported phenomena (McKinnon, 1988).

Accordingly, the research instruments used in this study were based on the review of related literature and then reviewed by advisors; senior colleagues, and peers to its validity.

This study adopted instruments from (Azeez and Yaakub, 2019a; Azeez and Yaakub, 2019b; Mafini and Pooe, 2013; and Blackmon, 2008) to measure MIS indicators and organization performance based on the literature evidence

3.3.2 Reliability of the instrument

According to Wei, (2018), Reliability reveals how bias-free it is, and so ensures consistent measurement across time and the various elements in the instruments. This study used the Cronbach alpha method to measure the reliability (internal consistency) of the data collection instruments. And as noted by, Spiliotopoulou, (2009) the researchers (Bland & Altman,1997) claimed that the outcome measure's internal consistency was acceptable to meet the standard of 0.70, which is normally used to assess acceptable reliability. Accordingly, the Cronbach alpha value for all variables used in this study was above o.7 as indicated in table 3.3, which shows the acceptable value according to most of the works of literature.

Table 3. 1: Reliability Statistics			
Construct	Variables	Cronbach Alpha	Number of items
MIS indicators(independent variables)	System quality	.819	4
	Information quality	.746	4
	Service quality	.764	4
	Intension to use	.801	4
	User satisfaction	.776	4
	Net benefit	.756	4
Dependent variable (Organization performance)	Financial perspectives	.780	3
	Customers perspectives	.88	3
	Internal process perspectives	.75	3
	Employee learning and growth	.80	3

Source: survey questioner, 2021

3.4. Population of the study

The target population of the study was employees of the commercial bank of Ethiopia, Hossana town. Currently, 10 CBE branches are operating in Hossana town which has 255 employees.

No	Branch name	Number of employees	Percentages of employees	Branch Grade
	Table 3.2 : Study population and branch Grade of banks			
1	Hossana	47	18.43%	4
2	Wachamo	43	17%	3
3	Bobecho	38	15%	3
4	Batena	32	12.55%	3
5	Seche Duna	28	11%	2
6	Selme	18	7%	2
7	GofarMeda	13	5%	1
8	Negest Eleni	11	4%	1
9	Ambecho Godea	14	5.5%	1
10	Aekmura	11	4%	1
	Total	255	100	-

Source: CBE, Hossana town, 2021

3.5. Sample design

Sample design refers to the methods that are used in selecting a sample from the population and imply techniques and formulas to draw a sample from the total population of the study area (Trotter, 2012).

3.5.1. Sampling technique

All 10 CBE branches operating at Hossana town were selected to make the data more accurate and to give equal chances for all CBE branches at Hossana town.

The study was used a systematic sampling technique to which assures that each unit has an equal chance of being included in the sample to which the first unit is chosen using random numbers that are chosen automatically according to a specified pattern (Shalabh, 2006) . To give equal chances for all employees of the bank branches of the study area and because of the homogeneity nature among CBE branches, a systematic

sampling method was used. From 10 branches of CBE, Hossana town the study used the sample from each branch based sample proportion by taking every K^{th} element from each branch.

$$K = N/n$$

3.5.2. Sample size

The total population of the study was 255, which includes all employees from 10 bank branches.

Sample size determination for this study was done by using Yamane (1967) formula to distribute the population.

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

This formula was used to calculate the sample sizes in this study in the assumption that a 95% confidence level, and e = 5%. Where n is the sample size, N is the population size, and e is the level of precision (or the acceptable sampling error). Based on this simplified formula, the sample size "n" is determined as follows: Population size (N) = 255, Sampling error (e) = 5% = 0.05, hence the sample size n is determined as:

$$n = \frac{N}{1+N\,(e)^2} = \frac{255}{1+255(0.05)^2} = \frac{255}{1.6375} = 156$$

The sample proportion for each branch of the CBE, Hossana town identified based on the following formula:-

$$n_i = \frac{n*Ni}{N}$$

Where

n_i : stands for a sample size of each bank branches.

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n: stands for the overall sample size obtained by the Yamane formula.

Ni: stands for the total population of each branch bank.

Based on the above formula, the following sample size proportion was derived: -

<div align="center">Table3.3: Sample frame of the study</div>

No	Branch name	Number of employees	Proportion of sample Size
1	Hossana	47	29
2	Wachamo	43	26
3	Bobecho	38	23
4	Batena	32	20
5	Seche Duna	28	17
6	Selmea	18	10
7	GofarMeda	13	8
8	Ngest Eleni	11	7
9	Ambecho Godea	14	9
10	Aekmura	11	7
	Total	255	156

<div align="center">Source: - CBE, Hossana town, 2021</div>

3.6. Method of data analysis

The study was conducted by using both descriptive and inferential statistics. Descriptive statistics used to describe demographic information and responses of respondents through frequency, means, and standard deviation. Inferential statistics usually a means of survey research where a sample of a population is studied to determine its characteristics, and it is then inferred that the population has the same characteristics (Chauhan, p . 15, 2012). In this study, it was used to inference the effects of MIS indicators on organizational performance through the support of Pearson correlation, linear regression model, and the data were analyzed by statistical package for social science (SPSS v.23).

Linear regression analysis was used to test the statistical significance of the relationship that exists between the independent and dependent variables.

Kraemer and Blasey, (2017) state the importance of linear regression analysis as it is used to determining the strength of the relationship between the dependent variable and independent variables. Also, it used to determine how a one-unit change in the independent variable affects the dependent variable. In this study linear regression analysis was used to determine the amount of percent that dependent variable (organizational performance) is explained by independent variable and to identify the relationship between organizational performance and MIS indicators was significant or not.

Pearson Correlation was used to measure the association between the MIS indicators and organizational performance through testing whether the relationship was positive or negative or strong, moderate or weak.

3.7. Model specification

Linear regression analysis is a general system for examining the relationship of a collection of independent variables to a single dependent, (Aiken et al., 2012). It enables to explain the dependent variable by a linear combination of more than two explanatory or independent variables, (Park et al., 2018). So, it is better to work with multiple linear regression analysis to determine the degree of the prediction and control to examine the relevant factors and relational expression can be used to predict and control another dependent variable by the operation of one or more variables, (Wei, 2018).

The study used multiple linear regression analysis to examine the effect of MIS (Information quality, service quality, system use, system quality, user satisfaction, and net benefits) on organizational performance of CBE, Hossana Town.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \dots + \epsilon_i \text{ for } i = 1, 2 \dots n.$$

Where;

Y: is dependent variable (Organizational performance),

β_0**:** is constant

β_n: is the coefficient of independent variables,

X_n: is independent variable (information quality, system quality, service quality, system use, user satisfaction, and net benefit).

ϵ_i: is an error term.

ϵ_i can be described as;

$$\epsilon_i = Y - \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n$$

3.8. Description of study variables

Dependent variable

The dependent variable of the study is organizational performance.

Organizational performance is overall performance measured based on performance resources, output performance, and flexibility performance (Al-taai, 2021) .

BSC model measures organizational performance based on four perspectives such as - Financial perspective, Customer perspective, Internal-business-processes perspective, Internal-business-processes perspective, and Learning and growth perspective.

According to, (Blackmon, 2008 ; Mafini and Pooe, 2013) :-

Financial perspective—measured based on effective cost control, efficient resource utilization, and good financial performance.

Customer perspective— encompasses such measures as customers' expectations, customers' satisfaction and, loyalty.

Internal-business-processes perspective—it is measured by working culture, service delivery process, and flow of communication.

Learning and growth perspective— it is measured by employees' sense of task accomplishment, optimal decisions made by employees, and teamwork among employees resulting from MIS.

<div align="center">

Independent variable

</div>

The Independent variable used in this study was the management information system (MIS).

The independent variable is measured by MIS indicators proposed by (DeLone and McLean, 2003) such as - information quality, service quality, system quality, and user satisfaction, use of the system, and net benefits. According to (Azeez and Yaakub, 2019a; Azeez and Yaakub, 2019b):-

System quality is assessed in terms of ease to use, functionality, availability, and security of the organization MIS.

Service quality is measured by the system response time, service to use, influence of service on the entire system, and technical support of specialists.

User satisfaction: - It is measured by employees' productivity, system efficiency, system flexibility, accuracy, and system objectivity.

Information quality: - is measured with dimensions of information understandability and usefulness, timely use, updated and accuracy of information from the organization system.

Intention to use (use):- determined by the frequency of use, interest to continue with the system, resources support MIS, and increment in the number of users.

Net benefit: - is measured based on the time needed to accomplish tasks by employees, employees' job performance, and effectiveness and organization productivity.

3.9. Ethical consideration

Many ethical considerations must be taken into account when conducting research. From those many ethical considerations, the first and the most is the data collection for this study was done by permission given by the college of business and economics research committee. All participants in this study were appropriately informed about the purpose of the research and the data was collected based on their willingness and permission without any enforcement and hidden information. In addition to this, the collected data were analyzed based on its collection result rather than personalizing the result for achieving the subjective goal of the researcher. Finally, reviewed articles, journals, magazines, books, thesis, and other published and unpublished documents were cited as per request of scientific study, and plagiarism issue for this study was checked before submission of the document.

CHAPTER FOUR

DATA ANALYSIS AND DICUSSION OF THE RESULTS

4.1. Introduction

This chapter deals with the description of the analysis, and interpretation of the data based on the information obtained from the questionnaires and documents. Most relevant data for the study were obtained through questionnaires distributed to employees of the commercial bank of Ethiopia Hossana.

The researcher distributed a total of 156 questionnaires and out of which 136 questionnaires were returned with a return rate of 87%. Because of various reasons, the rest 20 questionnaires (19%) were not returned. The data presentation and analysis were based on responses obtained from the employees of CBE, Hossana town through questionnaires. After the presentation of the demographic characteristics of the respondents, the study deals with the presentation, analysis, and interpretation of data collected from the questionnaires.

Collected data through questionnaires were analyzed with the Statistical Package for Social Science (SPSS v.23). The responses of employees on all given variables other than the demographic variables were measured based on the five-point Likert scale with 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4= Agree, and 5= Strongly Agree. The demographic variables such as gender, age, the field of specialization, educational background, organizational position, and years of experience were measured based on the following techniques using SPSS software. In the case of gender, values were provided as Male=1 and Female =2. For the age groups, values were provided as age ranges <30 =1, age ranges (31-36) =2, age ranges (37-42) =3, age ranges (43-48) =4 and age ranges >48 =5. For field of specialization, values were provided as Accounting & Finance =1, Banking & Finance =2, Management =3, = Business Administration 4, Marketing management = 5, Economics= 6 and other than

these fields =7. For Educational Background, values were provided as Diploma =1, First university Degree =2, Masters Degree =3, and Doctorate Degree =4. For organizational positions values were provided manager =1, officer =2, Auditor =3, other = 4 other than these organizational positions.

For experience in organizations values were provided as years of experience ranges from <3yrs = 1, 3-6yrs = 2, 6-9yrs = 3, 9-12yrs = 4, and above 12 yrs = 5.

4.2. Demographic characteristics of respondents

The demographic information discussed in this part is about employees of commercial bank of Ethiopia Hossana town in terms of sex, age, the field of specialization, educational background, positions in the organization, and yrs of experience in a current organization.

4.2.1. Demographic variables analysis

4.2.1.1. Gender of respondents
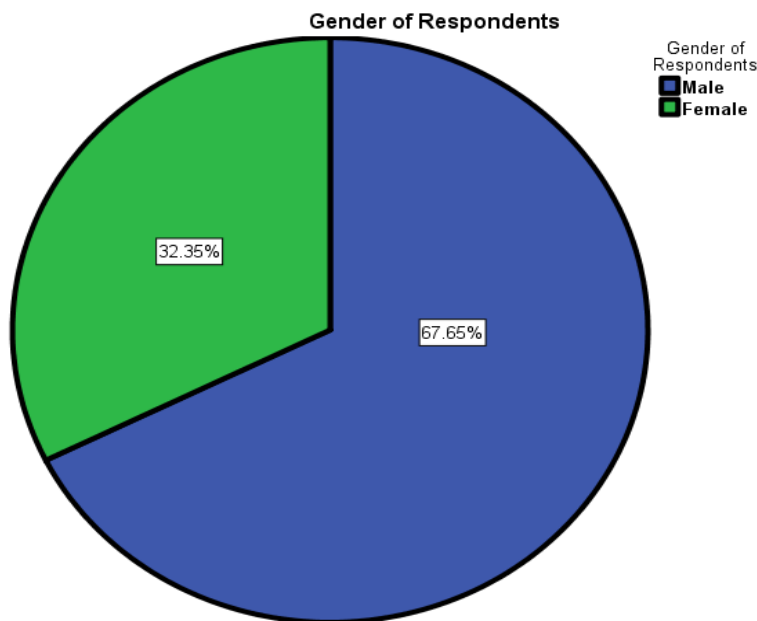
Figure4.1: Gender of Respondents

Source: survey questioner, 2021

According to Figure 4.1, from total respondents, 67.6% of the respondents were males while 32.4% were females. This indicates that the commercial bank of Ethiopia, Hossana town, was dominated by males' employees.

4.2.1.2. Respondents Age group
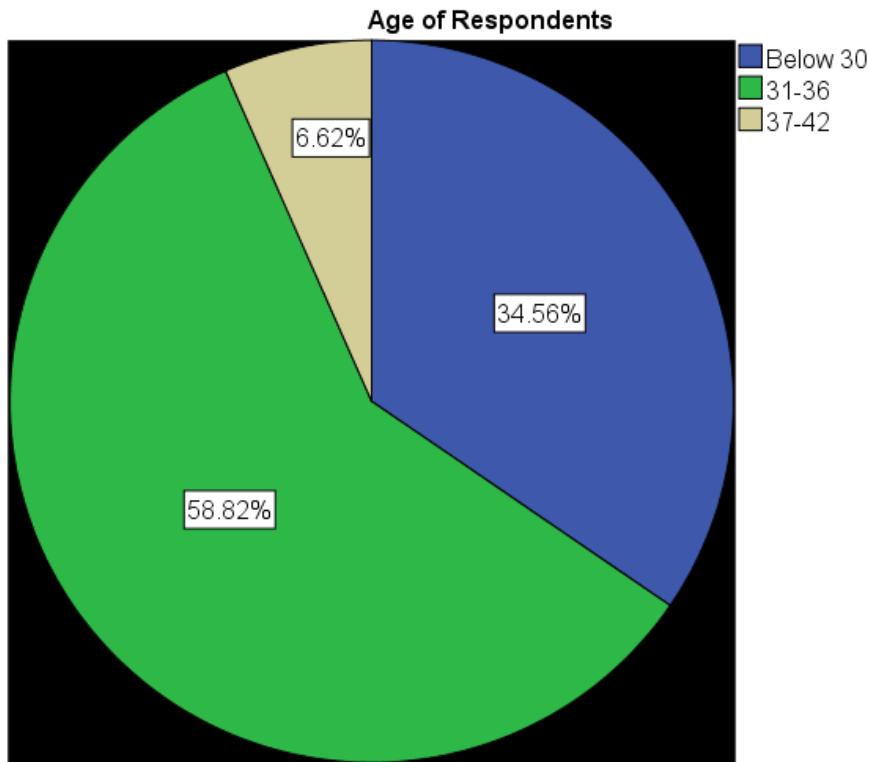
Figure 2.2: Respondents age group

Source: survey questioner, 2021

As depicted from figure 4.2, the respondents 34.6% were in the age of Below 30, 58.8% in the age of 31-36 and 6.6% in the age of 37- 42. This shows that majority of respondents (employees) in CBE were aged between 31-36 years old followed by below 30 years old. This shows that most of the employees were at the age which highly motivated to work and adapting management information system with more interaction to computers system.

4.2.1.3. Respondents field of Specialization
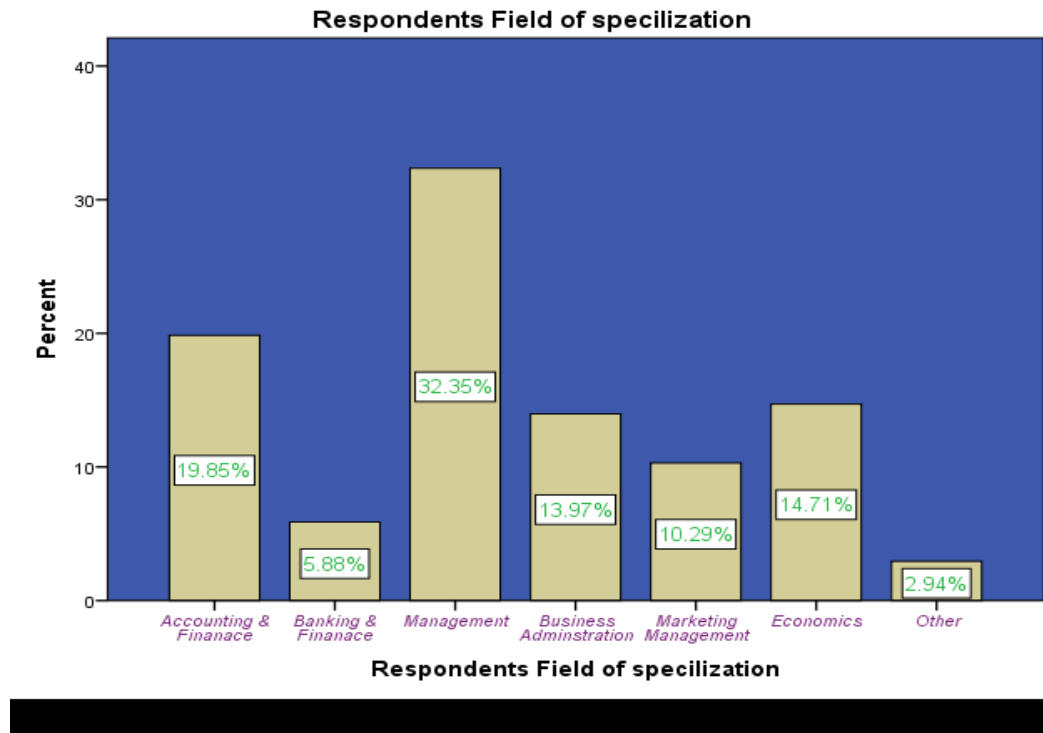
Figure 4.3: Respondents field of specialization

Source: Survey questioner, 2021

For the variable field of specialization as it is seen from figure 4.3, most of the employees of CBE, Hossana town were specialized with management 32.35% followed by Accounting holders 19.85%, Economics 14.71%, Business administration 13.97%, Banking & financing 5.88% and 2.94% of respondents replied on other option. This implies that the majority of employees of CBE, Hossana town were specialized in business-related fields.

4.2.1.4. Educational Background of Respondents

Educational_Background

Legend:
- First Unversity Degree (orange)
- Masters Degere (green)
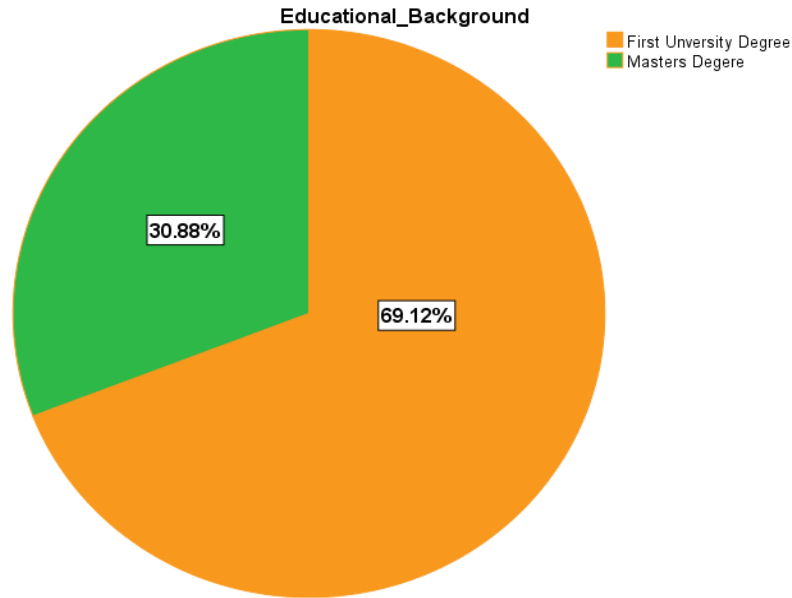
30.88%

69.12%

Figure 4.4: Respondents Educational Background

Source: survey questioner, 2021

As it is seen from figure 4.4 the educational background for the employees in CBE (Hossana town) shows that 69.12% and 30.88% of the respondents were holding academic qualifications of First University Degree and Masters Degree with different business-related fields of specialization respectively. This enhances the commercial bank of Ethiopia, Hossana town to reduce any system confusion because of knowledge incompatibility.

4.2.1.5. Respondents organizational position
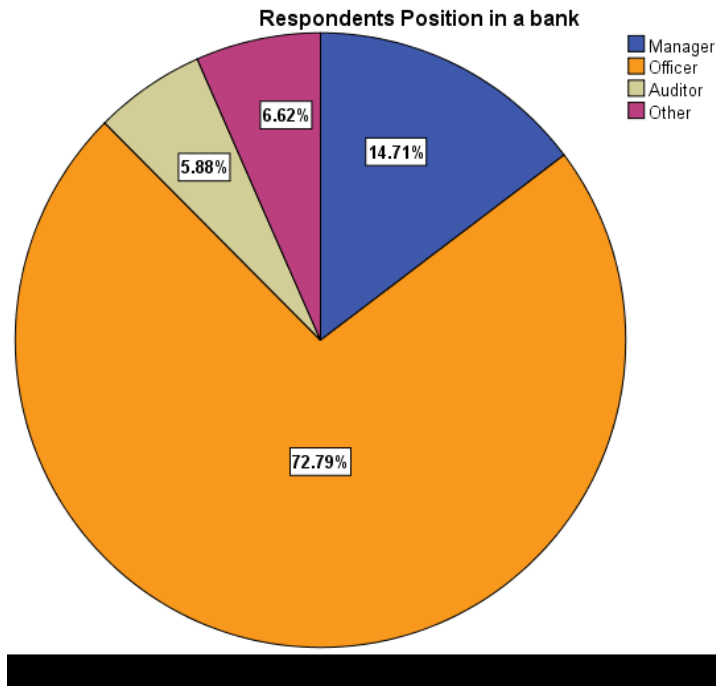
Figure 4.5: Respondents organizational position

Source: survey questioner, 2021

As depicted from figure 4.5 respondents' organizational position show that 72.79 %, 14.71%, & 5.88% of CBE, Hossana town employees were possessed officer, manager & auditor position in an organization. However, 6.62% were replied in "other" option that may they possess the position that not specified in this study demographic profile.

4.2.1.6 Respondents years of experience in the organization
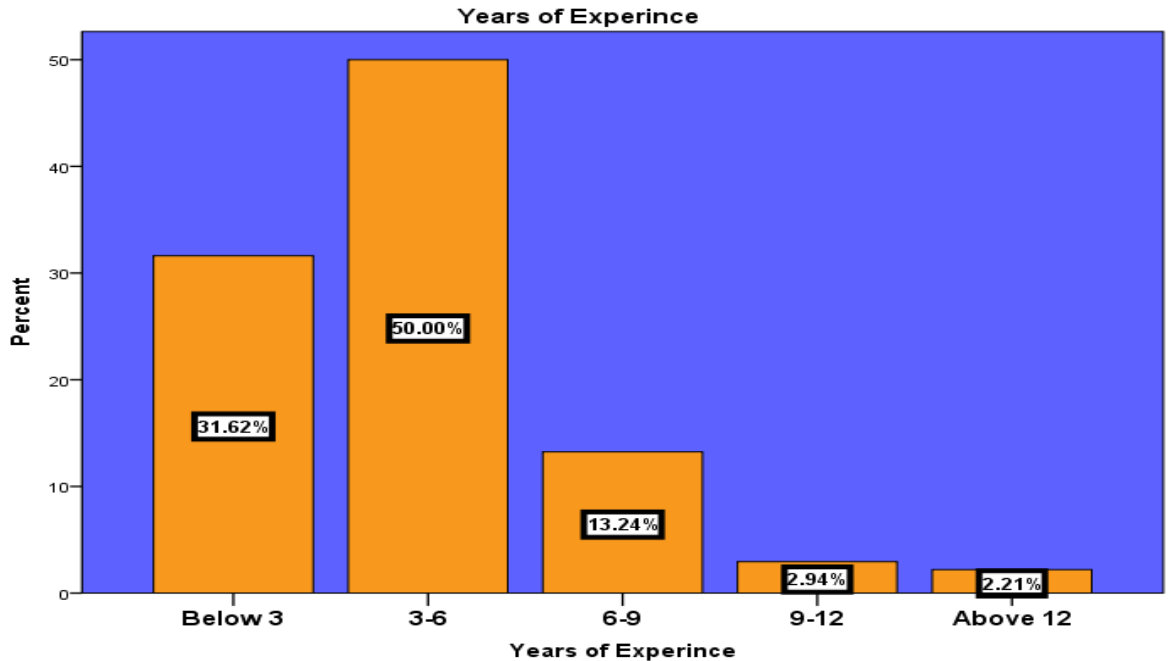
Figure 4.6: Respondents years of experience in the organization

Source: survey questioner, 2021

As indicated in figure 4.6 respondents years of experience in an organization show that 31.62 %, 50%, 13.24%, 2.94% & 2.21 % employees of CBE, Hossana town were an experience of below 3yr, 3-6yr, 6-9yr, 9-12yr and above 12 yr respectively stayed in the bank industry. This indicates that the half of employees of CBE Hossana town were with the experience ranges from 3-6 years, which is one of an important asset to the bank because more experienced employees' plays a great role in organizational performance.

4.3. The current Organizational performance of CBE

Organizational performance is a concept that measures the overall organization in terms of financial, customer perspectives, employee learning perspectives, and internal business process Perspectives as was discussed in the literature part of the study. Based on these there were 12 questioners were distributed to respondents based on the five-point Likert scale model with 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree.

Organizational performance analyzed and presented via Mean and Std. Deviation.

4.3.1. The current financial performance of commercial bank of Ethiopia

Table 4.1 : Mean and Std. Deviation table for financial perspectives			
	N	Mean	Std. Deviation
MIS help us to be more effective at cost control	136	4.14	.936
Utilization of MIS make financial performance of the organization is good	136	4.27	.821
Resources are managed efficiently well with help of MIS	136	4.30	.792

Source: - survey questioner, 2021

a. MIS help us to be more effective at cost control

Concerning the importance of MIS at cost controlling in CBE, table 4.1 shows that the values of mean, and standard deviation 4.14 &0.936 respectively. The Mean value (4.14) falls in between Agree (4) and Strongly Agree (5) which is approximate to the value of 5(agree). This indicates that most of the respondents for this question replied agree on an option with less than 1 std. deviation. This implies that currently, MIS helps CBE, to be effective at cost control. This result of the study was in line with, Ahmad, Hanini, and Oqaily, (2018) to which founds that MIS has significant effect in reducing service cost provided by bank.

b. Utilization of MIS make financial performance of the organization is good

Utilizing MIS makes the financial performance of the commercial bank of Ethiopia good indicated by 4.27, and 0.821mean and Std. Deviation respectively. The mean value (4.27) falls between 4 (agree) and 5(strongly agree) that approximate to the value of 4 (agree). So, the mean value indicates that the majority of respondents' replies agree to this question as it is seen from table 4.1 with 0.821 deviations. From this, it can be sure that the utilization of MIS brings Commercial bank of Ethiopia makes its financial performance well.

c. Resources are managed efficiently well with help of MIS

The existence of MIS enables CBE to manage resources efficiently indicated with 4.30, and 0.792 mean and Std. Deviation respectively. The mean value of 4.30 falls between 4 (agree) and 5 (strongly agree) which approximate to the mean value of 4 because it is far from 5 by 70%. Further, this mean value confirms that the majority of respondents were replied to agree with option for this question with 0.792 deviations from the mean. This indicates that most of the respondents replied agree (4) that confirm resources are managed well with the existing MIS in the commercial bank of Ethiopia.

Generally, with regards to financial perspectives the Management information system helps the commercial bank of Ethiopia, with effective cost control, good financial performance, and efficient resource management is seen from the data analyzed in descriptive statistics with a mean value of 4.14, 4.27 &4.30 with no more than one (1) std. deviation. This indicates that the overall financial performance of the commercial bank of Ethiopia is significantly relying on the existing management information system.

4.3.2. The current customers' perspectives of commercial bank of Ethiopia

Table 4.2 :Mean and Std. Deviation table for customers perspectives			
	N	Mean	Std. Deviation
MIS enable the organization consistently to meet the expectations of clients	136	4.26	.750
Most clients are satisfied in my organization due to MIS	136	3.67	1.199
Most clients are loyal to the organization from the service that system provide them	136	4.04	1.046

Source: survey questioner, 2021

a. MIS enables the organization consistently to meet the expectations of clients

Regarding the effects of MIS in meeting the expectation of customers, 136 employees of CBE Hossana town were replayed. Descriptive statistics value in table 4.2, shows

that a mean value of 4.26 & Std. Deviation of 0.750. A Mean value (4.26) falls in between agree (4) and strongly Agree (5), but it is near to agree on value which implies that most of the respondents replied agree with less than 1 Std. Deviation from the mean value. Hence, the existing MIS in the commercial bank of Ethiopia enables the organization to meet its customer expectation.

b. Most clients are satisfied in my organization due to MIS

Satisfying customers is a primary goal for any type of organization whether it is a private or governmental organization. And satisfying customers began with identifying the expectation of customers in regard to the services or products to deliver to them. Employees of CBE of Hossana town were asked to rank from 1-5 (strongly disagree – strongly agree) in regard to how MIS makes the organization satisfy its customers. According to table 4.2, descriptive data implies 3.67, and 1.199 mean, and Std. Deviation respectively. The mean value is approximately 4 (agree) than neutral .On average most of the respondents replied that they agreed which confirms that because of MIS customers of CBE were satisfied significantly.

c. Most clients are loyal to the organization from the service that MIS provide them

Keeping customers being loyal is the primary success for performing the overall goal of the organization. This would be achieved when the expectations of customers meet with the organization's delivery quality prior to competitors. Respondents asked to answer this question, accordingly, descriptive data table 4.2 depicted shows 4.04, and 1.046 values of mean, and Std. Deviation respectively. The mean value of 4.04 implies that most of the respondents replied agree to this question, which proves customers of CBE are loyal as a result of providing service from carefully implemented MIS with 1.046 Std. Deviation from the mean value.

In frankly speaking the organization's performance is the direct replica of what invested in customer's relationship. Due to existing MIS, the commercial bank of Ethiopia consistently meets the expectations of customers consistently, satisfy customers and

make them loyal which significant with a mean value of 4.26, 3.67, and 4.04 respectively.

4.3.3.The current Internal process perspectives of commercial bank of Ethiopia

Table 4.3 :Mean and Std. Deviation table for internal process perspectives

	N	Mean	Std. Deviation
MIS improve working culture of the organization	136	4.01	1.106
MIS improve our service delivery Processes	136	4.19	.882
MIS disseminate Communication flows easily throughout the organization	136	4.65	.477

Source: survey questioner, 2021

a. MIS improve working culture of the organization

With regard to MIS in improving the working culture of the organization CBE, as it is seen from table 4.3 most of the respondents were replied agree with the mean value (4.01). Further, value 1.106 shows the amount of deviation from the mean value. This implies the current working culture of CBE is improved because of the existing MIS.

b. MIS improve our service delivery Processes

As it is observed from table 4.3, most of the respondents replied agree in regard to MIS improve the service delivery process of the organization with values of 4.19 &0.882 respectively mean and std. Deviation. The mean value (4.19) is near to 4(agree), which implies that most of the respondents for this question replied agree with less than 1 std. Deviation from the mean. So this confirms that MIS improves the service delivery process of the commercial bank of Ethiopia as is seen from descriptive output table 4.3.

c. MIS disseminate Communication flows easily throughout the organization

Table 4.3 depicted the analysis for MIS disseminates Communication flows easily throughout the organization in the commercial bank of Ethiopia. More computed descriptive statistics result provides 4.65 & 0.477 mean and std. deviation respectively.

From these given figures we realize that the Mean value (4.65) exists between 4(Agree) and 5(strongly agree), but it is approximate 5(strongly agree). Further, values of std. deviation 0.477 shows that the majority of respondents replied to these questions close to the mean value. It is easy to say MIS disseminates communication flows easily through the organization in CBE significantly.

According to the analyzed data as it is seen in the table above reasonable MIS improves internal working culture, service delivery process, and flow of communication with a mean value of 4.01,4.19 & 4.65 with not more than one deviation from the mean except for working culture in commercial bank of Ethiopia.

4.3.4.The current Employee learning and growth of commercial bank of Ethiopia

Table 4.4: Mean and Std. Deviation table for Employee learning & growth			
	N	Mean	Std. Deviation
MIS make me develop a sense of my task accomplishment	136	4.41	.509
MIS allow me to make optimal decisions to accomplish my performance objectives	136	4.35	.625
MIS enhances good teamwork in the organization	136	2.23	.825

Source: survey questioner, 2021

a. MIS make me develop a sense of my task accomplishment

Regarding a sense of task accomplishment through MIS currently in the commercial bank of Ethiopia, most of the respondents were replied to agree with the mean value of 4.41. The Mean value (4.41) exists between 4(Agree) and 5(strongly agree), but it is approximate to 4(agree). Further, value of std. deviation 0.509 shows that majority of respondents were replied very close to the average mean value. From these descriptive statistics one decides that in current CBE, MIS insists employees to develop a sense of task accomplishment in day to day activities of their operation.

b. MIS allow me to make optimal decisions to accomplish my performance objectives

MIS allow employees to make an optimal decision against organizational objectives, the descriptive table above shows values of 4.35 & 0.625 mean and std. Deviation respectively. Further, the mean value (4.35) is approximate to agree (4) than strongly agree (5) with less than 1deviation from the mean value. It suggests that MIS enables employees of the commercial bank of Ethiopia to make an optimal decision to an objective performance designed by the organization.

c. MIS enhances good teamwork in the organization

The descriptive table above shows that MIS enhancing teamwork among employees of the organization with values of 2.23 & 0.825 mean and std. Deviation respectively. The mean value for this question is falls between 2(disagree) and 3 (neutral), but it is a further approach to 2(disagree) by 23% and far from 3(neutral) by 77%. With regard to enhancing teamwork in an organization, MIS is not accepted by a majority of respondents to this question with <1 deviation from the mean. This confirms there is no significant teamwork exists in CBE, with the implemented MIS.

Generally, in regard to employee learning and growth, employees are developing a sense of task accomplishment and they make the optimal decisions in the current CBE, Hossana town significantly at the mean value of 4.41 and 4.35. However, in regard to enhancing teamwork MIS is insignificant in the commercial bank of Ethiopia with a mean value of 2.23. So, currently in CBE, employees are accomplishing their tasks with higher initiation and good ability of decision-making tendency on their objective performance due to MIS, but there is no teamwork approach arising from MIS.

4.4.Management information system in current CBE

The independent variable for this study is MIS, which is indicated by six independent variables as; system quality, information quality, service quality, intention to use (using system), user satisfaction, and net benefits. Table 4.5 up to 4.10 demonstrates the descriptive statistics such as mean and std. Deviation for the independent variables

based on the five-point Likert scale model with 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5= strongly agree indicated below.

4.4.1. system quality

Table 4.5 : Mean and Std. Deviation table for system quality			
	N	Mean	Std. Deviation
MIS in my organization is easy to use	136	3.96	.914
The function of MIS in organization meet my requirements	136	3.83	1.152
MIS in my organization always available	136	3.32	.926
MIS in my organization is secure	136	4.25	.805

Source: survey questioner, 2021

a. MIS in my organization is easy to use

As represented in the above table 4.5, respondents replied between neutral and agree with 3.96 & 0.914 respectively Mean and Std. Deviation. The mean value (3.96) falls between 3(neutral) and 4 (agree). Further, the mean value is approximated to 4 by with less than 1deviation from the mean value. Generally, the mean value confirms that the majority of respondents agree on MIS that is easy to use significantly.

b. The function of MIS in organization meet my requirements

Regarding MIS in meeting employee's requirement in commercial bank of Ethiopia, most of the respondents were replied between neutral with 3.83 &1.152 respectively mean and Std. Deviation. The mean value is approximate 4 (agree) with a 1.152 standard deviation from the mean value. So, the mean value of 3.83 confirms that a majority of respondents (employees of CBE) replied agree. This confirms that the existing MIS function in the commercial bank of Ethiopia enables employees to meet day to day operation of the bank significantly.

c. MIS in my organization always available

Most of the respondents replied between neutral and agree with MIS always available in CBE with a mean value of 3.32. The mean value for this question falls between

3(neutral) and 4(Agree), but it is approximate to the value of 3 (neutral). Accordingly, the majority of respondents not agree in that MIS is always available in CBE.

d. MIS in my organization is secure

The security issue is a sensitive one for any organizational type regardless of their business objective than any time to which many cyber-attack cost governments, organizations, and individuals. The bank is one of the financial organizations that require considerable priority to make the system complex to illegal access by modifying itself per time world technology change.

As displayed in table 4.5, the mean value (4.25) falls between 4(agree) and 5(strongly agree) with 0.805deviations from the mean. Further, the mean value is approximate 4(agree) which confirms MIS in CBE is secure with the deviation of 0.805 indicates the responses did not vary from the mean value. Generally regards system quality the majority of respondents agree that the MIS in the commercial bank of Ethiopia is easy for them, functional in meeting their requirements, and secure with a mean value of 3.96, 3.83, and 4.25 respectively. However, MIS in CBE is not always available as needed which indicated by mean value of 3.32. Hence, currently, MIS in CBE is easy to use, functional, and secure however it is not available whenever it is needed as it is supported by descriptive statistics.

4.4.2. Information quality

Table 4.6: Mean and Std. Deviation table for information quality			
	N	Mean	Std. Deviation
MIS provides me information in a useful and understandable format	136	4.40	.491
MIS in my organization provides information timely to use	136	4.60	.506
MIS provides me up to dated information	136	4.43	.747
MIS in my organization provides system users with accurate information	136	4.53	.530

a. MIS provides me information in a useful and understandable format

As indicated in Table 4.6 above, the descriptive statistics for this question provide 4.40 &0.491mean and Std. Deviation respectively. Further, the mean value is approximate 4(agree). More the mean value confirms that a majority of respondents replied agree to this question implies information provided by MIS in a commercial bank of Ethiopia, is useful and understandable. Further, the value of Std. Deviation (0.491) shows a majority of respondents replied very close to the mean value.

b. MIS in my organization provides information timely to use

The function of a system is to provide the required information as much as possible needed for decision-making purposes as fast in a timely manner. Table 4.6 shows descriptive values of 4.60 & 0.506 mean and Std. Deviation respectively. The mean value (4.60) falls between 4 (Agree) and 5 (Strongly agree). And this value is approximately 5(strongly agree) and it conveys that majority of respondents (employees of CBE) were replied that strongly agree to this question with close to mean value of 0.506 std. Deviation. Hence, MIS currently in CBE provides information when needed in a time for a performing expected service delivery is significant.

c. MIS provides me up-to-dated information

Based on the data depicted in table 4.6, the descriptive output shows 4.43 & 0.747 mean and standard deviation presented respectively. The mean value for this question falls between 4 (agree) and 5 (strongly agree) but, it is approximate to4 (agree). So, this implies that the majority of respondents replied to agree with less than 1 deviation from the mean. Generally, one to be sure is that MIS provides up-to-date information currently in the commercial bank of Ethiopia for its workers as per their request for day-to-day operation.

d. MIS in my organization provides system users with accurate information

The information must be accurate enough for the purpose for which it will be used. Unless the information is accurate it is too difficult for those who under-take in using

such a system. Respondents asked to respond whether MIS provide them accurate information during their working time by ranking with 5 point Likert scales ranging from strongly disagree to strongly agree with a mean value of 4.53 and Std. Deviation of 0.530 as it is seen from the above table 4.6. More the mean value (4.53) approximate to 5 (strongly agree). Hence, the majority of respondents replied strongly agree which indicates currently MIS provides accurate information for employees of CBE with very close deviation from the mean.

With regard to information quality, the majority of respondents of CBE agreed in MIS provide information in a useful and understandable manner, timely to use, updated, and accurate information with the mean value of 4.40, 4.60, 4.43 &4.53 respectively. Hence, the current MIS in CBE provides information in a useful and understandable manner, timely to use, updated and accurate information for its users is significant in CBE with a mean value greater than 4.

4.4. 3. Service quality

Table 4.7 : Mean and Std. Deviation table for service quality			
	N	Mean	Std. Deviation
The response time of MIS in my organization is good	136	4.11	.924
MIS in my organization provides well-mannered services for use	136	4.04	.965
The service quality of MIS in my organization affects the extent to which the system can be used	136	4.38	.826
My organization has MIS specialists to address technical problems and emergencies if any	136	2.40	1.157

Source: - survey questioner, 2021

a. The response time of MIS in my organization is good

For service-providing organizations, it is advisable for a system to respond with minimum time as much as needed. Descriptive statistics value in the above table shows

a 4.11 & 0.924 mean and deviation respectively. More the mean value is approximate to 5(strongly). So, this indicates that the majority of respondents replied that agree for which the response time of MIS in the commercial bank of Ethiopia is good with less than 1 deviation from the mean.

b. MIS in my organization provides well-mannered services for users

As it is seen from table 4.7 the value of the descriptive statistics portrayed that the value 4.04 and 0.965 mean and Std. Deviation respectively. More the mean value is approximated to 4, which stands for the value of agreeing to option and it represents that the majority of respondents agree in MIS provides well-mannered service to system users with less than 1 deviation from the mean.

c. The service quality of MIS in my organization affects the extent to which the system can be used

Regarding service quality, MIS affecting the entire system of the organization a descriptive statistics value shows values of 4.38 & 0.826 mean and std. Deviation respectively. Further, the mean value is approximate 4. Accordingly, for this question majority of respondents replied agree by accepting the existing service quality of MIS affects the entire system of the organization with 0.826 deviations from the mean.

d. My organization has MIS specialists to address technical problems and emergencies if any

Regarding existing MIS, specialists to address a technical problem in the system in CBE table 4.7 above depicted that the mean value of 2.40 and std. Deviation of 1.157. The mean value states that the majority of respondents who replied to this question disagree, which confirms there is the problem of technical assistants in the time when the system breaks in the commercial bank of Ethiopia, Hossana town.

Generally, service quality With regard to good response time, providing service to use, and service quality has an effect on the entire organization system the majority of employees replied agree with a mean value of 4.11, 4.04 & 4.38 respectively. This in line with the finding of , Ahmad, Hanini, and Oqaily, (2018) who found MIS improve

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service quality of bank. However, the majority of respondents replied disagree in that the bank has MIS technical specialists to fix any technical problems with a mean value of 2.40. Hence, MIS in current CBE, Hossana town has good response time, provide service to use and the service quality has an effect on entire organizational system significantly but the survey questioner statistics output conveys there is the inadequacy of technical specialists in MIS who fix when there is the system down.

4.4.4. Intension to use

Table 4.8: Mean and Std. Deviation table for intention to use			
	N	Mean	Std. Deviation
I often use the MIS applied in my organization	136	4.56	.541
I am very interested in the process of continuing to use the MIS in my organization have helped its success	136	4.23	.471
The human and material resources supporting the MIS in my organization have helped its success	136	3.26	1.361
The number of participants in the use of MIS in my organization has been constantly increased since its beginning	136	4.37	.486

Source: - survey questioner, 2021

a. I often use the MIS applied in my organization

As observed in table 4.8, the descriptive output 4.56 & 0.541 mean and std. Deviation. The mean value is approximate 5(strongly agree) which shows the majority of respondents replied strongly agree to this question with less than 0.5 deviation from the mean. It is easy to conclude that employees of the commercial bank of Ethiopia are often using MIS for their day-to-day operation.

b. I am very interested in the process of continuing to use the MIS in my organization have helped its success

According to table 4.8, respondents were asked to rank their interest in continuing using MIS in the commercial bank of Ethiopia. Statistical descriptive output data shows the mean, and standard deviation for this question 4.23 & 0.471 respectively. The mean value is approximate 4(agree) that implies the majority of respondents replied agree to this question. Further, standard deviation (0.471) for this question is less than 0.5, which indicates most of the respondents replied close to the mean value (4.23). Accordingly, all of the respondents were agreed and accepted that they are interested in using MIS in the commercial bank of Ethiopia. Therefore, employees of CBE are interested in using MIS significantly.

c. The human and material resources supporting the MIS in my organization have helped its success

As depicted in table 4.8, mean and std. Deviation 3.26 & 1.361 respectively. The mean value is approximate 3 (neutral) which indicates most of the respondents replied neutral more than 1 deviation from the mean. This shows that there is shortage of the human and material resources availability in the commercial bank of Ethiopia to support MIS.

d. The number of participants in the use of MIS in my organization has been constantly increased since its beginning.

Regarding the number of users increase to MIS in CBE as seen in table 4.8, with 4.37 & 0.486 mean and Std. Deviation presented respectively. The mean value of 4.37 indicates that the majority of respondents replied to agree. Further, the standard deviation value of 0.486 represents the majority of respondents who replied close to the mean value, which portrays that the number of system users for MIS in CBE is increasing since before significantly.

Hence, regarding the intention to use the majority of employees replied agree that they always using MIS, they have the interest to continue with MIS, and MIS users increase from time to time with a mean value of 4.56, 4.23 & 4.37 respectively with less than 0.5

deviations from the respective mean values. However, the majority of respondents replied neutral in that the bank has MIS has material and human resources to support MIS a mean value of 3.26. Hence, in current CBE, employees use MIS always to perform the given task, they are interested to continue using MIS, and the number of users increases from time to time. But the survey questioner statistics output conveys there is the shortage of the human and material resource to support MIS in current CBE.

4.4.5. User satisfaction

Table 4.9: Mean and Std. Deviation table for user satisfaction			
	N	Mean	Std. Deviation
Using MIS in my organization helps me to improve productivity	136	4.38	.488
The MIS in my organization is very efficient	136	3.70	1.013
The MIS in my organization is flexible enough	136	3.68	.885
I am satisfied with the accuracy and objectivity of my organization MIS	136	3.93	.772

Source: - survey questioner, 2021

a. Using MIS in my organization helps me to improve productivity

Regarding MIS improving the productivity of employees, a descriptive output value presented shows that mean and std. Deviation 4.38 & 0.488 respectively. The mean value confirms that the majority of respondents replied agree and the standard deviation value confirms most of the respondents replied close to the mean value with less than 0.5. Hence, the currently existing MIS in the commercial bank of Ethiopia helps employees to improve working productivity significantly.

b. The MIS in my organization is very efficient

In terms of efficiency MIS in the commercial bank of Ethiopia, the descriptive table 4.9 implies 3.70 & 1.013 mean and std. Deviation respectively. The mean value (3.70) is falls between neutral (3) and agree (4), but it is approximate to 4(agree). This mean

value confirms that majority of respondents are replied agree in that MIS is very efficient in CBE with more than 1 deviation from mean. Generally, the efficiency of MIS in the commercial bank of Ethiopia, it is accepted by a majority of respondents.

c. The MIS in my organization is flexible enough

As depicted in Table 4.9, descriptive statistics result shows the mean value of 3.68 and std. Deviation of 0.885.Further, the mean value indicates majority of respondents replied agree with less than 1 deviation from the mean. Hence, the current existing MIS in commercial bank of Ethiopia is flexible enough as seen from the data. This result is supported by the study conducted by Ahmad, Hanini and, Oqaily, (2018) who founds significantly MIS help helps banks to change the service delivery system based on customers' expectations and timely response to the change in technology.

d. I am satisfied with the accuracy and objectivity of my organization MIS

Respondents were asked to reply with their satisfaction on the accuracy and objectivity of MIS. The descriptive output data in table 4.9 show 3.93 & 0.772 mean and std. Deviation respectively. The mean value further confirms most of the respondents replied agree with less than 1 deviation from the mean. Hence, currently, employees of CBE are satisfied with the objectivity and accuracy of MIS in the organization significantly according to observed mean value from the data.

For user satisfaction dimension at all most of respondents replied agree on MIS that improves their job productivity, MIS is efficient, flexible enough, accurate, and objective with a mean of 4.38, 3.70, 3.68 & 3.93 respectively. The descriptive statistics result show that currently in CBE MIS improve work productivity, it is efficient which reduce unnecessary resource utilization through reducing paperwork, it is flexible enough which is easy to adopt any technological change introduced and it is accurate and has its own objectives that guide employees towards to it significant with a mean value greater than 3.68.

4.4.6. Net benefit

	N	Mean	Std. Deviation
Table 4.10: Mean and Std. Deviation table for Net benefit			
Using MIS in my organization helps reducing the time fixed to accomplish my task	136	4.41	.509
Using the MIS in my organization improve my job performance	136	4.43	.497
The application of MIS in my organization helps organization productivity	136	4.38	.486
The MIS in my company enhances the effectiveness of my job	136	4.60	.491

Source: - survey questioner, 2021

a. **Using MIS in my organization helps reducing the time fixed to accomplish my task**

As it is depicted in table 4.10 employees of CBE asked to respond in regard to MIS reducing the time given to accomplish a given task with a descriptive output value of 4.41 & 0.509 mean and std. Deviation respectively. So the mean value portrays that majority of respondents are replied to agree with less than 0.5 deviations from the mean. Hence, in current CBE MIS enable employees to perform the given task with less than the time required is significant.

b. **Using the MIS in my organization improve my job performance**

Descriptive statistics table above shows value of 4.43 & 0.497 mean and std. deviation respectively. The mean value demonstrates the majority of respondents replied agree with very close to mean with less than 0.5 deviation. This confirms that the existing MIS in the commercial bank of Ethiopia improves job performance of employees significantly.

c. The application of MIS in my organization helps organizational productivity

According to the data observed in table 4.10, computed descriptive statistics shows a mean value of 4.38 and std. Deviation of 0.486 for this question. The mean value confirms that the majority of respondents replied agree. Moreover value for std. Deviation is less than 0.5 which shows the majority of respondents were replied very close to the mean value. Hence, there is the organizational productivity with the application of MIS in the commercial bank of Ethiopia.

d. The MIS in my company enhances the effectiveness of my job

The descriptive statistics in table 4.10 above shows 4.60 &0.491mean value and std. Deviation respectively. The mean value is approximate 5(strongly agree) which confirms that the majority of respondents replied strongly agree option and the deviation for this question shows the majority of respondents were replied close to an average value. Hence, currently, MIS enhances job effectiveness in the commercial bank of Ethiopia significantly.

Generally, with regards to user satisfaction, the majority of employees replied that MIS reduces the time fixed to accomplish employees' tasks, improves employees' job performance, job effectiveness, and improves the organization's productivity with a mean value of 4.41, 4.43, 4.60 & 4.38 respectively with less than 0.5 deviations from the mean. Hence, because of existing MIS currently in CBE employees perform their job with less time than is required, improve job performance and effectiveness and improve the organization productivity significantly with a mean value greater than 4.

4.5. The association between MIS and organizational performance

A person correlation method was employed to measure the association between the dependent variable (organizational performance) and independent variable (MIS indicators). A correlation coefficient is the end result of a correlation analysis to which the direction of the association is determined by the sign of the correlation coefficient and its values vary between -1 and +1. A correlation coefficient of +1 indicates that the two variables are perfectly related in a positive manner while, a correlation value of -1 indicates that two variables are perfectly associated in a negative manner, whereas a correlation value of zero implies that the two variables being examined have no linear relationship (Gogtay and Thatte, 2017). Prior to performing the regression analysis, a correlation analysis was performed.

Table 4.11: Pearson correlation coefficient matrix

		OP	Sysqu	IQ	Servequ	IU	US	NB
OP	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	136	1					
Sysqu	Pearson Correlation	.569**						
	Sig. (2-tailed)	.000						
	N	136	136	1				
IQ	Pearson Correlation	.538**	.305**					
	Sig. (2-tailed)	.000	.000					
	N	136	136	136	1			
Servequ	Pearson Correlation	.533**	.292**	.443**				
	Sig. (2-tailed)	.000	.001	.000				
	N	136	136	136	136	1		
IU	Pearson Correlation	.411**	.116	.151	.179*			
	Sig. (2-tailed)	.000	.178	.078	.037			
	N	136	136	136	136	136	1	
US	Pearson Correlation	.723**	.369**	.467**	.355**	.367**		
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	136	136	136	136	136	136	1
NB	Pearson Correlation	.700**	.391**	.404**	.491**	.181*	.485**	
	Sig. (2-tailed)	.000	.000	.000	.000	.035	.000	
	N	136	136	136	136	136	136	136

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Note: OP (organizational performance), Sysqu (system quality), IQ (information quality), Servequ (service quality), IU (Intension to use) & NB (Net benefit).

Source: - survey questioner, 2021

The result in Table 4.11 implies that the association between organizational performance and MIS indicators (system quality, information quality, service quality, intention to use, user satisfaction, and net benefits). As it is noted by, Cohen, (1992) correlation coefficient (r) between 0 ± 0.1 represents a low effect, 0 ± 0.3 is a medium effect and 0 ± 0.5 is a high effect.

As shown in the correlation table the Pearson correlation result implies that system quality, information quality, service quality, user satisfaction, and net benefit have a strong and positive association at r, (.569**, .538**, .533**, .700** & .723**) with organizational performance respectively. Accordingly, intention to use has a positive and moderate association with organizational performance with a correlation coefficient of r, (411**).

Generally, the resulting value of Pearson correlation (2-tailed) for this study confirms that all MIS indicators such as system quality, information quality, service quality, intention to use, user satisfaction, and net benefit have a positive association with organizational performance.

4.6. Multiple regression analysis

4.6.1. Assumptions of multiple regression analysis

Before performing linear regression analysis, it is essential to test assumptions of multiple linear regression analysis Model (Keith, 2006). Accordingly, there are principal assumptions that justify using multiple linear regression models for purposes of inference or prediction. Accordingly, normality, linearity, Homoscedasticity, and multicollinearity were tested as below.

4.6.1.1. Normality Test

This assumption formally applies to the distribution of the errors (or, equivalently, the conditional distribution of the response variable) for any given combination of values on the predictor variables (Williams, Alberto ,and Grajales, 2013)

The histogram is a frequency diagram created by dividing the data into evenly spaced cells and graphing the frequency of each cell against the cell's center. The residuals histogram can be used to determine if the variance is normally distributed. Asymmetric bell-shaped histogram which is evenly distributed around zero indicates that the normality assumption is likely to be true and if the histogram indicates that random error is not normally distributed, it suggests that the model's underlying assumptions may have been violated. As displayed in figure 4.7 below the normality histogram for this study was approximately bell-shaped, which shows the data used in this study were normally distributed.
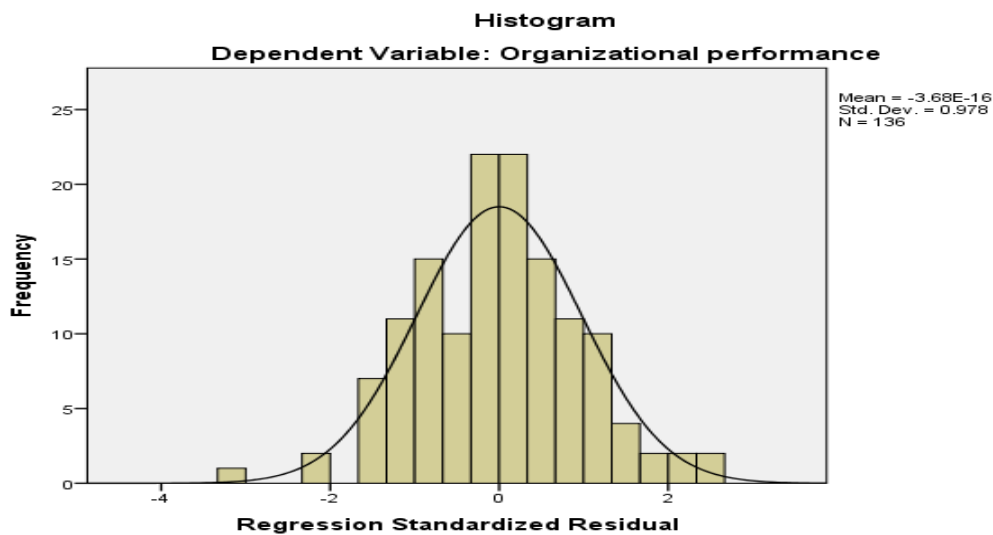
Figure 4.7: Normality test

Source: survey questioner, 2021

4.6.1.2. Linearity assumption

Multiple regressions can accurately estimate the relationship between dependent and independent variables; when the relationship is linear in nature. "Standard multiple

regressions can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature" (Williams, M. N., Grajales, C. A. G., & Kurkiewicz, 2013). If the relationship between the independent variables and the dependent variable is not linear the resulting regression outcome such as; regression coefficients, standard errors, and tests of statistical significance may be biased (Osborne and Waters, 2003). The linearity assumption for this study was checked by p-plot residual shows there was no linearity problem as it is seen in figure 4.8 below.

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Organizational performance
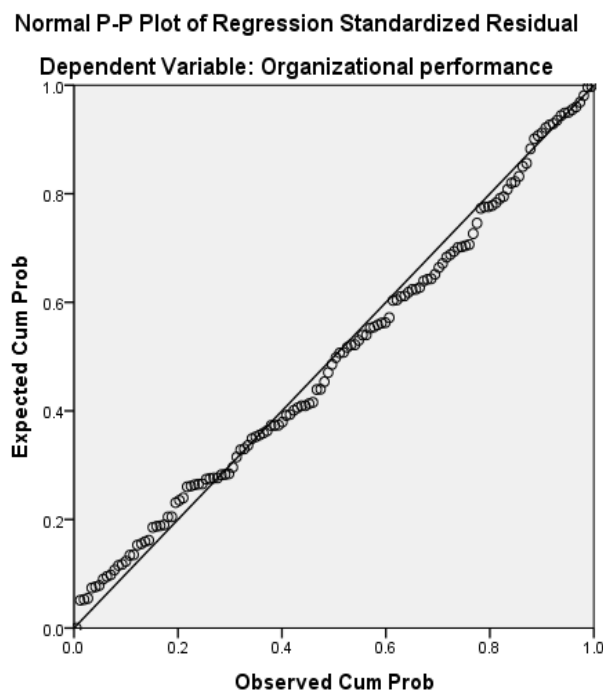
Figure 4.8: Linearity test

Source: survey questioner, 2021

4.6.1.3. Homoscedasticity test of the model

When inferring with a linear regression model, we usually assume that the errors are evenly distributed for each of the predictor variables; this is referred to as 'Homoscedasticity' while the residuals do not support Homoscedasticity, they are referred to as 'heteroscedasticity (Hickey et al., 2019). Concerning this errors are assumed to be spread out consistently between the variables. This study used a scatter

plot of standardized residuals against standardized predicted values to check Homoscedasticity to which a random pattern centered on the line of zero standard residual value.

For this study, almost all the values (Scatter plot) were between ±3.3, which confirmed there was no heteroscedasticity problem to the model as is indicated in figure 4.9 below;
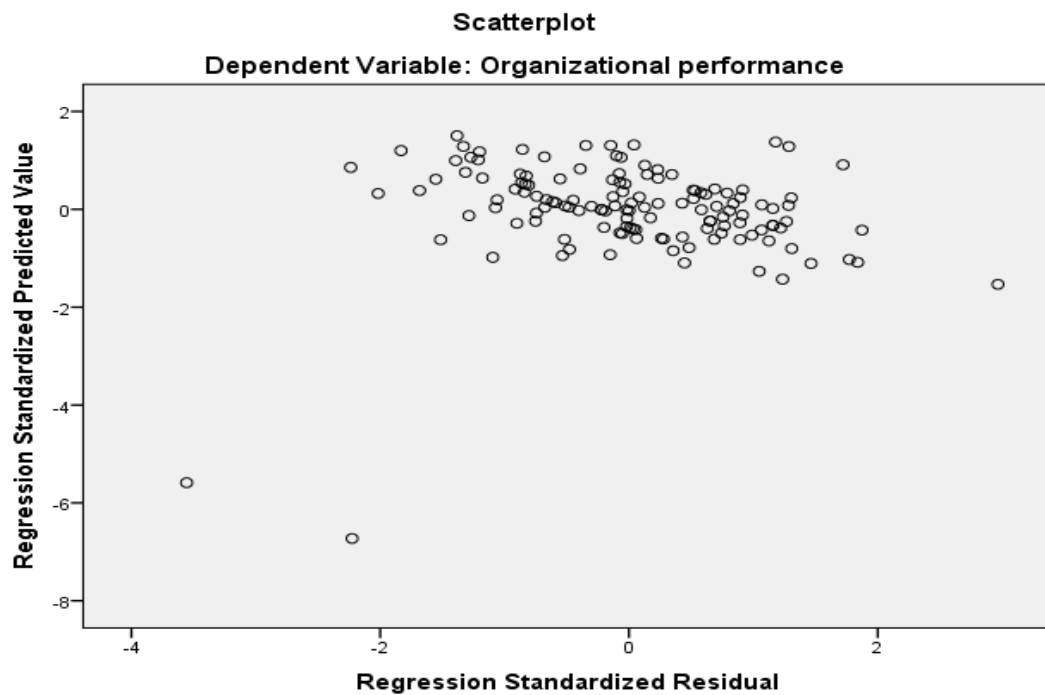
Figure 4.9: Scatter plot diagram

Source: - survey result of 2021

4.6.1.4. Multicollinearity test of the model

Multicollinearity is the situation that may arise from the relationship among predicators' variables is high which affects the instability of regression coefficients (Aiken *et al.*, 2012). Regards to this tolerance and Variance Inflation Factor (VIF) were used to tests correlation among each independent variable. Multicollinearity assumed to exist if VIF is greater than or equal to 10 and tolerance (T = 1/VIF) is less than or equal to 0.1. VIF = (1/1-R2). T = 1 − R2 j, the reciprocal of VIF, where each predictor is regressed on all of the other predictors in the analysis. A rule of thumb for tolerance and

VIF is that the tolerance should not be less than 0.1, and the VIF should not be more than 10 (Miles, 2005).

Accordingly, the regression result computed by SPSS v.23 stated that there were no problems of Multicollinearity problems as indicated below table 4.12.

Table 4.12: Multi co linearity statistics

Coefficients			
Model		Co linearity Statistics	
		Tolerance	VIF
1	system quality	.792	1.263
	Information quality	.679	1.474
	Service quality	.679	1.473
	Intension to use	.860	1.163
	User satisfaction	.591	1.692
	Net benefits	.615	1.627
a. Dependent Variable: Organizational performance			

Source: - survey questioner, 2021

4.6.2. Regression analysis result

Regression analysis is used to know how much the independent variable explain the dependent variable. In this study, multiple linear regression analysis used to measure how each independent variable (system quality, information quality, intention to use, service quality, user satisfaction, and net benefits) explains the dependent variable (organizational performance).

The results of regression analysis among MIS and organizational performance discussed as follows: - The regression result of model summary observed below table 4.13 indicates that the coefficient of determination(R) with a value of 0.885a (88.5%) and R2 with a value of 0.783 (78.3%). More the R square value for this study confirms that MIS indicators such as; system quality, information quality, service quality,

intention to use, user satisfaction, and net benefits were determined organizational performance by 78.3%. However, the remaining 21.7% indicated other factors that determine the dependent variable other than the variables used in this study.

			Adjusted R	Std. Error of	
Model	R	R Square	Square	the Estimate	Durbin-Watson
1	.885[a]	.783	.773	.20874	1.617

Table 4.13: Model Summary

a. Predictors: (Constant), Net benefits, Intension to use, system quality, Information quality, Service quality, User satisfaction

b. Dependent Variable: Organizational performance

Source: survey questioner, 2021

Table 4.14: Regression coefficients

Model		Un standardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.410	.135		10.469	.000	1.144	1.677
	system quality	.133	.026	.238	5.166	.000	.082	.184
	Information quality	.012	.005	.108	2.168	.032	.001	.022
	Service quality	.010	.005	.113	2.269	.025	.001	.020
	Intension to use	.019	.005	.169	3.815	.000	.009	.029
	User satisfaction	.259	.042	.329	6.179	.000	.176	.342
	Net benefits	.045	.007	.318	6.082	.000	.030	.060

Source: - survey questioner, 2021

The result of regression value on table 4.14 indicates that β value for system quality was .133 at t= 5.166 & p= .000. Further, the β value (.133) for system quality implies that an increase in the effectiveness of system quality by 1% leads to an increase in organizational performance by 13.3% at sig level of .000 & t= 5.166. The β value for information quality was .012 at t=2.168 & p= .032. More the β value (.012) shows that an increase of 1% of information quality results in 1.2% on organizational performance and vice versa at p = 0.032 & t= 2.168. The β value for service quality was .010 at t= 2.269 & p= .025.Further, the β value (.010) of regression coefficient for service quality

confirms that any improvement in service quality by 1% tends to increase the organizational performance by 1% at sig value .025 & t= 2.269.The β value for intension to use was .019 at t = 3.815 & p = .000, shows that an increase in intention to use by 1% leads to an increase of 1.9% on organizational performance. The β value for user satisfaction was .259 at t = 6.179 & p = .000 which confirms that an increase in user satisfaction by 1% leads to an increase of 25.9% on organizational performance. Net benefit has a β value of .045 at t = 6.082 & p = .000, which indicates an increase in net benefit by 1% leads to an increase of 4.5% on organizational performance.

This regression result confirms that MIS indicators have positive and significant effects on organizational performance at p-value < .05. Hence, each MIS indicator has direct and significant influences on organizational performance to which the more the organization works on improving each indicator the organizational performance tends to be good, while, the focus for those variables gets low it leads the organization to perform weakly in overall aspects of its performance. The relationship of organizational performance **(Y)** to the independent variables system quality **(X1),** informational quality **(X2),** service quality **(X3),** intention to use **(X4),** user satisfaction**(X5),** and net benefit**(X6)** can be expressed as $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon_i$. Here, β_0 is constant and β_n is the coefficient of independent variables. An Unstandardized Coefficients table column was used to constructing a regression equation. Based on this the following linear regression model equation formed from the above table 4.14:-

Organizational performance = 1.410 + 0.133 system quality + 0.012 information quality + 0.010 service quality + 0.019 intension to use + 0. 259 user satisfaction + 0.045 net benefits.

4.7. Effects of MIS on organizational performance

In this part, independent variable MIS indicators were tested to check whether they affect positively and strongly affect the dependent variable organizational performance or not based on research objectives and research questions. To do this, six hypotheses

have been tested to answer the research questions based on the research problem and objectives. The hypotheses address each MIS indicator such as; (system quality, information quality, intention to use, service quality, user satisfaction, and net benefits).

4.7.1. Effects of system quality on organizational performance

Hypothesis 1: system quality has significant and positive effects on organizational performance.

System quality has significant and positive effects on organizational performance at a p-value of .000 and β value .133.

The p-value of system quality (.000) is less than the level of significance, α = .05. This proves that there is sufficient evidence to agree with the study hypothesis. Due to the fact, H1 failed to reject to which the study confirmed system quality has a positive and significant effect on organizational performance. In addition to this, the β value (.133) for system quality implies that an increase in the effectiveness of system quality by 1% leads to an increase in organizational performance by 13.3% at sig level of .000 & t= 5.166. Therefore, more CBE should work on system quality by improving system connection, using updated and sophisticated hardware and software technologies, and building strong system security to reduce illegal access and cyber attack to the system, certainly such conditions will improve the overall organizational performance of the bank. This finding is consistent with the previous study conducted by (Bahari and Mahmud, 2009; Hsieh and Wang, 2007; Wixom and Todd, 2005, & Ahmad and Omar, 2016).

4.7.2. Effects of information quality on organizational performance

Hypothesis test 2: information quality has significant and positive effects on organizational performance.

 Information quality has significant and positive effects on organizational performance at a p-value of .032 and β value.012. The p-value of information quality (.032) is less than the level of significance, α = .05. This proves that there is sufficient evidence to

agree with the study hypothesis. Due to the fact, H2 failed to reject to which the study confirmed information quality has a positive and significant effect on organizational performance.

Further, regression coefficients indicate an increase of 1% of information quality results in 1.2% on organizational performance and vice versa at p = 0.032 & t= 2.168. An increase of ease of use to the system users, reducing noise, improving data quality, adapting information to increase its pertinence, and saving users time and money shifts the organizational performance positively and significantly (Choo, 1995). unless it is difficult to assess the quality of information without monitoring and improving existing information quality as per change with technology (Gorla, Somers, and Wong, 2010). Further hypothesis result of this study in line with previous studies of Kalhoro et al., (2019) ; Bahari and Mahmud, (2009) ; Azeez and Yaakub, (2019a) ; Azeez and Yaakub,(2019b) while ,it contradict with the finding of (Omiunu O.G., 2015).

4.7.3. Effect of service quality on organizational performance

Hypothesis test 3; service quality has significant and positive effects on organizational performance.

Service quality has a positive and significant effect on organizational performance at a p-value of .025 and β value .010. The p-value of service quality (.025) is less than the level of significance, α = .05. This proves that there is sufficient evidence to agree with the study hypothesis. Due to the fact, H3 failed to reject to which the study confirmed service quality has a positive and significant effect on organizational performance.

In addition, the β value of regression coefficients confirms that any improvement in service quality by 1% tends to increase the organizational performance by 1% at sig value .025 & t= 2.269. So, making the system easy to use, functional, reliable, high data quality, flexible, integrated, accurate, sophisticated, and customized enable the organization to improve its service quality and the improved service quality brings better organizational performance DeLone and McLean, (2003) and (Sedera and Gable, 2004). This finding is consistent with the findings of studies done by , (Bahari and

Mahmud, 2009), Aswar and Hafizh, (2020), (Wei, 2012),(Ali, Omar, and Bakar, 2016) and (Munawar, 2014) who found a positive relationship between service quality and organizational performance.

4.7.4. Effects of intension to use on organizational performance

Hypothesis test 4; Intension to use has significant and positive effects on organizational performance.

Intention to use (Use) has significant and positive effects on organizational performance at a p-value of .000 and β value .019. The p-value of intention to use (.000) is less than the level of significance, α = .05. This proves that there is sufficient evidence to agree with the study hypothesis. Due to the fact, H4 failed to reject to which the study confirmed an intention to use has a positive and significant effect on organizational performance.

The more system users use the system the better the organizational performance will be achieved as shown in the above regression model table 4.16 because the β value for intention to use was positive. Further, the β coefficient of regression indicates that an increase in intention to use by 1% leads to an increase of 1.9% on organizational performance at sig value of .000 & t of 3.815. Finally, this study in line with the study conducted by Kalhoro et al., (2019), (Bahari and Mahmud, 2009), who found a positive relationship between intention to use and organizational performance while a study conducted by Azeez and Yaakub, (2019a) , Azeez and Yaakub, (2019b) & Omiunu O.G., (2015), contradict with the finding of this study.

4.7.5. Effects of user satisfaction in organizational performance

Hypothesis 5; User satisfaction has significant and positive effects on organizational performance.

User satisfaction has significant and positive effects on organizational performance at a p-value of .000 & β value of .259. The p-value of user satisfaction (.000) is less than the level of significance, α = .05. This proves that there is sufficient evidence to agree with

the study hypothesis. Due to the fact, H5 failed to reject to which the study confirmed user satisfaction has a positive and significant effect on organizational performance.

As indicated in Table 4.15 under the Unstandardized coefficients column an increase of 1% of user satisfaction leads to the increase by 25.9% in organizational performance at sig value .000 & t= 6.179. User satisfaction is an important concept regardless of any type of organization whether it is a business or non-business organization because unless the user of the system satisfied difficult for the organization to survive without user satisfaction of the system. The study result revealed in this study in line with the previous study of Azadeh, Salehi ,and Salehi, (2016), Azeez and Yaakub, (2019a) & (Azeez and Yaakub, 2019b).

4.7.6. Effects of Net benefit and organizational performance

Hypothesis 6; Net benefit has significant and positive effects on organizational performance.

Net benefit has significant and positive effects on organizational performance at a p-value of .000 and β value of .045.   The p-value of information quality (.000) is less than the level of significance, α = .05. This proves that there is sufficient evidence to agree with the study hypothesis. Due to the fact, H6 failed to reject to which the study confirmed information quality has a positive and significant effect on organizational performance.

More an increase in 1% of intention to use leads to an increase by 4.5 % in organizational performance at sig value of .000 & t = 6.082 as it is observed in the Unstandardized regression coefficient table column. More the bank applies and improves MIS it leads to improve decision-making, improve productivity, cost reductions, improved profits, market efficiency, customer satisfaction, and economic development. The study result revealed in this study in line with the previous studies of Azeez and Yaakub, (2019a) & (Azeez and Yaakub, 2019b).

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

This chapter deals with conclusions, recommendations and suggestions for future research direction.

5.1. Conclusions

The main aim of this study was to examine the effect of management information systems on the organizational performance of the commercial bank of Ethiopia, Hossana town.

The demographic analysis of respondents for this study was measured by Gender, age, the field of specialization, educational background, current position, and years of experience.   Accordingly, the majority of respondents are males and aged in the range of 31-36. Regarding field of specialization, education background, and organizational position Majority of the respondents are specialized by management, first university degree holders, and work at officer positions respectively. In terms of year of experience majority of respondents fall between 3-6 years of experience in the banking industry.

Organizational performance for this study was measured by financial perspectives, customers' perspectives, internal process perspectives, and employees' learning and growth. Financial perspectives of organizational performance at CBE, Hossana town shows that there is effective cost control, good financial performance position, and efficient resource management that resulted from an existing management information system.

The existing MIS in CBE, Hossana town consistently meet the expectations of Customers, satisfying and making them loyal to the organization, this due to the existing flexible service that customized per customer demand and easily understanding procedures.

Internally MIS fairly improves the working culture of the organization, service delivery process and enhancing the easy flow of communication within and among the

employees of the bank. With regard to employees learning and growth employees of CBE develop a sense of task accomplishment and they can develop the tendency of optimal decision making due to existing MIS. However, MIS in CBE, Hossana town is insignificant regarding improving teamwork in an organization.

The MIS indicators system quality, information quality, and service quality, intention to use (use), user satisfaction, and net benefits were briefly discussed.

System quality in current CBE is easy to use, functional in meeting employees' requirements, and secure significantly, however it is not available at any time when it is needed.

In regard to information quality MIS provide information in a useful and understandable manner, timely to use, updated and accurate information to employees of the commercial bank of Ethiopia significantly. Further, the service quality provided by MIS of CBE is characterized by the good response time, service in a manner well to use and its quality has a significant effect on the overall performance of the entire organization. However, CBE, Hossana town has an inadequate number of technical specialists who deal with system breaks. As it is known the break down in one system of the organization will result fall entire organization.

Intension to use by the system user in current CBE shows that employees of the bank use the system always, have the interest to continue with using MIS, and number of system users increase from time to time in CBE significantly. However, current CBE is characterized by shortage of human and material resources to support the organization MIS.

Currently System users (employees) of CBE are satisfied in an organization MIS which improve job productivity of employees, efficient, flexible, accurate & objective.

The net benefit obtained from MIS to both the organization and its system users in current CBE is significant. Due to exiting MIS employees of CBE improve their job performance, job effectiveness, able to reduce the time fixed to accomplish certain tasks, and improve the organization's productivity.

Regarding to the association between MIS and organizational performance, the person correlation result confirms that MIS (system quality, information quality, service quality, intension to use, user satisfaction, and net benefit) has a positive association with an organizational performance at $\alpha = .05$. Further, all MIS indicators associated strongly with organizational performance except intension to use to which the $r < .05$ (.441).

Regression analysis is performed in this study used to measure the percent of the independent variables that explain dependent variables and the significant effect of independent variables on the dependent variables. Before analyzing multiple linear regressions its assumptions were tested to which normality, linearity, Homoscedasticity, and multicollinearity result shows that all were fit well as needed to model adequacy. The regression result for this study confirms that MIS indicators (system quality, informational quality, service quality, intention to use, user satisfaction, and net benefit) have a positive and significant effect on organizational performance of CBE at $\alpha = .05$ to which the developed alternative hypothesis fails to reject.

5.2. Recommendations

Based on the data findings and conclusions, all six management information system indicators such as system quality, informational quality, net benefits, intention to use, service quality, and user satisfaction were found to positively affect the organizational performance of the commercial bank of Ethiopia, Hossana town. Therefore, the following recommendations were forwarded to CBE, Hossana town to further improve the bank's organizational performance from detailed result analysis.

❖ Based on the result of finding system quality has positive and significant effect on organizational performance of CBE, Hossana town. It is highly recommendable to CBE, branches operating in Hossana town to improve system quality to make the organizational performance good in all aspects through making MIS of the bank always available to system users by applying tight follow up on system requirement and practice from time to time.

❖ Service quality of MIS influences the organizational performance of CBE, Hossana town positively and significantly. Based on the result of findings CBE, Hossana town is recommendable to improve the service quality of MIS through hiring and training MIS specialists who handle the breakdown of the system that reduce the performance of system.

❖ Based on finding CBE, Hosanna town is recommendable to increase intension to use of employees (system users) through providing material and human resources supporting MIS, providing a training program to system users, making the system itself too attractive and easier to users with flexible and sophisticated technology.

❖ To increase the Net benefit obtained from MIS to both the organization and system users CBE, Hossana town is recommendable to assess the overall practice of MIS before a system intended expectations to check whether the expected objective of the system achieved or not among employees, customers and overall the organization.

5.3. Direction for further study

In this study the effect of management information systems on organizational performance was only done in CBE, Hossana town it is essential to research district level for further generalization of the study. And this study was used six MIS indicators to measure organizational performance but future researchers should add other variables like leadership quality, management support, data quality, demographic factors, TQM, and others. Even it is better to study the interrelationship between the variables to which this study considers only their effects on dependent variables. The model used in this study was linear regression analysis for a future researcher it is recommendable to use the structural equation model (SEM) to further explaining the information system success factors (MIS indicators). Also, most of the IS literature supports AMOS (analysis of moment structures) and PLS (partial least square) used for analyzing the structural equation model.

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APPENDICES

JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

PROGRAM: *MBA* IN MANAGEMENT

Questionnaire designed for employees of CBE, Hossana town

Dear Employee

The purpose of this questionnaire is to collect primary data to conduct a study on the research topic called: The effects of MIS on organizational performance the case of Commercial Bank of Ethiopia, Hossana town, Hadiya Zone, SNNPR as a Partial fulfillment for the requirement of Master in Business Administration (MBA) Program at Jimma University. In this regard, I kindly request you to provide me reliable information that is to the best of your knowledge so that the findings from the study would meet the intended purpose. I strongly assure you that the information pertaining to your answers in this questionnaire will be completely confidential and I would also like to extend my deep-heart thanks to you in advance for being a volunteer to devote your valuable time to answer this questionnaire.

Directions:

✓ No need to write your name.

✓ Answer by putting a tick mark ⬜ in the boxes.

✓ In case you have ambiguities on any of the questions, please do not hesitate to contact me

(Mobile No: 251-945647096, E-Mail: ashuyaaba@gmail.com).

✓ MIS refers Management Information Systems.

PART- I. Demographic Information of Respondents

1. Gender   Male ☐   Female ☐

2. Age

    Below 30 ☐   31 -36 ☐   37-42 ☐   43-48 ☐   above 48 ☐

3. Field of Specialization

Accounting & Finance ☐   Banking and Finance ☐

Business Administration ☐   Marketing ☐

Economics ☐   Management ☐

Others ☐

4. Educational background

Doctorate degree ☐   First University degree ☐

Master degree ☐   Diploma ☐

5. Position in a bank

Manager ☐   Officer ☐

Auditor ☐   other ☐

6. **Years of experience**

Below 5 yr ☐   6-11 yr ☐ 12 – 17 yr ☐   18 -23 yr ☐   Above 24 yr ☐

| Part II. Questionnaires in MIS indicators |

Please indicate your level of agreement with each statement with Strongly Disagree (1) , Disagree (2), Neutral (3), Agree (4) and Strongly (5)

A. System quality

No	Items	1	2	3	4	5
1	MIS in my organization is easy to use					
2	The function of MIS in organization meet my requirements					
3	MIS in my organization always available					
4	MIS in my organization is secure					

B. Information quality

No	Items	1	2	3	4	5
1	MIS provides me information in a useful and understandable format					
2	MIS in my organization provides information timely to use					
3	MIS provides me up to dated information					
4	MIS in my organization provides system users with accurate information					

C. Service quality

1	The response time of MIS in my organization is good.					
2	MIS in my organization provides well-mannered services for users.					
3	The service quality of MIS in my organization affects the extent to which the system can be used.					

| 4 | My organization has MIS specialists to address technical problems and emergencies if any. | | | | | |

D. Use of the system(Intension to use)

No	Items	1	2	3	4	5
1	I often use the MIS applied in my organization					
2	I am very interested in the process of continuing to use the MIS in my organization have helped its success					
3	The human and material resources supporting the MIS in my organization have helped its success					
4	The number of participants in the use of MIS in my organization has been constantly increased since its beginning.					

E. User satisfaction

No	Items	1	2	3	4	5
1	Using MIS in my organization helps me to improve productivity					
2	The MIS in my organization is very efficient					
3	The MIS in my organization is flexible enough					
4	I am satisfied with the accuracy and objectivity of my organization MIS					
No.	**F. Net benefits**	1	2	3	4	5
1	Using MIS in my organization helps reducing the time fixed to accomplish my task					
2	Using the MIS in my organization will improve my job performance					
3	The application of MIS in my organization helps organization productivity					
4	The MIS in my company enhances the effectiveness of my job					
Part III. Questionnaires on organizational performance						

Please indicate your level of agreement with each statement with Strongly Disagree (1) , Disagree (2), Neutral (3), Agree (4) and Strongly (5)

A. Financial perspectives

No	Items	1	2	3	4	5
1	MIS help us to be more effective at cost control					
2	Utilization of MIS make financial performance of the organization is good.					
3	Resources are managed efficiently well with help of MIS					

B. Customer Perspective

No.	Items	1	2	3	4	5
1	MIS enable the organization consistently to meet the expectations of clients					
2	Most clients are satisfied in my organization due to MIS					
3	Most clients are loyal to the organization from the service that system provide them					

C. Internal process

No	Items	1	2	3	4	5
1	MIS improve working culture of the organization					
2	MIS improve our service delivery Processes					
3	MIS disseminate Communication flows easily throughout the organization					

D. Employees Learning & growth

Please indicate your level of agreement with each statement with   Strongly Disagree (1) , Disagree (2), Neutral (3), Agree (4) and Strongly (5)

Employee growth and learning have been identified as an important aspect of organizational

Performance. Please respond based upon your opinion concerning each statement.

No	Items	1	2	3	4	5
1	MIS make me develop a sense of my task accomplishment					

2	MIS allow me to make optimal decisions to accomplish my performance objectives					
3	MIS enhances good teamwork in the organization					

Thanks a lot for your patience