



Assessment of the effectiveness of Computerized accounting information systems(CAIS) in measuring and controlling economic activities of an enterprise timely: The case of Ethiopian Industrial Inputs Development Enterprise(EIIDE)

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DECLARATION

I the undersigned graduate student hereby declare that this thesis is my original work, and that all sources of the material used for this thesis have been acknowledged. This research study is being submitted in partial fulfillment of Master Degree of Business Administration in Finance.

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Abstract

This paper presents an empirical study of assessments of effectiveness of CAIS in measuring and controlling economic activities of an enterprise. The purpose of this study is to know benefits of computerised accounting information systems of EIIDE; to assess the effectiveness of using computerised accounting information systems in EIIDE; to identify the challenges as well as problems associated with the use of these computerised accounting information systems. Primary and secondary data were used in this study. The primary sources include the use of questionnaires and personal interview while the secondary data were include text books, article and other important write-up in various journals. A survey method of data collection was used and the collected data were analysed qualitatively and quantitatively through descriptive statistical mean and cross tabulation analysis using SPSS version20 computer software. Generally, based on all the intended variables (Perceived usefulness, Infrastructure, HR Capability, Ease of use, Internal Controlling System, Flexibility, Completeness, Security and comprehensive) effect, the findings imply that CAIS of EIIDE is moderately effective in measuring and controlling the economic activities of the enterprise. Pertaining to the research questions, the results revealed that CAIS moderately helped the EIIDE to improve internal controlling systems that reflected as segregation of accounting duties, facilitate accounting duties and follow up, process large amounts of financial information, strengthen the responsibility and accountability and also improved the reliability of financial reports of the Enterprise. But the EIIDE did not get the necessary benefits (showing and generating real time financial position) that it has to get from CAIS. The challenges that hinder the enterprise to get the necessary benefits of CAIS are no adequate and necessary IT infrastructures, No strong enough internal controlling system, no competent enough HR skills (IT specialists and the users) and incompleteness of the system with the necessary accounting modules .To mitigate the above challenges and get full necessary benefits of CAIS the EIIDE recommended to invest on development IT fields by forming a committee of all the beneficiary directorate workers, Skill upping the HR competency of those users and administrators of the system through training accordingly and there should be alert enough about the upcoming IT security breach problems and its effects on the enterprise regularly. Prospect is kept open for further research regarding cost wise effectiveness and efficiency of CAIS of the enterprise.

Keywords: *accounting system, information system, computerized accounting information system, IT infrastructure.*

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Abbreviations

EIIDE	Ethiopian Industrial Inputs Development Enterprise
CAIS	Computerised Accounting Information System
IT	Information Technology
HR	Human Resource
KSA	Knowledge, Skills and Attitude
GAAP	Generally accepted accounting principles

1. CHAPTER ONE: Introduction

1.1 Background of the study:

The American Accounting Association defines accounting as the process of identifying, measuring and communicating economic information to permit informed judgment and decision by users of the information (Ijiri, Y. (1975). Accounting is also the establishment, maintenance, collection and analysis of financial position of an organization and any changes that have occurred or may occur overtime. Chionye (2003) defines accounting system as the art of identifying, recording, classifying measuring and interpreting in a significant manner the financial transaction of an organization for decision making. Summarizing from time to time the information contained in the record, for its significant presentation and interpretation to interested parties as an aid to decision making.

Computers became widely used for business and personal purposes. Vertmaat et al (2011) asserted that vast benefits could be derived by organisations through the use of computers. Computerised accounting information systems in business brought advantages in terms of speed, reliability, consistence and huge storage capacities. Hartzell (2006) defines computer as an electronic machine for processing information automatically and very quickly. The important of computers is the ability to handle vast amount of information and to do other processes with accuracy and speed, which could not manually undertaken, recognized and appreciated by any industry. Tanenbaum (2010) sees computer as a machine that can solve problems for people by carrying out instructions given to it.

Technology has dramatically changed the accounting profession. One response to this change is the development of accounting programs that emphasize Accounting Information Systems (AIS) (Strong, et al, 2006).The rapid change in information technology, the wide spread of user-friendly systems and the great desire of organizations to acquire and implement up-to-date computerized systems and software have made computers much easier to be used and enabled accounting tasks to be accomplished much faster and accurate than before. On the other hand, this advanced technology has also created significant risks related to ensuring the security and integrity of computerized accounting information systems (CAIS) (Musa and Abu, 2005).

Naturally, there is no system without goal, we should differ between stated objectives and the real objectives, which the entity declares its objectives are consumes satisfaction while the real objectives is gaining a maximum profits. Each enterprise has implicit and explicit goals

and objectives, Many enterprises have a mission statement that describes their goals. These goals can vary widely among enterprises ranging from non-profit organizations, where goals were aimed at serving specified constituents, to for-profit organizations, where goals are directed toward maximizing the owner's objectives (Meigs; et al. Op.Cit. p.16.).

(Ijiri, 1975) in addressing the question of what an accounting system should do identifies 'accountability' and 'information usefulness' as the two main broad objectives that any accounting system should achieve. He states that accountability has clearly been the social and organizational backbone of accounting for centuries. In this sense to account for he takes to explain a consequence by providing a set of causes that have collectively produced the result. To provide accountability is thus an essential feature of an accounting system. However, in the modern business world, information usefulness is also an important, even though secondary, requirement. Thus, the core of any accounting system is to provide accountability with 'information usefulness.

1.2 Statement of the Problem

The technological development and the information revolution taking place in the world and in Ethiopia in particular have forced business firms to use computerised accounting information systems and cope up with these developments. The introduction of the computerized accounting information system led to effective accounting operations for the organizations (Agbim, 2013). A computerized accounting system involves the computerization of accounting information systems which is established in order to facilitate decision making. These are associated with a number of benefits like speed of carrying out routine transactions, timeliness, quick analysis, accuracy and reporting. Effective and efficient information flow enhances managerial decision-making, thereby increasing the firm's ability to achieve corporate and business strategy objectives (Manson, McCartney, and Sherer, 2001). This in turn, may increase the prospects of the firm's survival (Platt and Platt, 2012). This can be evaluated by the procedures, accounting records and tools used (Keating and Frumkin (2003).

According to Meigs (1999) , in developing information about the financial position of a business and the results of its operations; every accounting system performs the following basic functions: Interpret and record the effects of business transactions, Classify the effects of similar transactions in a manner that permits determination of the various totals and

subtotals useful to management and used in accounting reports and Summarize and communicate the information contained in the system to decision makers.

The differences in accounting systems arise primarily in the manner and speed with which these functions are performed. Ensure the fully control, which confirm accuracy recording and manipulating the data related to business activity. Also, protect those data and organizations assets.

The Ethiopian industrial inputs development Enterprise (EIIDE) was start using computers for different office clerical activities and also COBOL-based accounting systems to print payroll and Financial statements of the Enterprise after manual works of all accounting procedures. Then after as EIIDE sets an international wide goals and objectives, using of modern Computerized accounting information systems was mandatory to achieve its" goals and objectives. So, EIIDE had shifted this system to MS Access database accounting system packages, which has supplied by one of Ethiopian private accounting software suppliers before a decade ago(EIIDE"s annual magazine report).Based on actual observations, even if EIIDE uses Computerised Accounting information system since a decade, it has no updated financial reports, it has a two years backlogged work. This shows that there may be problem with computerized accounting information systems effectiveness of the EIIDE.

The study topic was emerged to assess the effectiveness of computerized accounting information systems in measuring economic activities of the EIIDE based on its expected benefits already expressed in different literatures (Hakim (2007) Op.Cit, Siam (2004) Op.Cit., Sajady,et al(2008) Op.Cit., Meigs (1999) Op.Cit and etc.).

1.3 Basic Research Questions

Based on the statement of the problem and the objective of the study the following Research questions has formulated to be examined

1. What are the benefits of computerised accounting information systems of EIIDE?
2. To what extent do computerised accounting information system of the EIIDE effective in providing expected benefits?
3. What are the challenges associated with using computerised accounting information systems?

1.4 Objective of the Study

The objectives of this study were attempted:

1. To assess benefits of computerised accounting information systems of EIIDE;
2. To know to what extent the computerised accounting information systems of the EIIDE effectiveness;
3. To identify the challenges as well as problems associated with the use of these computerised accounting information systems;

1.5 Significance of the Study

As the study assessing effectiveness of computerised accounting information systems in measuring and controlling economic activities of an enterprise, this study gives a clue of measurements to be taken in order to improve the CAIS design and implementation for the under study enterprise.

It is also helps the interested party in outlining the feasibility factors to be considered by companies who want to adopt a Computerised Accounting information System and Identifying and addressing some possible challenges associated with the use of a Computerised Accounting Systems.

1.6 Scope of the Study

The present study assessed the benefits and effectiveness of computerized accounting Information system in EIIDE. Because of the Enterprise's financial activities consolidated at the head office level, the scope of the study was also limited in EIIDE at Addis Ababa.

1.7 Variables of the Study

The variables were supported with relevant literatures review. The dependent variable refers to the effectiveness of CAIS and the Independent variables are Completeness, Security, Flexibility, HR capability (KSA), Ease of use, Infrastructure, Perceived usefulness and internal controlling system.

1.8 Definition of terms

Internal controlling system: - according to Grady, (1957) internal control represents "the organization plan and procedures which are used within the business to safeguard its assets.

Infrastructure: - is the systematic provision of facilities (physical devices and software) for the transmission of knowledge, information and techniques via online and offline network with hardware and software.

Completeness:-fully supported with the necessary accounting modules and no piece of information essential to a decision or task should be missing.

Flexibility:-ability of the accounting information systems to adjust to the changing internal and external environment.

Security:-ability of protection to databases of the enterprise against compromises of their confidentiality, integrity and availability. The degree to which sensitive functions and reports can be protected through passwords will affect how the program rates in security.

HR capability (Knowledge, Skills and Attitude): -Even the best software can be a nightmare to the organization if people have not properly trained to use it. People are the key to the success of any accounting software program. Good staff training is essential and provides the information, practice, and involvement needed to get the most out of the software. (www.sagesoftware.com, "how choose accounting systems")

Ease of use: - How simple and easy-to-use is the software interface, the primary screens where data is entered or otherwise managed?

Perceived usefulness:-has equated with reality for most practical purposes and guides human behavior in general. The measurement of e-learning must incorporate different aspects of user perceptions to form a useful diagnostic instrument (Wang, 2003).

1.9 Organization of the study

The study was organized in five chapters. The first chapter deals with background of the study, problem statement, objective, significance, and definition of terms respectively. Chapter two comprised review of related literatures review, Chapter Three, briefs research method of the study , chapter four includes presentation, analysis and discussion of the data and the last chapter brings the study to final, by presenting summary of findings, conclusion and recommendations.

1.10 Limitations of the study

This research was based on few interviews, few structured questionnaire and some secondary data in survey of CAIS benefits and its effectiveness as well as its challenges. This is because

of limited time, not fully organized and up-to dated recordings that revealed cost wise effectiveness and efficiency of EIIDE's CAIS. The respondents are not reply genuinely as to expectations.

2. CHAPTER TWO: Literature Review

2.1 Overview of CAIS

The rapid change in information technology, the wide spread of user-friendly systems and the great desire of organizations to acquire and implement up-to-date computerized systems and software have made computers much easier to be used and enabled accounting tasks to be accomplished much faster and accurate than before. Hence as the study shows there are different factors that affect the effectiveness of computerised accounting systems. Some of the research findings of researchers" related this research proposals presented as the following paragraphs.

Thayer, Leith and Anya (2014) explored the research study on the factors affecting the effectiveness of accounting information system in Jordanian private higher education. Criterion validity analysis was conducted by using the dependable variable (human resource efficiency, software and hardware efficiency, database efficiency) and the undependable variable Accounting Information Systems efficiency. Pearson correlation was used to quantify the strength of the relationship between the two variables. Their results showed that the human resources, hardware, software and data bases have a positive relationship with the efficiency of AIS.

AL Hakim (2007) studied the impact of using databases on accounting information in controlling the public sector in which he focused on identifying the weaknesses in controlling function in the system analysis stage. In his findings, he found out that accounting information system is being enhanced by the use of database in designing accounting information system s and operation.

Siam Study (2004) entitled "Evaluation of effectiveness of computerized accounting information systems in Jordanian Banks under technological development" This study aimed to assess the effectiveness of systems Accounting information , through a set of criteria that reflect the effectiveness of the performance of these systems of quality , flexibility, reliability and simplicity. The study findings to computerized accounting information systems in the Jordanian banks in lost Technological development characterized by quality, through the accuracy and adequacy of the outputs of these systems and timing appropriateness of the submission of decision-making and appropriately , thereby contributing to the rationalization as it the study findings that computerized accounting information systems at Jordanian banks

under Technological , flexible, simple , reliable development in descending order as next (quality , reliability , flexibility , simplicity) . The researcher recommended was the most important Enhance interest in computerized accounting information systems and work to develop them.

Altoona Study (2005) entitled " Impact of the use of information technology on the effectiveness of accounting information system: A study about banks corporations and insurance listed on the Amman Stock Exchange within the first market. " It was aimed to identify the impact of the use of IT Information on the effectiveness of the information system of accounting in banks and insurance companies in Amman Stock Exchange within the first market, where two questionnaires have been developed in order to achieve objectives of the study, first objective is about the purpose of measuring the effectiveness of the accounting system, and the second one was for purpose of measuring impact of technology Information on the effectiveness of the accounting information system. The study included the use of information technology impact on effectiveness of the accounting information system as it was the most influential factor is use of telecommunications networks, followed by hardware, software, and databases and found that the banking sector has levels Technological higher than in the insurance companies. The study recommended the need to increase investment in information technology and work to keep pace with technological developments as presence of specialists within Career Level to solve any failures.

Fidel Study (2007) entitled "the effect of environmental factors, organizational and behavioural and technological effectiveness of accounting information systems at Jordanian banks in Republic Yemeni –Field Study "It aimed to determine the effect of environmental factors, organizational and behavioural and technological effectiveness of accounting information systems, both of these factors taken collectively or independently. The study concludes several findings as follows : Upon dealing with factors as one package , it was found that there were positive effectiveness for technological and organizational factors of accounting information systems , while there was no effect for each of environmental and behavioural factors , but in case in analysing each factor independently , it was proved existence of a clear and positive impact for all variables of the study effectiveness of accounting information systems used in business banks in Yemen . The study recommended a need for participation of both staff and users in design of accounting information systems in addition to development and necessity to use computers and sophisticated software, besides expanding use of administrative decentralized system.

A study conducted by Ismail & King (2007) entitled "Factors influencing the alignment of accounting information systems in small and medium sized Malaysian manufacturing firms" The study aimed to identify the factors that affect use of accounting information systems in factories, small and medium -sized enterprises in Malaysia. The study sample consisted of (214) companies that have accounting systems. The study concluded that the use of accounting information systems shall connect information flow from the top and bottom at these companies, besides helping the staff and employees at them to achieve their goals. In addition to application of these systems will enable companies to provide accurate information to the relevant government agencies. Consequently, the study assisted the researcher to identify more factors affecting employing of accounting information systems and thus will influence the effectiveness of a subject 's of the current study .

Sajady, et al (2008) conducted a study entitled "Evaluation of the Effectiveness of accounting information Systems". The study aimed to evaluate the effectiveness of information systems companies from the perspective of financial managers (347) of the total industrial company (1383) of companies registered in the financial stock market in city of Tehran, Republic of Iran , The study indicated an application of accounting information systems in these companies at a good level which helps in improving process of decision-making by financial managers as well as it assists to improve internal observation as well as quality of financial reports . This study benefited from evaluating accounting information systems and its impact on improving the decision-making process besides developing the observation which is considered a part from the current study variables.

Ahmad e-tall (2013) examined the factors that affect accounting information system implementation and accounting information quality, a survey in university Utara Malaysia, which he found out that the relationship between management commitment and data quality are not significantly related to accounting information quality but significantly related accounting information systems and human resources. Questionnaires were used as data collection instrument, to ensure questionnaire reliability, Cranach's alpha was used as a measure of internal consistency of the questionnaire and a regression analysis was used to test the hypothesis. The study recommends that comprehensive training programs should be organized to get the sufficient knowledge in accounting information system implementation and the importance of data quality, however the study recommends that top management should support AIS implementation to get full benefit of accounting information.

According to Rahway (2012) ,the management commitment on data quality together have adequate effects on accounting information system ,although the contribution of management commitment to data quality needs to be improved based on their research, and also finds lack of top management adequacy for training and funding for resources development. As the management commitment increase, accounting information system effectiveness improves, management commitment is “engaging in maintaining behaviours that others achieve their goals” . Thong, e -tall (1996) believed that if there is low level of top management support, then top management may not involve in aspects of IS Implementation such as the review of the consultant recommendations, participate in decision making, or monitor the project, expect approving the purchase of computer system, furthermore they found out that management commitment increases the effectiveness of information system.

Mashhour & Zaatreh (2008) conducted a study entitled "Framework for evaluating the Effectiveness of Information Systems at Jordan Banks: An Empirical Study". The study aimed to identify how the investment in information systems at Jordanian banks contributes to the effectiveness of accounting information systems. In addition to measurement of the factors that determine the effectiveness of accounting information systems in banks sector in Jordan which is the main subject of the study. The study sample consisted of (12) Jordanian banks. The study concluded that the accounting information systems and dramatically affect the performance of these banks as well as their level of competitiveness among them. Additionally, competitiveness between banks is the subject of the study. The study benefited the researcher, particularly in construction of its instrument, being similar to the study topic. The difference between this study and the current one is that the second attempted to evaluate investing in information systems in general and whether this will benefit to Accounting Information Systems effectively, while the current one discusses the effectiveness of accounting information systems from the viewpoint of administration, taking into account the difference in the environment, as the current study was conducted in Jordan.

There is a strong agreement that information required from AIS is always reliable. It was also agreed that the information required from AIS has been found to be accurate, timely, precise, adequate and meaningful. From the information extracted from the 104 respondents, they strongly agreed that they usually get help from IT support personnel in the organization when difficulties are encountered during the usage of AIS. Aside from this, help can also be assessed easily from the Institute of Chartered Accountants, the AIS manual and from colleagues. The support services provided by AIS head office staff were agreed to be always

adequate, relevant, provided within an acceptable time frame, provided with a positive attitude and overall was regarded as satisfactory.

2.1.1 Information Systems

An information system is an organized means of collecting, entering, and processing data and storing, managing, controlling, and reporting information so that an organization can achieve its objectives and goals (Romney et al., 1997:18). This definition of information system shows that an information system has following components.

Every information system has designed to accomplish one or more goals or objectives. For example, an information system had designed to collect and process data about employees to help managers prepare payroll reports.

Inputs: Data had entered into the information system to be processed. Data are the facts that has collected and processed by the information system. Data are meaningless and useless, which, therefore, should be processed and transformed to meaningful, organized, and useful form that is called information.

Outputs: Output is the meaningful and useful information produced by the information system. For example, weekly payroll report produced by the information system is an output.

Data storage: In addition to the external data entered into the information system, there should be internally stored data used for processing.

Processors: In order to produce useful and meaningful information, data must be processed. Most companies process data by using computers.

Instructions and Procedures: An information system produces data by the following instructions and procedures. In computerized information systems, software includes procedures and instructions that direct computers to process the data.

Users: Users are people who use the information produced by the system and who interacts with the system. For example, managers who use financial statements that had produced by an accounting information system are the users of the information system.

Control Measures: In order to make the information system produce correct, and error free information, necessary measures has taken to protect and control the information system. Any

system that includes the above components has known as an information system. The following section will show how accounting systems are established using these components.

2.1.2 Accounting Information Systems (AIS):

The definition of AIS has evolved over the years from one focusing on the provision of more formal, financially quantifiable information to assist in decision-making processes to one that embraces a much broader scope of information. The dimensions used to reflect the design of AIS include focus, orientation, time horizon, aggregation, integration, timeliness, financial and non-financial, and quantitative and qualitative.

Defining AIS has been difficult to day and research in this area is quite diverse. It includes behavioural studies of audit decision – making tools, field studies of organizational systems, design, development of general ledger systems, and development of accounting models that effectively utilize advancement in computer technology, application of different technology solutions to AIS situations, and many other types of studies. In general, an information system is used to represent the real world phenomena with a set of symbols which are captured and implemented within a computerized environment (McCarthy, 2003). Therefore, an accounting information system is one that translates representations of economic activities into a format that is valuable to accountants and to their customers i.e., business decision makers, who need information about economic activities. Accountants are being pressured to redefine their contribution to organizations and to expand the scope of their activities beyond financial statement preparation and analysis.

Accounting information system (AIS) is the information subsystem within an organization that accumulates information from the entity's various subsystems and communicates it to the organization's information processing subsystem. The AIS has traditionally focused on collecting, processing, and communicating financial-oriented information to a company's external parties (e.g. investors, creditors, and tax agencies) and internal parties (mainly management).

Under the traditional view of AIS, each organization's functional areas, such as marketing, production, finance, and human resources, maintain a separate information system. However, organizations have found the need to integrate these separate systems into one seamless database or to enterprise-wide information system.

Today, AIS is concerned with non-financial information as well as financial data and information.

Accounting information system (AIS) is based on value accounting theory which are designed to store and summarize financial transactions used to produce financial statements in accordance with generally accepted accounting principles (GAAP) and to account to the owners of the business in this way. An accounting information system (AIS) consists of people, procedures and information technology. (Remney; steinbart, 2000)

2.1.3 Computerized Accounting Systems

In computerized system computers are used in processing data and in disseminating accounting information to interested users. Now-a-days most of business organizations eventually replace their manual accounting system with computerized accounting system. Computerized accounting systems are software programs that gather the various accounting information related to sales, purchases, receivables, payables, cash receipts, cash disbursements, and payroll. And in this procedure the financial statement is generated. (Islam, 2010). Most of the accounting information is generated from transactions. Transactions of firms have both accounting and non-accounting attributes. During the early days of computerization of AISs, accounting system used to be isolated from other information systems and served as operational; support systems. Today, as more powerful, flexible, economical, and user-friendly software and hardware have become available, the trend is toward a logical arrangement where a single system can support both accounting and operational needs. In sum, today's accounting systems are closely tied into and may even be fully integrated with other information systems. (Wilkinson et al, 2000).

A computerized accounting system involves the computerization of accounting information systems which is established in order to facilitate decision making. These are associated with a numbers of benefits like speed of carrying out routine transactions, timeliness, quick analysis, accuracy and reporting. Effective and efficient information flow enhances managerial decision-making, thereby increasing the firm's ability to achieve corporate and business strategy objectives (Manson, McCartney, and Sherer, 2001). This in turn, may increase the prospects of the firm's survival (Platt and Platt, 2012). This can be evaluated by the procedures, accounting records and tools used (Keating and Frumkin (2003).

According to Meigs et al. (1999) the basic functions of accounting systems, in developing information about the financial position of a business and the results of its operations; every accounting system performs the following basic functions: Interpret and record the effects of business transactions, Classify the effects of similar transactions in a manner that permits

determination of the various totals and subtotals useful to management and used in accounting report and Summarize and communicate the information contained in the system to decision makers.

The differences in accounting systems arise primarily in the manner and speed with which these functions are performed. Ensure the fully control, which confirm accuracy recording and manipulating the data related to business activity. Also, protect those data and organizations assets.

2.1.4 Characteristics of Accounting Information Systems:

According to Stambaugh; Carpenre (1992) the accounting information system has the following characteristics: Provided on timely basis, Presented in an aesthetically appealing format, Relevant to the decisions at hand, Concise, yet sufficient in scope to allow” what-if” analysis and Flexible to interface with information from other functional units.

2.1.5 Components of Accounting Information Systems

An accounting system consists of the personnel, producers, devices, and records used by an organization to develop accounting information and to communicate this information to decision makers. The design and capabilities of these systems vary greatly from one organization to the next. In very small business, the accounting system may consist of little more than a cash register, a check book, and an annual trip to an income tax prepared. In large business, on accounting system includes computers, highly trained personnel, and accounting reports that affect the daily operations of every department (Meigs; et al. Op.Cit. p.6.).

But in every case the basic purpose of the accounting system remains the same to meet the organization”s needs for accounting information as efficiently as possible. Many factors affect the structure of the accounting system within a particular organization. The most important are: the company”s needs for accounting information and the resources available for operation of the system.

2.2 Measures of CAIS effectiveness

2.2.1 Perceived Usefulness

Quality information is critical to organizations success in today”s highly competitive environment. Accounting information systems (AIS) as a discipline within information systems require high quality data. However, empirical evidence suggests that data quality is

challenging in AIS. Therefore, knowledge of critical factors that are important in ensuring data quality in accounting information systems is desirable. (Hongjiang, 2003) and Kim (1989) argues that usage of AIS depends on the perception of the quality of information by the users. Generally the quality of information depends on reliability, form of reporting, timeliness and relevance to the decisions. Effectiveness of accounting information system also depends on the perception of decision-makers on the usefulness of information generated by the system to satisfy informational needs for operation processes, managerial reports, budgeting and control within organization. (Sajady et al, 2008).

2.2.2 Infrastructure

The accounting application should provide extensive editing of data and change capability upon input and before a transaction is posted to an account, but no ability to change data after it is posted. If an error is discovered after the transaction is posted, a separate correcting transaction must be made. The system should be capable of exporting electronic files of transactions and other data.

2.2.3 HR capacity/competency (Knowledge, Skills and Attitude):

The accounting system in any organization consists of a number of human parts represented by all personnel at the accounting department who utilize the material parts needed for accounting work such as equipment, hardware, books and records, in accordance with established accounting rules and procedures in order to record, calculate and deliver data into sets of financial reports and statements to all parties concerned with making decisions (Dahmash, Abu Zir, 2004). Individuals are among the most important components of accounting systems. The importance of individuals within the accounting information system increases under work for electronic purposes, in terms of the availability of qualified individuals and their ability to perform accounting tasks using modern technology with multiple entities related to the economic unit where they operate, in addition to the increase in data and information required to be collected, processed and delivered to stakeholders.

The effective Accounting Information System must involve the understanding of how people work and the social practices involved inside it (Indeje and Zheng, 2010: 4). User competence is one of the factors that influence the success or failure of an organization/company in implementing information systems O'Brien and Maracas, 2009).

The results of research which is conducted by Najab Eternal et.al (2013) provide empirical evidence that information technology has positive influence on the effectiveness the

accounting information. Further research that was conducted by Taber et.al (2014) produces empirical evidence that there is a significant positive effect between user's competences and the performance of Accounting Information Systems.

2.2.4 Ease of use

It is the extent to which the CAIS system's interface is ease to interact with it and perform the necessary activities.

2.2.5 Internal Control Systems:

The Modern information age is fully dependent upon CAIS but it has grown increasingly more complex and dependent on technology to meet needs of information. This complexity and importance of CAIS makes it necessary for business organizations to ensure their adequate control over their existing CAIS. In different times, the business organization performs examinations of the system to ensure the adequacy of the control and its proper function. Actually control is the process of exercising influence over the activities of an object, organism or system. CAIS involve processing of transactions as a means of maintaining financial records. Such systems identify, assemble, analyse, classify, record, summarize and report transactions and other events. Internal controls include all the policies and procedures adopted by the management of an entity to assist in achieving management's objective of ensuring, as far as practicable, the orderly and efficient conduct of its business, including adherence to management policies, the safeguarding of assets, the prevention and detection of fraud and error, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information. Internal Control is a process, affected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives three categories like reliability of financial reporting, compliance with applicable laws and regulations and effectiveness and efficiency of operations. Effective internal control systems are essential for successful operation of business as well as accounting control and administrative control. It helps the Accounting Information Systems division to generate reliable and relevant information. Other qualitative characteristics of accounting information can also be maintained if there is sound internal control system in an organization. Internal controls are procedures to set up to protect assets, ensure reliable accounting reports, promote efficiency and encourage adherence to company policies. Internal controls are essential to achieve some objectives like efficient and orderly conduct of accounting transactions, safeguarding the assets in adherence to management policy, prevention of error and detection of error, prevention of fraud and

detection of fraud and ensuring accuracy, completeness, reliability and timely preparation of accounting data.

The computerized accounting system must provide input edits and controls to assure that information entered into the system is accurate, that all appropriate information is entered into the system, and that information is entered into the system only once. All information entered into the system must be authorized through effective manual or electronic controls. Transaction dates should be based upon system generated dates which cannot be modified by the user. If necessary, the system may provide an additional effective date of the transaction that is user controlled.

Segregation of duties is the concept of having different people do different tasks within the organization. It provides the foundation of good internal control by assuring that no one individual has the capability to perpetuate and conceal errors or irregularities in the normal course of their authorized duties. Segregation of duties is achieved within information technology systems by appropriate assignment of security profiles that define the data the users can access and the functions that they can perform. Access must be restricted to the minimum required for the user to perform their job function. Access rights must be periodically reviewed and approved by management. As it was cited by Bhourat Kombo (2013) in his study, the effects of computerized accounting system on auditing process: a case study of Mtwara district council (MDC), Cengage (2011) investigated the impact of accounting information system knowledge and audit effectiveness in Thailand. The results of the study revealed that, knowledge of CAS, the risk assessment competency and quality planning judgments are the factors which affect audit effectiveness in computerised environment.

The computerized accounting system must incorporate features that assure all accounting information is reported accurately and completely. Procedures must also exist to assure that only authorized individuals have access to computer generated output. All receipts or payments generated by the accounting system must include unique document identification numbers either pre-printed on the form or printed on the form by the application system. If the numbers are printed on the form by the application system, adequate security must be implemented to prevent unauthorized modification of the number sequence. Pre-printed receipt and check stock must not include pre-printed signatures, must be securely stored, and usage must be logged and reconciled. If the report content can be modified via user selection

of various criteria such as account codes, department codes, transaction codes, status codes, etc., the report heading should contain sufficient information regarding the selection criteria to allow another user to understand what information is being reported and recreate the report. All output reports must clearly indicate the effective dates of the information in addition to the report generation date. Output reports must have appropriate subtotals to allow reconciliation to other reports and to external documentation.

2.2.6 Flexibility

Information generated in one computer application system and transferred to another computer application system must be accurate and complete. Both systems should generate reports documenting record counts and the dollar value totals of the information transferred to enable prompt identification of discrepancies. The need for flexibility of the existing CAIS is compatibility of it with technology advancement, changes in government regulations, organizational growth and increased competitions.

2.2.7 Completeness

The extent to which having all the necessary CAIS modules and facilities which helps measure all economic activities accurately and timely.

2.2.8 Security

The importance of effective management of IT security from an economic perspective increased in recent years because of the increasing frequency and cost of security breaches. Increased interconnectivity among computers enabled by the Internet raised the scale and scope of information technology related crime. IT security is no longer purely the concern of the traditional high-risk category organizations such as those in the defence, military, or government sectors. Firms in all sectors of economy must address IT security concerns because the cost of a single security breach can be huge in terms of monetary damage, corporate liability, and credibility. Even though companies spend more money for the deployment of computer security technologies, the security problem is not getting better. Firms need to recognize that even the best technology is not complete proof. Furthermore, even if such a complete proof technology exists, it may not always be desirable for all firms. A secure environment for information and transaction flow can create value for the organization as well as its partners and customers (Hasan Cavusoglu, Huseyin Cavusoglu and Srinivasan Raghunathan, 2004)

The reliance on information and continuous changes in technology; force organizations to implement security controls that protect Computerized Accounting Information Systems (CAIS). However, the failure to secure the CAIS and the information they contain or to make it available when it is required can, and does, lead to great financial and non-financial losses.

Hermanson et al (2000) carried out an exploratory survey using a questionnaire to understand how organizations are addressing their IT risks and to examine evaluations of IT risks performed by internal auditors in their organizations. The results of the study revealed that internal auditors focus primarily on traditional IT risks and controls, such as IT asset safeguarding, application processing, and data integrity, privacy, and security.

2.2.8.1 Physical Security

The computer system and the associated telecommunications equipment must be adequately protected from environmental damage including, but not limited to, fire, water, and physical damage by individuals. In addition, the computer must be protected from unauthorized access, terminals must be inoperable when not attended by an authorized employee, and terminals utilized to enter sensitive commands must not be positioned where unauthorized individuals may view the contents of the video display terminal.

2.2.8.2 Logical Security

Effective logical security prohibits unauthorized access and restricts the computerized resources each authorized user may utilize. Access to accounting information and processes must be controlled by operating system software and by the computerized accounting application through user identification codes (user IDs) and passwords. User IDs are unique identifiers assigned to each authorized user, which remain constant for that user. Passwords are confidential keywords associated with the user ID to provide verification of the user's identity. Each user must have a unique user ID and password which must not be shared. Passwords must meet the following criteria:

- a. Passwords must be changed every 30 days.
- b. Passwords must be a minimum of six (6) characters in length.
- c. Passwords must be a combination of alphabetic and numeric characters.
- d. Passwords may not be the same for a user ID as the last five (5) passwords used by this user ID.
- e. Individuals must assign their own passwords.
- f. Passwords must be encrypted while stored on the computer.

- g. Reporting of security definitions and user access rights to information must be available to, and easily understood by, Management and State Board of Account Field Examiners. These security definitions and user access rights must enforce adequate segregation of duties for the accounting system.
- h. Users other than System Administrators and Security Administrators must be prevented from accessing sensitive operating system commands.
- i. The number of System Administrators and Security Administrators must be limited.
- j. Computer programmers must not have update access to production accounting information.
- k. Users must not be allowed to be active on multiple terminals at the same time with the same user ID.
- l. User IDs must be deactivated after three unsuccessful attempts to sign on to the computer.
- m. For inactive terminals, the user must be automatically prevented from accessing the computer after 15 minutes of no activity until the user's password is entered.
- n. Users must be prevented from modifying or deleting operating system and computer program files.
- o. Users must be prevented from updating accounting information except through authorized transactions within the computerized accounting application system.
- p. User access rights must be eliminated or revised upon termination of employment and transfers of employee responsibility.

The study of (Abu-Mousa, 2006), cited by Eman Al Hanini (2012), entitled by: “Examining the threats regarding the computerized accounting information systems in the developing countries: A field study on the Saudi organizations” aimed at identifying the threats that threaten the accounting information systems in the Saudi companies. And the study concluded that the accidental and intentional entry of bad data, the accidental destruction of data, the employees’ sharing of password and the introduction of the viruses into the computers are the most important risks which the computerized accounting systems can be exposed to and there is no difference attributed to the type of the company or the economic sector that it belongs to.

2.3 Conceptual framework

Some of the variables that influence the Effectiveness of Computerized Accounting Information System has formulated as the following Conceptual framework

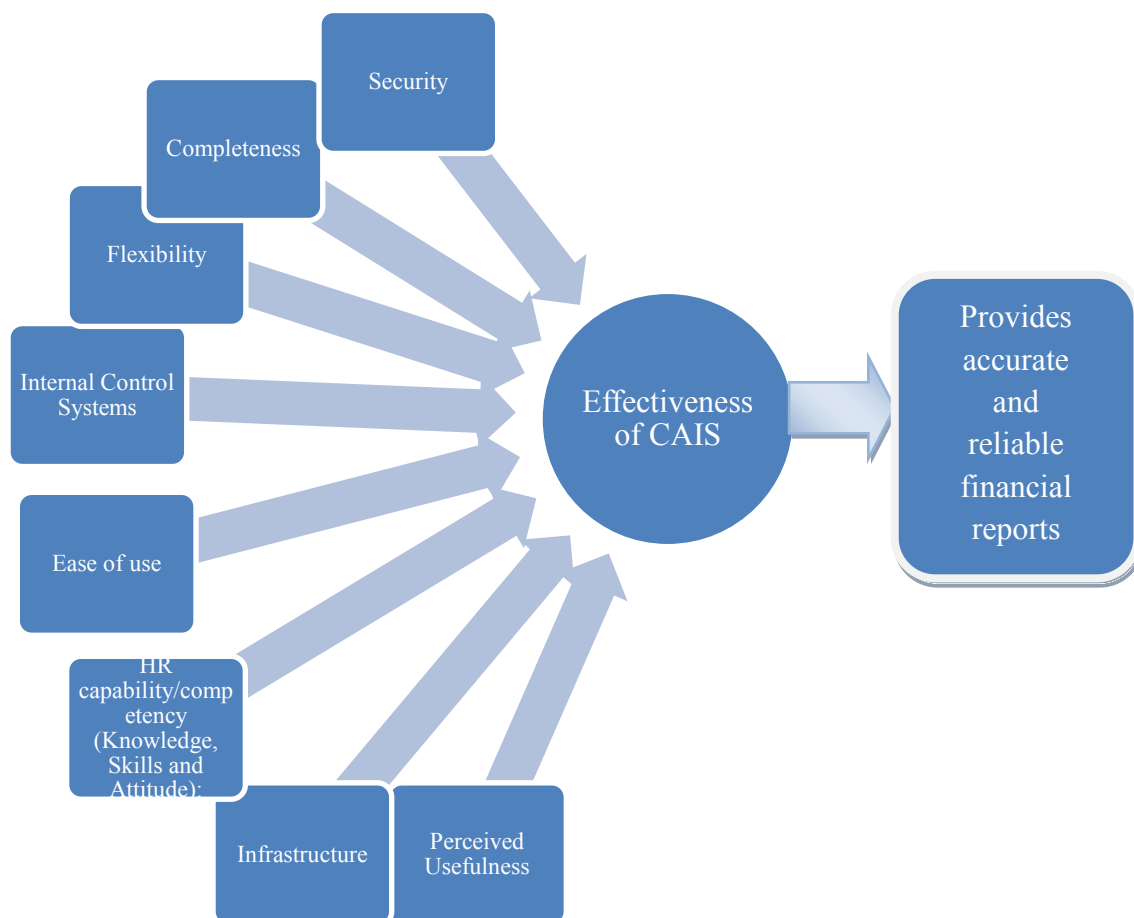


Figure 2.1: Conceptual framework

Source: adopted from the work of Julia Smith, Sharinah Binti Puasa (2016)

As it shown in the above figure 2.1, all the determinant factors have an impact on the effectiveness of CAIS independently. To be effective in measuring economic activities of an enterprise and providing its reliable and accurate financial reports timely, CAIS has to accompany with some those necessary determinant factors.

3. CHAPTER THREE: Research Methodology

Research methodology is a way to systematically solve the research problem. A scientific approach to the research methodology is very much essential to evaluate the research problem systematically. The aim of research methodology is to set up the foundation of the statistical analysis.

3.1 Research Design

The data was collected by an interview and using a self-administrated questionnaire that was designed after a preliminary observation on the practice of computerized accounting information systems in the EIIDE. The questionnaire reviews the existence of all general functions and procedures that guarantee Computerised accounting information systems to be effective in achieving its goals. Thus descriptive survey method has adopted as appropriate methodology to describe and analyze the current status, problems and features.

3.2 Data Source

Both primary and secondary source of data was used. To have a good conceptual clarity of the subject under study, as the secondary sources of data books, journals, research literatures and websites on the issues of CAIS, was used. The population of interest was defined as the employees of EIIDE Finance directorate, IT directorate, Audit directorate and other its management bodies, which are total 74 employees. This is because they are considered as the main Employees who have direct contact with the systems. The research respondent pattern from those intended groups presented as of the following table.

Table: 3.1. Research Respondents

Targeted population	Addis Ababa Head office				
	Finance Directorate	IT Directorate	Top Management Body	Audit Directorate	total
Total number of population	50	7	6	11	74
Total number of respondents	50	7	6	11	74

3.3 Reliability and Validity of the Study

The study is valid if its measurements actually measure what they claim to and if there are no logical errors in drawing conclusions from the data (Garson, 2002). Therefore different steps were taken to ensure the validity of the study. The literatures that have been selected for the study was clearly described and research question has been formulated based on those literatures. To check the content validity of the questionnaire various expert in the field of academics and business from the different organization were contacted and the components of questionnaire were modified as per their instructions.

3.4 Data Gathering Instrument

In order to gather the primary data the research was predominantly use questionnaire and an interview. It was designed in mainly closed ended and few open ended items for EIIDE employees. The questionnaire had two major parts general questions and measurement of effectiveness factors questions. Depending on the type of questions the statements was placed on a 5 point Likert-type scale (1 for Strongly Disagree and 5 for Strongly Agree). Likert Scale is a rating scale used for measuring the strength of respondent agreement with a clear statement on five point ratings.

The language construction of the questionnaire was refined and used for the final study, and administered with 74 respondents in English with the belief that it would provide maximum opportunity for accurate communication of ideas between the researcher and the respondents.

3.5 Data Organization

Data entry was start after the actual data collection and manual editing and coding were completed. The data was entered into the computer using the Statistical Package for Social Sciences (SPSS) version 20 software. Once the process of data entry was accomplished, cleaning of the data started. Data cleaning and editing are focuses on checking whether the assigned value for each case is legitimate, and on the logical consistency and structure of cases.

3.6 Methods of Data Analysis and Presentation

The responses obtained from the questionnaire were analyzed by descriptive (Mean, standard deviation, cross-tabulation and percentage). In so doing, the collected data was coded, edited, and sequenced. All the close-ended questions of the questionnaire including the preliminary data was entered in to the Statistical Package for Social Sciences (SPSS) computer Program and quantitatively analyzed and interpreted. The responses from Top management body to

Open-ended questions were analyzed and organized sensibly .Finally, major findings and conclusions was discussed accordingly. Then, based on the peculiarities of the findings, some recommendations have been given.

37. Ethical Considerations

The research ensure that information receive from respondents will treated with a high level of care and confidentiality. The identities of key informants are not disclosed in the report since the research is to appraise what pertains and not to use personal opinions of individuals.

4. CHAPTER FOUR: Data presentation, Analysis and Interpretation

4.1 Introduction

This chapter discusses the data presentation, analysis and interpretation of the findings. The purpose of the study was to assess effectiveness of computerized accounting information systems of an enterprise: the case of EIIDE. The researcher made use of Statistical tables and figures to present data.

4.2 Demographic Data analysis

4.2.1 Sex:

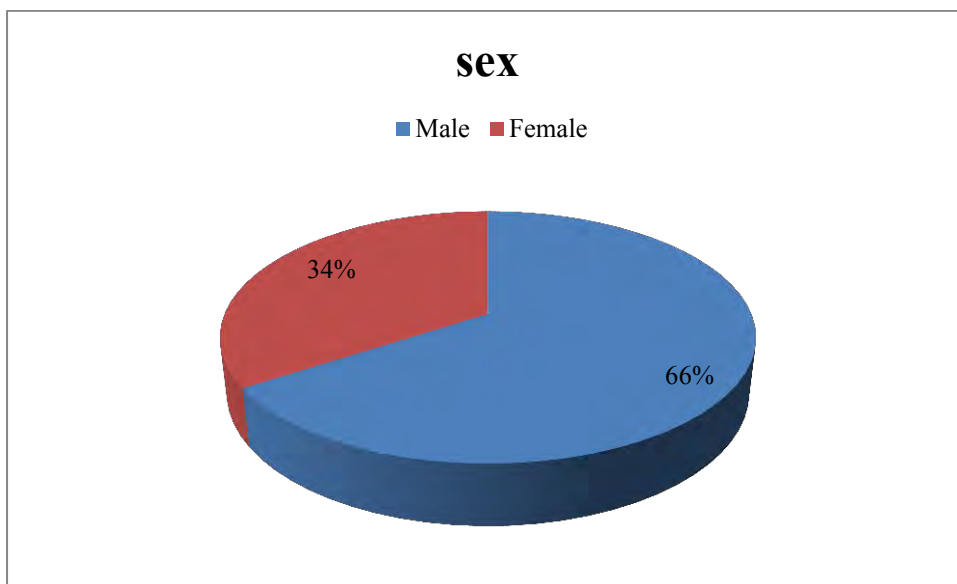


Figure 4.1: Sex of respondents

Source: SPSS output from field survey data, April, 2017

As the above Figure 4.1 shows 66% of 74 participants of this research is Male, while 34% represents Female.

4.2.2 Age:

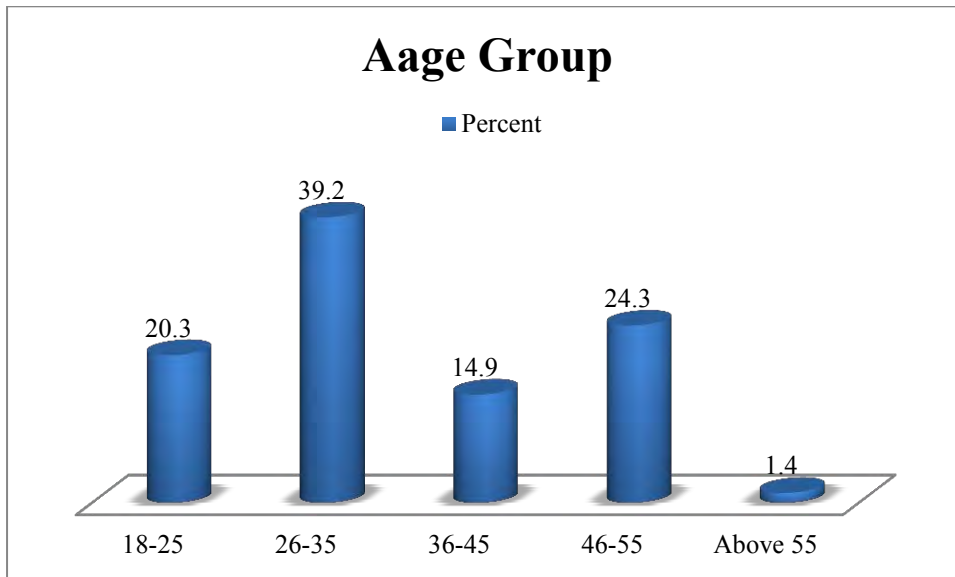


Figure 4.2: Age group of respondents

Source: SPSS output from field survey data, April, 2017

The above figure 4.2 shows 20.3% age group of 18-25, 39.2% age group of 26-35, 14.9% age group of 36-45, 24.3% age group of 46-55 and 1.4% age group of above 55 were participated in the study.

4.2.3 Marital Status

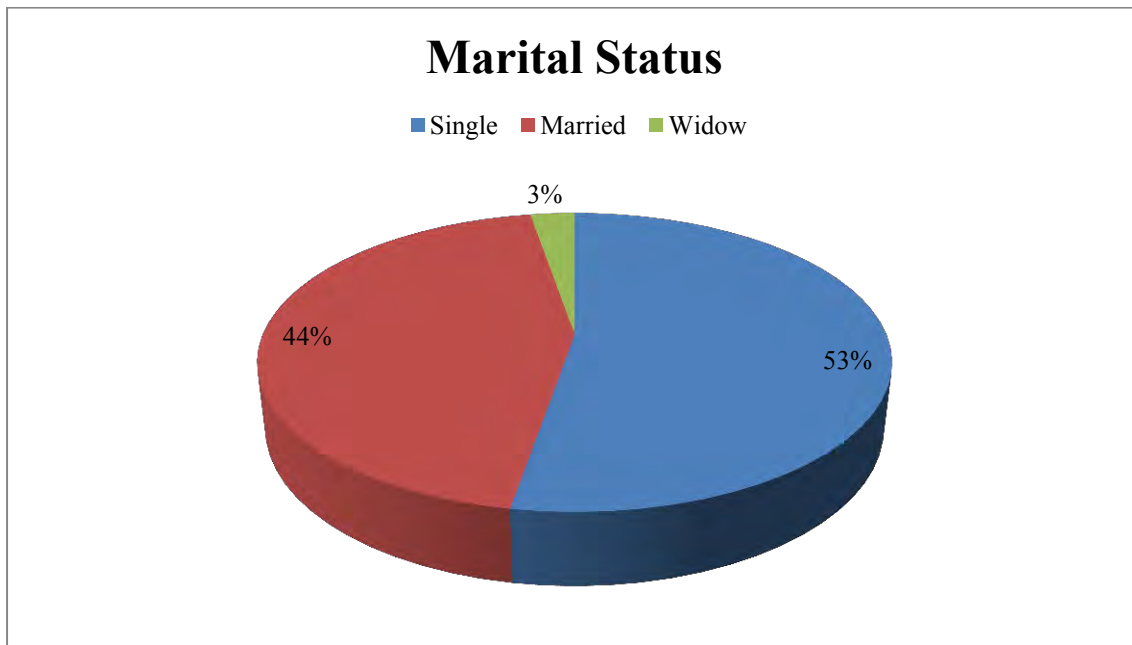
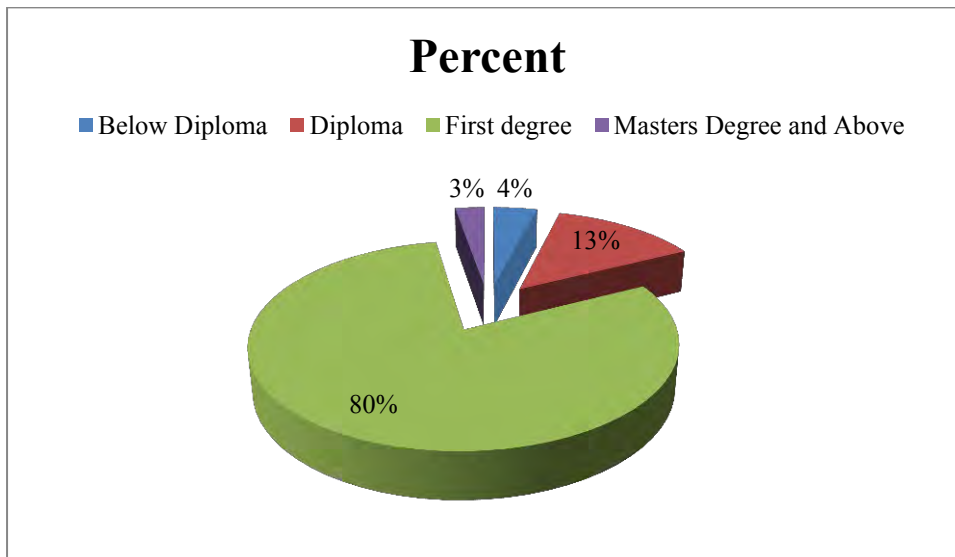


Figure 4.3: Marital Status of respondents

Source: SPSS output from field survey data, April, 2017

As the above figure 4.3 shows, 57%, 40% and 3% of the study participants were Married, Single and Widow respectively.

4.2.4 Educational Level



Source: SPSS output from field survey data, April, 2017

Figure 4.4: Educational level of respondents

As the above figure 4.4 shows, the educational level of the employees participated in this research, which represents 4% was below Diploma, 13% Diploma, 80% First degree and 3% was Masters Holders.

4.2.5 Work Experience

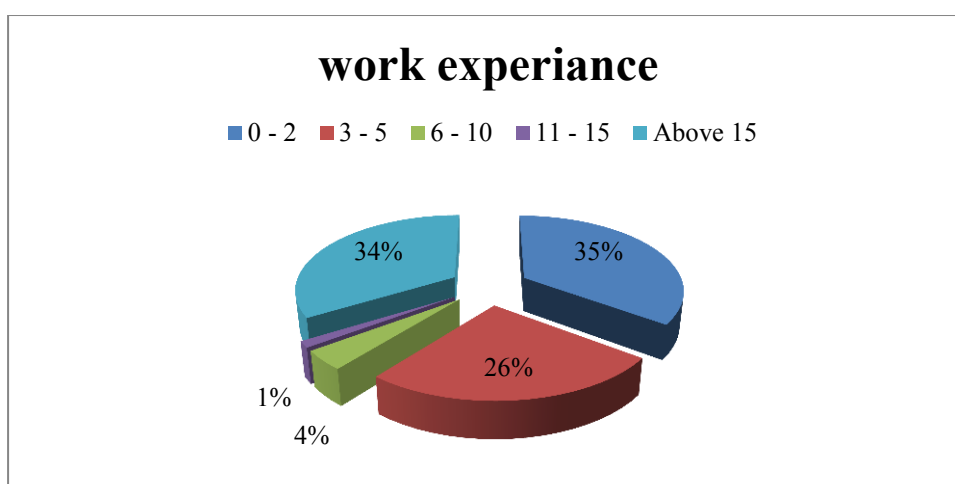


Figure 4.5: Work experience of respondents

Source: SPSS output from field survey data, April, 2017

The above figure 4.5 shows that the study included 35% of the participants which their years of work experience were between 0-2, 26% of the participants which their years of work experience were between 3-5 years, 4% of the participants which their years of work experience were between 6-10 years, 1% of the participants which their years of work experience were between 11-15 years and 34% of the participants which their years of work experience were above 15 years.

4.2.6 Work Group

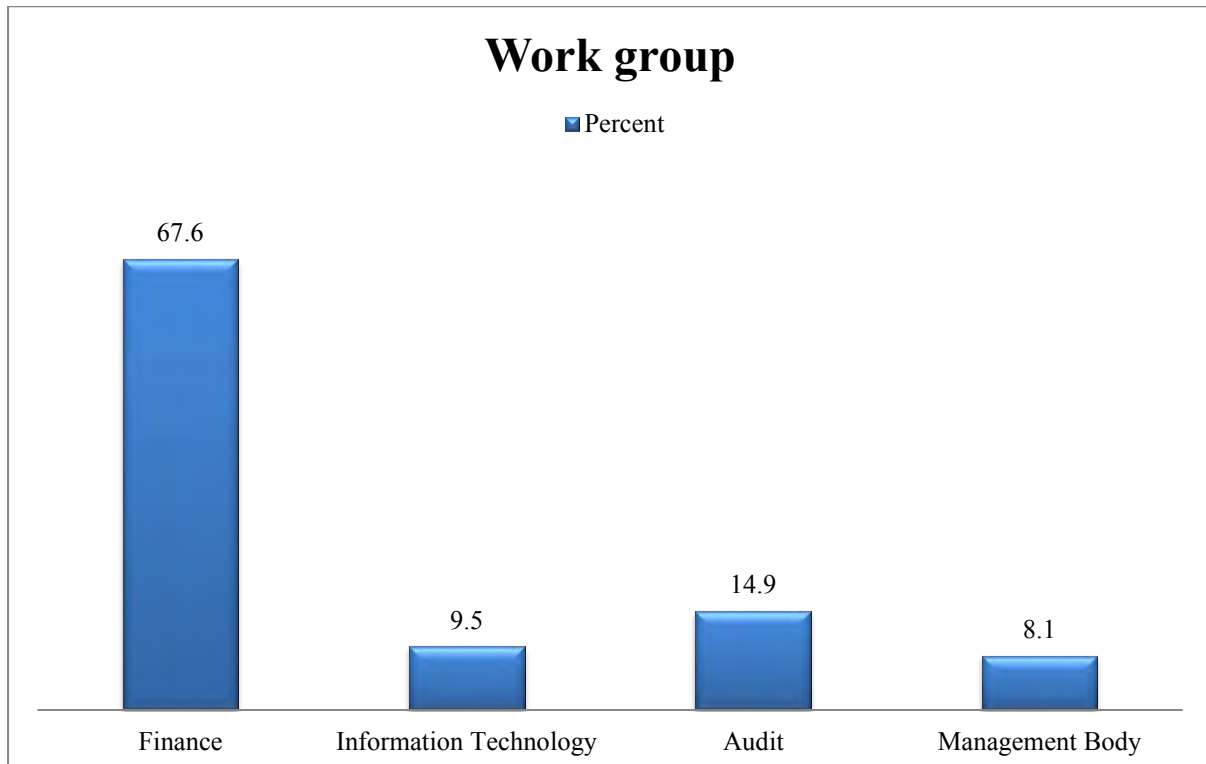


Figure 4.6: Work groups of respondents

Source: SPSS output from field survey data, April, 2017

As the above figure 4.6 shows, the percentage of respondents to whom questionnaires was distributed and returned from Finance Directorate represents 67.6%, 9.5% representing Information Technology (IT) Directorate, 14.9% Audit Directorate and 8.1% representing Top management body of the Enterprise.

4.3 Analysis the effectiveness of CAIS

The mean values of all the intended variables was calculated as follows

Likert scale: 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree

$$\text{mean value of each question} = \frac{\sum \text{ikert scale value} * \text{number of the respondents for the question}}{\text{total number of respondents of each group}}$$

$$\text{total mean value} = \frac{\sum \text{mean value of each variables}}{\text{the total number of the variables}}$$

4.3.1 Perceived usefulness

Table: 4.1. Perceived usefulness

Perceived usefulness	Work Group			Total mean
	Finance	Information Technology	Audit	
CAIS generates Automatic document numbers (pre numbered)	2.26	2.71	2.27	2.42
CAIS allows me to process large amounts of financial information.	3.70	3.71	3.36	3.59
CAIS enabled me to accomplish tasks easily and more quickly.	3.68	3.57	3.36	3.54
CAIS improved the reliability of financial reports of my Enterprise.	3.74	3.29	3.18	3.40
CAIS eliminate data entering redundancy.	3.36	2.86	3.00	3.07
I believe CAIS effectively implemented in EIIDE;	3.12	3.86	3.00	3.33
CAIS enhancing higher quality of work performance for higher profitability.	3.48	3.29	3.09	3.29
Total mean	3.33	3.33	3.04	3.23

Source: SPSS output from field survey data, April, 2017

Some of the qualitative characteristics of computerized Accounting Information include accuracy, timeliness, generating consecutive document numbers, and comparability and understand ability. As the above table 4.8 shows, more than average mean value given by respondents to variables related to perceived usefulness of CAIS, implies there is a positive perception of respondents that CAIS of the EIIDE allow to process large amount of financial information data, enable to accomplish tasks easily and more quickly, improves the reliability of financial reports, enhancing higher quality of work performance, eliminates data entry redundancy and effectively implemented. But 2.42 mean weight shown in the table, indicates that the enterprise loses the benefits of CAIS generate Automatic document numbers (pre

numbered).As a result, it is possible conclude that there is difficulty to have a strong internal controlling system and also makes effectiveness of CAIS of the EIIDE questionable.

As the overall respondents reply, the weighted average mean value of the variables related to perceived usefulness of CAIS was 3.23. Therefore; this implies that there is a general positive perception of the study respondents to CAIS and this also indicates that having positive perception leads CAIS to be effective. So, regarding this CAIS of EIIDE is effective having positive perception of using it.

4.3.2 Infrastructure

IT infrastructures are one the main components of that should exist adequately any IT based systems. So, the IT infrastructures that the EIIDE used to run its CAIS effectively are characterised as follows by respondents participated in this research.

Table: 4.2 Infrastructures

INFRASTRUCTURE	Work Group			Total mean
	Finance	Information Technology	Audit	
There are the required equipment and materials to use CAIS in the EIIDE;	3.22	3.86	2.91	3.33
I have the required knowledge to use the enterprise"s CAIS;	2.80	3.14	1.91	2.62
I have stable and fast internet connection access that I can use the enterprise CAIS;	2.20	2.71	2.09	2.34
There is the required computer technology to use CAIS in the EIIDE;	3.00	3.57	2.64	3.07
Total mean	2.81	3.32	2.39	2.84

Source: SPSS output from field survey data, Aril, 2017

As the above table 4.2 shows, the variable there is the required equipment and material to use CAIS in the EIIDE have a weight mean value of 3.33, the required knowledge to use CAIS of the Enterprise has average mean value of 2.62, stable and fast internet connection access to use CAIS of the Enterprise has a mean value of 2.34 and there is the required computer technology to use CAIS has a mean value of 3.07.As the overall respondents reply, the

weighted average mean value of the variables related to infrastructure of CAIS of EIIDE is 2.84.

In detail, as Finance and Audit department respondent's reply, the cumulative weighted average mean value of the variables related to infrastructure of CAIS in the EIIDE is 2.81 and 2.39 respectively which implies that they are disagree to those questions, while as the IT department respondents reply, it have the mean value of 3.32 that implies their agreements to those questions. As a result, this antagonistic may implies that there is knowledge gap between those departments related to the necessary infrastructures to be used.

Therefore, based on the overall respondents' reply, the CAIS of the enterprise did not adequately supported by IT infrastructure. So, it is possible to conclude that there is a probability of ineffectiveness of EIIDE's CAIS. The need of necessary IT infrastructures (skilled human power, known computer software and hardware) for effectiveness of CAIS was revealed by different researchers like Sajady, H., Dastgir, M., &Nejad, H. H. (2012) and also stated in different literatures.

4.3.3 HR Capability/Competency (Knowledge, Skills and Attitude)

Table: 4.3. HR capability

HR Capability	Work Group			Total mean
	Finance	Information Technology	Audit	
I believe that a qualified human staffs plays an important role in raising the performance of accounting systems.	3.38	4.00	3.82	3.73
CAIS provides opportunities to skill up accounting practices and procedures.	2.68	3.14	2.73	2.85
CAIS encourages workers to perform daily activities.	2.82	3.86	2.36	3.01
The CAIS helps to manage adequately accounting tasks based on the Enterprise's rules and regulations.	2.94	3.43	2.45	2.94
The managements are satisfied with the services provided by accounting staff.	2.92	3.00	2.55	2.82
The IT staffs are adequately support the CAIS.	2.58	3.29	2.55	2.80
Total mean	2.89	3.45	2.74	3.03

Source: SPSS output from field survey data, April, 2017

The above table 4.3 shows, weighted mean value of the variables related to HR capability/competency of those have direct contact with CAIS of the EIIDE. As the Finance department respondents reply except the variable "I believe that a qualified human staffs plays an important role in raising the performance of accounting systems" 3.38, all variables related to HR competency of those using CAIS of the EIIDE weighs below an average value with a cumulative mean of 2.89. As the IT department respondents reply all those intended variables shows an average and above average mean value with a cumulative mean value of 3.45. As the reply of respondents from Audit department, except the variables "I believe that a qualified human staffs plays an important role in raising the performance of accounting systems" all other variable has weighed below average value and with a cumulative mean value was 2.74. As to the all respondents reply, the cumulative average weights of all intended variables related to HR competency to use and manage CAIS of EIIDE was 3.03.

As different literatures and research findings noticed, HR competency is one of the major factors to be considered that affects the effectiveness CAIS. In supporting those, the above results show that there is moderate HR capability of those staffs using and managing the CAIS of the enterprise. While the results of each intended group implies that there is a skill gap of CAIS users that may also resulted in ineffectiveness of CAIS in the EIIDE. It means that there are still many system users and supporters who have many obstacles and difficulties in operating CAIS of the enterprise.

4.3.4 Ease of use

Table: 4.4. Ease of use

Ease of use	Work Group			Total mean
	Finance	Information Technology	Audit	
Learning to use CAIS is easy for me.	3.54	4.57	3.27	3.79
I found CAIS easy to do what I want to do	3.60	4.14	3.27	3.67
It is easy for me to become skilful at using CAIS of EIIDE.	3.62	4.43	3.27	3.77
CAIS of EIIDE provide the financial and accounting Information on need in easy and understandable way.	3.48	3.57	3.00	3.35
Total mean	3.56	4.26	3.22	3.68

Source: SPSS output from field survey data, April, 2017

The above table 4.4 shows the weighted average mean of variables related to ease of using the CAIS of EIIDE. As the Finance department respondents' reply the entire intended variables weighs above average weight mean and has a cumulative weight mean of 3.56. as the IT department respondents' reply all the intended variables has a weighted average mean of more than 4.00 except the variable "CAIS of EIIDE provide the financial and accounting Information on need in easy and understandable way" which has 3.57 mean. As the Audit department respondents reply, each variables related to ease of using the CAIS of EIIDE has a weight of above average mean value and has a cumulative weight mean of 3.22. As all respondents reply, all the entire variables ease of use of EIIDE's CAIS weighs above average mean value of 3.68.

The results of above imply that there is a moderate agreement of the respondents regarding the questions related to ease of use of the EIIDE’s CAIS.

4.3.5 Internal Controlling System

Table 4.5: Internal Controlling system

Internal controlling system	Work Group			Total mean
	Finance	Information Technology	Audit	
CAIS's that is implemented in EIIDE highly contributed for internal controlling system	3.50	4.29	3.45	3.75
CAIS improve segregation of accounting duties in the enterprise	3.26	3.43	3.00	3.23
CAIS helps the enterprise to implement rotation of duties;	3.12	3.00	2.55	2.89
CAIS of EIIDE’s facilitates accounting duties and follow up.	3.26	4.29	2.91	3.48
The internal control system ensures compliance with laws and regulations.	2.94	4.14	3.55	3.54
I believe that CAIS is effective in strengthening the control system and accountability in EIIDE.	3.26	4.43	3.45	3.71
Total mean	3.22	3.93	3.15	3.43

Source: SPSS output from field survey data, Aril, 2017

The above table 4.5 shows weighted average of the intended variables related to effectiveness of CAIS in internal controlling system of the EIIDE nearest to agreement with the questions. It looks in detail, as finance department respondents’ reply, except compliance with laws and regulations (2.94), all other variables weigh above average mean.

Regarding with the IT department respondents’ replay, all variables weigh above average mean with accumulative weight mean of 3.93. As the Audit department respondents’ replay, the variables “CAIS helps the enterprise to implement rotation of duties and CAIS of EIIDE’s facilitates accounting duties and follow up” Weighs below average value of 2.55 and 2.91 respectively, while the other intended variables weigh above mean value.

Based on the total mean value shown in the table, except the variable” CAIS helps the enterprise to implement rotation of duties” all variables related to effectiveness of CAIS of EIIDE in internal controlling system weighs above mean value. The overall cumulative mean value of the entire variables related to the benefits of CAIS in internal controlling system is 3.43.

Therefore, according to the respondents reply, it is possible to conclude that there is a moderate contribution of CAIS in improving internal controlling systems EIIDE. Furthermore, the above result implies there is a still difficulty in controlling the economic activities of the under study enterprise using CAIS.

4.3.6 Flexibility

Table: 4.6. Flexibility

FLEXIBILITY	Work Group			Total mean
	Finance	Information Technology	Audit	
CAIS supports flexibility to the changing environment to manage high transaction of the enterprise	3.34	3.71	3.09	3.38
It enables to generate report with different file format (word, excel, PDF...)	3.70	4.29	3.09	3.69
There is an effective Documentation Standards in the Enterprise.	2.88	3.43	2.73	3.01
The system enables to export data from the system to different file type (word, excel, PDF...)	3.68	4.14	3.18	3.67
The system enables to Import data from different file type (word, excel, PDF...)	3.02	2.57	2.91	2.83
Total mean	3.32	3.63	3.00	3.32

Source: SPSS output from field survey data, April, 2017

The above table 4.6 shows weight average value of the variables related to flexibility of CAIS of EIIDE.

As the Finance department respondent’s reply, except the variables an effective Documentation Standards in the Enterprise (2.88), all the intended variables related to

flexibility of CAIS of the EIIDE weighs above average. As these department respondents' reply, the weighted mean value of flexibility of CAIS was 3.32

As the IT department respondents' reply, all variables related to flexibility of CAIS of the EIIDE weighs above average except the variables "enables to Import data from different file type (word, excel, PDF...)". As this work group reply, the overall weighted mean of those variables were 3.63.

As a result of Audit department respondent's reply the variables related to flexibility of CAIS of the EIIDE has an average weight 3.00.

As the entire respondents reply, the intended variables:CAIS supports flexibility to the changing environment to manage high transaction of the enterprise has a weight mean of 3.38, CAIS enables to generate reports with different file format weighs 3.69, effective documentation standards in EIIDE weighs 3.01, the system enables to export data to different file tapes has a weight mean of 3.67 and also enable to import data from different file types to the system has a weight mean of 2.83. The overall weight average value of variables related to flexibility of CAIS of the EIIDE were above average mean value of 3.32.

4.3.7 Completeness

Table: 4.7. Completeness

COMPLETENESS	Work Group			Total mean
	Finance	Information Technology	Audit	
CAIS effectively support the Enterprise in strategic management decision.	3.12	2.71	2.91	2.91
I assure that CAIS of the EIIDE is well designed by integrating all accounting modules (Stock control, General account, payroll, fixed asset management) effectively.	2.96	2.86	2.73	2.92
EIIDE'S CAIS can produce necessary information to achieve control and evaluation of the economic activities (fiscal performance measurement) effectively.	2.94	3.00	2.82	2.92
It provide ability to see the real-time state of the enterprise's financial position;	3.10	3.00	2.64	2.91
I believe EIIDE uses CAIS fully.	2.58	2.57	2.55	2.57
Total mean	2.94	2.83	2.73	2.85

Source: SPSS output from field survey data, April, 2017

The above table 4.7 shows the weighted average mean of the variables related to completeness of CAIS OF EIIDE. As the Finance department respondents reply, the variables: CAIS effectively support the Enterprise in strategic management decision has weight mean of 3.12, CAIS is well designed by integrating all accounting modules has a weight mean of 2.96, CAIS can produce necessary information to achieve control and evaluation of the economic activities of EIIDE has a weight mean of 2.94, provide ability to see the real time financial position of the enterprise has a weight mean of 3.10 and EIIDE fully uses CAIS has a weight mean of 2.58. As this department respondent's reply, the Overall weighted average mean value of the variable related to completeness of CAIS of EIIDE was 2.94 which were below the average that shows incompleteness of the CAIS.

As the IT department respondents reply, the variable producing necessary information to achieve control and evaluation of the economic activities (fiscal performance measurement)

effectively and provide ability to see the real-time state of the enterprise's financial position weighs mean value of 3.00 each but others weigh below average. As this working group's reply, the overall weighted average of the variables related to completeness of CAIS of the EIIDE was 2.83.

As the Audit department respondents reply, the weighted mean of all the intended variables related to completeness CAIS of the EIIDE were below average mean value (3.00) and have accumulative mean of 2.73.

As all respondents reply, the weighted mean value of all the intended variables related to completeness of CAIS in the EIIDE were 2.85.

As a result, it implies that even if completeness of CAIS is needed to get the necessary benefits from it, the CAIS implemented in the EIIDE is incomplete to provide ability to see the real-time state of the enterprise's financial position timely and accurately. This is shown by 2 years back-locked accounting works of enterprise.

4.3.8 Security

Security definitions and user access rights must enforce adequate segregation of duties for the accounting system. User access rights must be eliminated or revised upon termination of employment and transfers of employee responsibility (www.ai.org/sboa/files/Drain_10.pdf). As per the experiences of respondents participated in this research, the security mechanism of EIIDE's CAIS seems follow.

Table: 4.8. Security

Security	Work Group			Total mean
	Finance	Information Technology	Audit	
CAIS has adequate security measure to prevent unauthorized modification of the accounting transactions.	3.30	3.29	3.27	3.29
There is a password protection for general system protection	3.68	4.57	3.18	3.81
There is a password restriction for specific system functions	3.50	4.57	3.09	3.72
I think my transaction information is secured.	3.10	3.29	2.91	3.10
Total mean	3.40	3.93	3.11	3.48

Source: SPSS output from field survey data, April, 2017

The above table 4.8 shows weighted mean value of variables related to security wise of CAIS of the EIIDE given by the study participants. As the Finance department respondents reply, all variables related to security wise CAIS of the EIIDE shows above average weighted mean with accumulative mean of 3.40. As the IT and Audit department respondents reply, those intended variables also shows above average weighted mean with a cumulative mean value of 3.93 and 3.11 respectively. The overall weighted average value of the variables related to security wise of CAIS of the EIIDE was 3.48.

Therefore, it is possible to conclude that there is agreements of the respondents to effectiveness CAIS of EIIDE having adequate security measure to prevent unauthorized modification of the accounting transactions and general protection of the systems.

4.4 Summary of comprehensive effects of the intended variables on effectiveness of EIIDE's CAIS

Table: 4.9. Effectiveness of EIIDE's CAIS

Descriptive Statistics	
Effectiveness of EIIDE's CAIS	Mean value
Perceived usefulness	3.23
Infrastructure	2.84
HR Capability	3.03
Ease of use	3.68
Internal Controlling System	3.43
Flexibility	3.32
Completeness	2.85
Security	3.48
Total mean	3.24

Source: SPSS output from field survey data, April, 2017

The above table 4.10 shows summary of respondents reply to the effectiveness of computerized accounting information system of the EIIDE based on the intended variables, which has mostly mentioned indifferent literatures as determinant factors of CAIS in general. As it shown in this table, the effectiveness EIIDE's CAIS has a weighted mean value of 3.27 (minnum 2.84 max. 3.68).

As a result, the research revealed that there is a moderate effectiveness of computerized accounting information system of the EIIDE

4.5 Analysis of challenges associated with computerized accounting information systems of the EIIDE.

Table: 4.10. Challenges of CAIS the EIIDE

Challenges	Work Group			Total mean
	Finance	Information Technology	Audit	
I thought there is poor accounting information system maintenance	3.74	2.57	3.00	3.10
There is inadequate on-job training for accounting and finance staff related with CAIS	3.76	3.29	3.45	3.50
I believe there is weak internal audit	3.50	3.71	3.27	3.50
There is inadequate management support	3.68	4.00	3.00	3.56
Lack of fixed Asset management software in the system.	3.96	4.14	3.45	3.85
Inadequate security measures to safeguard the assets of the Enterprise.	3.70	4.14	3.27	3.71
Total mean	3.72	3.64	3.24	3.54

Source: SPSS output from field survey data, April, 2017

The above table shows weighted average mean of variables related to the challenges associated with using CAIS, As a result 3.10 average mean represents the variable “I thought there is poor accounting information system maintenance”, 3.5 mean represents there is inadequate on job-training related to CAIS for accounting and finance staffs,3.5 mean represents there is weak internal audit, 3.56 represents there is inadequate management support, 3.85 represents lack of Fixed Asset management software and 3.71represents inadequate security measures to safeguard assets of the Enterprise. The entire variables related to challenges of CAIS of the EIIDE weighs an average mean value of 3.54.

In addition to the questionnaire, the respondents asked open ended question, what other Challenges do you face with computerized accounting information system in performing your daily activities? Among the participants, 46respondents stats that there is unclear segregation of duties of IT staffs, software developer and finance staffs in maintaining and controlling the

enterprise's chart of account and daily transaction. As per their response, authentication and authorization rights to permit, using the daily necessary facilities needed in CAIS has given to the software developer and vender.

The above findings show agreement of the respondents that there are moderate challenges of CAIS in EIIDE. The results also imply that there are no responsibility and accountability issues of using and providing information related to the CAIS of the EIIDE.

4.6 Analysis of Interviews

The interview questions related to this study were presented to the EIIDE'S five top management body (Audit director, Finance director, and HR subordinate G/Director and G/director) in advance and face to face interviews were conducted at a scheduled time on April4, 2017 in their office. The interview started with general introduction and an explanation of the purpose of the research.

An interviewee, Enterprise's top management body (G/Director, Finance directorate Director, IT directorate director, Audit directorate director, Finance and HR subordinate director, and Procurement and Sales subordinate director), replies to each questions related to effectiveness of CAIS in EIIDE is presented as follows.

➤ Perceived usefulness

Among the EIIDE's top management respondents, except the procurement and sales subordinate director, all the others believe that CAIS improved the reliability and accountability of the EIIDE's financial reports but not 100%.As to the statements of G/director and finance directorate director, this is because of partiality of using CAIS, Limited HR skills of both IT and finance directorate staffs. As the procurement and sales subordinate director statement, theoretically CAIS can improves the reliability and accountability of an enterprise's financial and accounting information but he is not shore whether did on the case of EIIDE.

As the above findings show, there is almost the respondents believed that CAIS improved the reliability and accountability of the EIIDE's financial and accounting reports. This is also in line with the moderate findings of mean value 3.23 shown in the above table4.1

➤ **Infrastructure**

Regarding the questions related to infrastructures of CAIS of the Enterprise, all the interview respondents reply that CAIS of the Enterprise does not fully supported with the necessary infrastructures. It had supported with limited software (stock management, payroll system and General account system), unorganized data center, not well maintained network and limited HR competency. In connection to this, the enterprise did not effectively use its resources to support CAIS effectiveness.

Therefore, the interview result implies that as there is no better infrastructure in the Enterprise, there is a high probability of CAIS ineffectiveness in the EIIDE. This also supported with the result presented in the table 4.2.

As to Pechanga Walter Kobo, Andrew Nyanja's (2015), Availability of ICT infrastructure compared to CAS adoption had a correlation of 0.400, which is a positive correlation. This finding may implies that to have effective CAIS there has to be better IT infrastructures available.

➤ **HR capability (Knowledge and Skills):**

Regarding to the question of HR Capability that was, Does CAIS provide an opportunity to skill up workers knowledge to follow up and evaluate economic activities of EIIDE?, among the top management body of the enterprise, Finance directorate director, IT directorate director, and the Audit directorate director replies that CAIS provide an opportunity to skill up workers knowledge to follow up and evaluate economic activities of EIIDE for those hard workers and eager to understand about the system.

As per response of Finance and HR subordinate G/Director, and procurement and sales subordinate director, CAIS does not skill up the workers knowledge and skills other than facilitating their work to perform easily. The G/director of the enterprise says that yes, theoretically CAIS provides an opportunity to skill up workers knowledge to follow up and evaluate economic activities of an enterprise but I am not shore that where it did on the worker of EIIDE.

The findings suggests that there is a perception difference between top management bodies of the enterprise regarding CAIS to provide an opportunity to skill up workers knowledge to

follow up and evaluate economic activities of the enterprise. This also implies that there is less attention to give CAISs training that needs better skills to use and manage the systems.

➤ **Ease of Use**

The EIIDE's top management body's response and findings regarding the questions related ease of use of its CAIS is looks likes as follows.

Among the EIIDE's top management respondents, G/director, Finance and HR subordinate G/Director, Finance directorate director and the IT directorate director replies that the CAIS of the enterprise is user friendly and it provides financial and accounting information in ease and understandable ways. But on need provision the repots may depends on the above mentioned problems regarding HR competency and infrastructure of the IT. As of the Audit directorate director, and procurement and sales subordinate director replies, they have no idea whether the system is user friendly but they stat that there is a problem of on time reports of the financial and accounting that had reflected on top management meeting schedule changing.

The finding implies that even if the system is user friendly (ease to use), combined effects of HR competency, IT network, system integrity and partiality of the enterprise's CAIS , makes it difficult to provide the financial and accounting information of the enterprise to the interested groups. Therefore, each implemented system (Stock management, G/accounting and payroll system) is user friendly by itself regardless of its partiality and integrity problem.

➤ **Internal Controlling System**

As the EIIDE's top management body's replies to the question related to contributions of CAIS in internal controlling system, CAIS supported the Enterprise in strengthening its internal controlling systems relating to stock movement, General account activities and payroll system with different data base. This is revealed by periodical reports come from each staff timely that helps the management pass different decisions accordingly. In addition, the Enterprise's G/director states that even if it supports in strengthening internal controlling systems, as compliance from the accounting staffs there is an integrity problem with all branches and interdepartmental, it is difficult to conclude, EIIDE's CAIS is 100% effective in supporting internal controlling system.

The findings in the table4.5 above also supports the G/director's view that even if CAIS supports in strengthening internal controlling systems, there are an integrity problem with all branches and interdepartmental and also system design problem that made the recording and

controlling of purchase and sales of the Enterprise by stock management staffs. As this, there may be a probability (gap) that leads to conceal and fraud activities that may have potential impact on CAIS's effectiveness by losing its reliability.

➤ **Flexibility**

As the replies of four top management body's (G/Director, Finance directorate Director, IT directorate director and Finance and HR subordinate G/Director), as the Enterprise use domestically customizable accounting software it has enterprise need based document standards and also accompanied by flexibility features to generate the intended report with different formats. They also states that as it granted by software developer the system have ability to migrate the data to whatever future software's.

As the replies of Audit directorate director, and procurement and sales subordinate director, they have no idea whether the system has such type of features. As a result, top management replies imply that almost the CAIS of the enterprise have benefits of CAIS's flexibility and documentation standards, which may have potential impacts on CAIS's effectiveness.

➤ **Completeness**

As to four of top management body's (G/Director, Finance directorate Director, IT directorate director and procurement and sales subordinate director) reply to questions related completeness of CAIS in the EIIDE supporting to measure and manage economic activities of the enterprise timely and effectively, CAIS of the EIIDE is not complete to manage economic activities of the enterprise. It partial having only stock management, general account and payroll system that is also work independently. As to two of the top management (Audit directorate director, Finance and HR subordinate G/Director) CAIS of the EIIDE is complete in supporting to measure economic activities of the enterprise timely and effectively. Averagely, as to the top managements' reply, CAIS of the Enterprise gives partials service to measure and manage economic activities of the enterprise timely and effectively.

Therefore, the results suggest that the enterprise loses the full-fledged benefits has to get from its CAIS.

➤ **Security**

As per the IT directorate director reply to the questions related to security mechanisms of CAIS of the enterprise, since the enterprise uses secured virtual private network (VPN), user pass word and known antivirus it is 100% secured to attacked by virus and prevent

authorized access to the system by hackers. The others reply that since there were no such type experiences of security problems of CAIS, there is an assumption of secured system but not conclude that there is a 100% security mechanisms in the enterprise.

Therefore, the results may implies that since using CAIS the enterprise have not got experienced data lose and system breakdown which may also has an implication of CAIS's effectiveness to give the intended services of an enterprise. This results also supported by 68 questionnaire respondents, which has above average weighted mean value (3.48) presented in table 4.8.

➤ **Challenges of using CAIS**

As the EIIDE's top management bods" reply to the question, What Challenges do you face with computerized accounting information system in measuring economic activities of EIIDE?, the enterprise faces the following challenges in using CAIS.

- Not having 100% reliable financial and accounting reports on time.
- Not having complete and integrated CAIS
- Absence of adequate IT infrastructures (Skilled HR, hardware and software) of the enterprise.
- Employee turnover
- Dependency on the software developer to maintain and manage the system.

The above findings imply that there is a big challenge to the effectiveness of EIIDE's CAIS. These findings strengthening the results that are moderate agreements of the respondents with mean value of 3.54(table 4.10).

➤ **Future plan**

As all the enterprise's top management bodies reply to the question related to future plan , Does the enterprise have plans to change the current CAIS? Why / Why not? For the coming two years, there is no plan to change it. But there is a plan to upgrade the existing system and adding fixed asset management, HR management and procurement management modules that will make well integrated and complete system.

5. CHAPTER FIVE: Summary of finding, Conclusion and Recommendation

5.1 Summary of Finding

The study has assessed effectiveness of computerised accounting information system the case study of EIIDE. The specific objectives of this study include; assessing benefits of computerised accounting information systems of EIIDE, to assess the effectiveness of using computerised accounting information systems in EIIDE and to identify the challenges as well as problems associated with the use of these computerised accounting information systems. The assessment was made by measuring the effectiveness of computerised accounting information system using SPSS version20 computer software. The research was well conducted and succeeded through reviewing different literatures and questionnaires which were provided to 68 respondents and also by interviews to 6 top management bodies of the EIIDE. The collected data were analysed qualitatively and quantitatively through descriptive statistics and cross tabulation analysis.

The results revealed that, based on all the intended variables comprehensive effect, CAIS of EIIDE is moderately effective in measuring and controlling the economic activities of the enterprise.

The comprehensive assessments of the intended variables, EIIDE's CAIS is moderately effective except incompleteness of having full computerized accounting modules and not well supported by the necessary infrastructures, which weighs below average mean value 2.89(table 4.9) and 2.84(table 4.2) respectively.

The weighted average mean value of the variables related to perceived usefulness of EIIDE's CAIS was 3.23(table4.1). This finding implies that there is a moderate positive perception of the study respondents to EIIDE's CAIS being satisfying the required benefits. The top management bodies of the enterprise have also the same perception to the usefulness of CAIS in providing reliable and accountable financial and accounting reports on time. AS it has mentioned in different referenced literatures, having positive perception of usefulness is the main criteria to implement and use CAIS. As this is so, expressing the true perception of usefulness in evaluating its performance is also the main one that should not be puts aside. The moderate mean value (3.23) of this study also shows not freeness of it suffering from not expressing the true perception of usefulness.

As the EIIDE's top managements interview results, having no better infrastructure in the Enterprise, there is a high probability of CAIS ineffectiveness in the EIIDE. This also supported with the result presented in the table 4.2.

As the results shown in table4.3, there is moderate HR capability of those staffs using and managing the CAIS of the enterprise. While the results of each intended group implies that there is a skill gap of CAIS users that may also resulted in ineffectiveness of CAIS in the EIIDE.

As all respondents reply, all the entire variables ease of use of EIIDE's CAIS weighs above average mean value of 3.68(table4.4).This results imply that there is a moderate agreement of the respondents regarding the questions related to ease of use of the EIIDE's CAIS.

As the finding in table 4.5, the overall cumulative mean value of the entire variables related to the benefits of CAIS in internal controlling system is 3.43.so, the result implies a moderate contribution of CAIS in improving internal controlling systems EIIDE. This findings also supported by EIIDE's top management body's reply to the interview question what are the contributions of CAIS for internal controlling system of your enterprise? As to the G/director's opinion that even if CAIS supports in strengthening internal controlling systems, there are an integrity problem with all branches and interdepartmental and also system design problem that made the recording and controlling of purchase and sales of the Enterprise by stock management staffs. As this, there may be a probability (gap) that leads to conceal and fraud activities that may have a potential impact on CAIS's effectiveness by losing its reliability.

The overall weight average value of variables related to flexibility of CAIS of the EIIDE was above average mean value of 3.32 (table4.6) that implies its moderate ability to be compatible with changing environment to manage high transaction of the enterprise.

As the results shown in table4.7, EIIDE's CAIS is not comprehensive to fully facilitate all its accounting activities and enjoy all the benefits from CAIS completeness.

The overall weighted average value of the variables related to security wise of CAIS of the EIIDE was 3.48.this result implies that there is agreements of the respondents to effectiveness CAIS of EIIDE having adequate security measure to prevent unauthorized modification of the accounting transactions and general protection of the systems.

As of all respondents reply, Lack of integration of the existing CAIS, HR capability problems of the IT staffs, finance staffs and other user's problem, absence of fixed asset management, Employee turnovers, not having reliable financial and accounting information on time and Dependency on the software developer to maintain and manage the system regularly are the main challenges exist in the enterprise.

As the replies of EIIDE's top management body, there is a plan to up -grade the existing CAIS that help mitigating the above mentioned challenges and have a complete CAIS service in the enterprise.

5.2 Conclusion

Pertaining to the research questions, CAIS moderately helped the EIIDE to improve internal controlling systems that reflected as segregation of accounting duties, facilitate accounting duties and follow up, process large amounts of financial information, strengthen the responsibility and accountability and also improved the reliability of financial reports of the Enterprise.

But generally, the EIIDE did not get the necessary benefits (showing and generating real time financial position) that it has to get from CAIS. This is because of the following bottlenecked problems.

- As the results of this study, there is no adequate and necessary IT infrastructures (qualified HR, known software and hardware) in the under study enterprise to fully perform its financial and accounting activities using CAIS.
- Not strong enough internal controlling system (Integrity problems of the existing system and unclear segregation of duties)
- As the research results show (table4.3), there is a moderate HR Competency maintaining and using the enterprise's CAIS.
- There is also a redundant work that has seen as recording of bank advice (debt and credit) and payroll in Journal-vouchers by General account staffs.
- The research finding shows that there is still no security breach history on CAIS's of the enterprise. However, inexperienced security breach does not mean that the CAIS of the enterprise complete proof of security breach.

5.3 Recommendation

Based on the above findings and conclusion, the followings are recommended to mitigate the mentioned problems and enjoying the necessary benefits has to be get from CAIS.

- Developments in the fields of software, hardware and databases, conducting regular maintenance which helps raise the level of the enterprise's CAIS effectiveness.
- As the enterprise has a plan to up-grade the existing CAIS, it is recommended that forming a system up-grading committee those have adequate enough experience in the existing system that mainly holding finance directorate, IT directorate and Audit directorate workers. By so doing this, the enterprise can enjoy the necessary benefits from CAIS.
- Skill upping the HR competency of those users and administrators of the system through training accordingly.
- Based on the above conclusion, that is inexperienced security breach does not mean that the CAIS of the enterprise complete proof of security breach. So, the IT directorate of the enterprise should be alert enough about the upcoming IT security breach problems and its effects on the enterprise regularly.
- The study was not considered cost wisely effective and efficient that prospect is kept open for further research.

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Appendix

1. Research Questionnaires to be filled by employees' of Ethiopian Industrial Inputs Development Enterprises

The purpose of this questionnaire is to collect data for a research thesis entitled “*Assessments of the effectiveness of computerized Accounting Information systems of the Ethiopian Industrial Inputs development Enterprise*”. This is an independent research being conducted in partial fulfillment of **MBA in Finance** by a prospective graduating student from **Addis Ababa University**. All information you give will be used for only academic purpose. So, please be sincere with your response.

Thank you in advance for taking time to fill the questionnaires.

Part I: - Demographic data

For this section please tick (✓) on the blank space which is appropriate for you.

1. Gender: A) Male B) Female
2. Age: A) 18-25 B) 26-35 C) 36-45 D) 46 – 55 E) above 55
3. Marital Status: A) Single B) Married C) Divorced D) Widow
4. Educational Level: A) Below Diploma B) Diploma C) first degree
D) Masters and above E) Others (Please specify) _____
5. Work experience in this Enterprise: A) 0-2 B) 3-5 C) 6-10 D) 11 – 15 E) above 15
6. Work group : A) Finance B) Information technology C) Audit
D) Top Management Body

Part II: Assessing Effectiveness of computerized accounting information systems on Ethiopian Industrial Inputs Development Enterprise (EIIDE)]

Section A: What are the major benefits of using computerized accounting information systems of EIIDE?

Please evaluate the degree of your agreement with the following criteria for effectiveness of computerized accounting information systems:

Key: 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree

1.	Perceived usefulness	1	2	3	4	5
1.1	CAIS generates Automatic document numbers (pre numbered)					
1.2	CAIS allows me to process large amounts of financial information.					
1.3	CAIS enabled me to accomplish tasks easily and more quickly.					
1.4	CAIS improved the reliability of financial reports of my Enterprise.					
1.5	CAIS eliminate the data entering redundancy.					
1.6	I believe CAIS effectively implemented in EIIDE;					
1.7	CAIS enhancing higher quality of work performed for higher profitability.					
2.	Infrastructure					
2.1	There are the required equipment and materials to use CAIS in the EIIDE;					
2.2	I have the required knowledge to use the enterprise"s CAIS;					
2.3	I have stable and fast internet connection access that I can use the enterprise CAIS;					
2.4	There is the required computer technology to use CAIS in the EIIDE;					

3.	HR capacity (Knowledge, Skills and Attitude):					
3.1	I believe that a qualified human staffs plays an important role in raising the performance of accounting systems.					
3.2	CAIS provides opportunities to skill up accounting practices and procedures.					
3.3	CAIS encourages workers to perform daily activities.					
3.4	The CAIS helps to manage adequately accounting tasks based on the Enterprise's rules and regulations.					
3.5	The managements are satisfied with the services provided by accounting staff.					
3.6	The IT staffs are adequately support the CAIS.					
4.	Ease of use					
4.1	Learning to use CAIS is easy for me.					
4.2	I found CAIS easy to do what I want to do					
4.3	It is easy for me to become skillful at using CAIS of EIIDE.					
4.4	CAIS of EIIDE provide the financial and accounting Information on need in easy and understandable way.					

4.5						
5.	Internal controlling system					
5.1	CAIS's that have implemented in EIIDE highly contributed for internal controlling system.					
5.2	CAIS improve segregation of accounting duties in the enterprise.					
5.3	CAIS helps the enterprise to implement rotation of duties;					
5.4	CAIS of EIIDE's facilitates accounting duties and follow up.					
5.5	The internal control system ensures compliance with laws and regulations.					
5.6	I believe that CAIS is effective in strengthening the control system and accountability in EIIDE.					
6.	Flexibility					
6.1	CAIS supports flexibility to the changing environment to manage high transaction of the enterprise					
6.2	It enable to generate report with different file format (word, excel, PDF, ...)					
6.3	There is an effective Documentation Standards in the Enterprise.					
6.4	The system enable to export data from the system to different file type (word, excel, PDF, ...)					

6.5	The system enable to Import data from different file type (word, excel, PDF, ...) to the system					
7.	Completeness					
7.1	CAIS effectively support the Enterprise in strategic management decision.					
7.2	I assure that CAIS of the EIIDE is well designed by integrating all accounting modules (Stock control, General account, payroll, fixed asset management) effectively.					
7.3	EIIDE`S CAIS can produce necessary information to achieve control and evaluation of the economic activities (fiscal performance measurement) effectively.					
7.4	It provide ability to see the real-time state of the enterprise`s financial position;					
7.5	I believe EIIDE`s are used fully CAIS.					
8.	Security					
8.1	CAIS has adequate security measure to prevent unauthorized modification of the accounting transactions.					
8.2	There is a password protection for general system protection					
8.3	There is a password restriction for specific system functions					

8.4	There is an effective Data security control in the Enterprise (audit log).					
8.5	I think my transaction information is secure.					

9. What is the benefit that the enterprise realized from CAIS?-----

Section B: What are the challenges associated with computerized accounting information systems of the EIIDE?

1.	Challenges associated with using CAIS in EIIDE	1	2	3	4	5
1.1	I thought there is poor accounting information system maintenance					
1.2	There is inadequate on-job training for accounting and finance staff related with CAIS					
1.3	I believe there is weak internal audit					
1.4	There is inadequate management support					
1.5	Lack of fixed Asset management software in the system.					
1.6	Inadequate security measures to safeguard the assets of the Enterprise.					

2. What other Challenges do you face with computerized accounting information system in performing your daily activities?-----

3. What solutions do you recommend for the challenges you mentioned in the above question?.....

.....
.....
.....

4. THANK YOU VERY MUCH FOR PARTICIPATING IN THIS STUDY

Please return the questionnaire to:

Bekele Seifu

Contact number: -0911-61-89-15 or

-0922-49-85-85

Interview for Top Managers

Interview Guide

Personal Information to be recorded with the permission of respondents

Name:

Gender:

E-mail:

Education:

Year of experience:

Position:

Date and time:

Guidelines:

1. Respondents are informed that they have to answer the interview questions taking into consideration the CAIS used in EIIDE

➤ ***Perceived usefulness***

1. Do you believe CAIS improved the reliability and accountability of financial reports of the EIIDE?

➤ ***Infrastructure***

2. Do you think that EIIDE fulfill all necessary infrastructures to use CAIS?
3. What kind of infrastructure uses for implementing CAIS?
4. Do you believe effectively uses the organization resources?

➤ ***HR capability/competency (Knowledge and Skills):***

5. Does CAIS provide an opportunity to skill up workers knowledge and skills to follow up and evaluate economic activities of EIIDE?

➤ ***Ease of Use***

6. Does CAIS of EIIDE provide the financial and accounting Information on need in easy and understandable way?
7. How much CAIS is user friendly?

➤ ***Internal controlling system***

8. What are the contributions of CAIS for internal controlling system of your enterprise?

➤ ***Flexibility***

9. Is there effective Documentation Standards in the Enterprise?
10. Does your enterprise's CAIS flexible to the ever changing environment?

➤ **Completeness**

11. To what extent does, the accounting information systems of your Enterprise computerized?
12. Do you think CAIS effectively support the Enterprise in strategic management decision?

➤ ***Security***

13. Is there any security mechanism to detect or to control fraud?
14. What kind of security mechanism uses to implement CAIS?
15. Do you think CAIS system software is secured from crack by hackers?
16. How much save the system is attacked by the virus?
17. Do you think the system is 100% secured?

➤ **Challenges of CAIS of the EIIDE**

18. What Challenges do you face with computerized accounting information
19. system in measuring economic activities of EIIDE?

➤ **Future plan**

20. Does the enterprise have plans to change the current CAIS? Why? / Why not?

2. Profile of the Organization

To know about Ethiopian Industrial Inputs Development Enterprise, one should trace some points about its predecessors as they formulate its foundations.

A. BESSE and His Company Ethiopia Limited-1936-1975

BESSE and His Company is believed to be the pioneer of modern merchandising in Ethiopia as it had been involved in importing and exporting as well as running wholesale and retail merchandising of industrial products until 1975 and was confiscated by the Derg Regime.

B. The Ethiopian Domestic Distribution Corporation (EDDC) 1975-1993

The nationalization of former A. BESSE, its affiliated companies, and other small private companies in 1975 become the foundation of The Ethiopian Domestic Distribution Corporation (EDDC).

C. Merchandise Wholesale and Import Trade Enterprise (MEWIT)

Merchandise Wholesale and Import Trade Enterprise (MEWIT) - was established in 1993 by the council of Ministers regulations No.103/1985 as public enterprise merging the former trading corporations-EDDC and ETMEX.

The rights and obligations of the Merchandise Wholesales and Import Trade Enterprise have transferred to The Ethiopian Industrial Inputs Development Enterprise on 31st December 2014.

D. The Ethiopian Industrial Inputs Development Enterprise established as a Public Enterprise with the purpose of:

- To establish, administer and transfer, when necessary, enterprises which ensure supply industrial inputs;
- To supply industrial inputs by manufacturing domestically and abroad;
- To supply industrial inputs by purchasing from the local and international market;
- To export industrial inputs which are in excess of the domestic industry consumption;
- To work jointly with enterprises which engaged in producing and supplying industrial inputs and raw materials;
- To implement strong supply chain management and to ensure dynamic efficient industrial inputs delivery;
- To work in collaboration with local and international governmental and nongovernmental institutions having similar objectives;

- In line with the directive and policy guidelines issued by the Ministry of finance and Economic Development to sell and pledge bonds and to negotiate and sign loan agreements with local and international financial sources;
- To engage in any other related activities necessary for the attainment of its purposes.

The Ethiopian industrial inputs development Enterprise (EIIDE) was start using computers for different office clerical activities and also COBOL-based accounting systems to print payroll and Financial statements of the Enterprise after manual works of all accounting procedures. Then after as EIIDE sets an international wide goals and objectives, using of modern Computerized accounting information systems was mandatory to achieve its“ goals and objectives. So, EIIDE had shifted this system to MS Access database accounting system packages, which has supplied by one of Ethiopian private accounting software suppliers before a decade ago.