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INFORMATION SYSTEM SUCCESS ANALYSIS AND FLOW OF E-COMMERCE: CASE STUDY ON BAE FOREIGN TRADE AND EXPORT

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FEBRUARY, 2021

ADDIS ABABA, ETHIOPIA

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DECLARATION

I, the undersigned, declare that this thesis is my original work and prepared under the guidance of **Tiruneh Legesse (Asst. Prof.).** All the sources of material used for this thesis have been duly acknowledged. I further confirm that this thesis has not been submitted either in part or in full to any other higher learning institutions for the purpose of awarding any degree.

Dagmawi Adugna   _____

Name   **Signature & Date**

ENDORSEMENT

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

Tiruneh Legesse (Asst. Professor)

Advisor

Signature & Date

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Thank you,

Dagmawi Adugna

LIST OF ACRONYMS

E-Commerce - Electronic Commerce

ICT- information and communications technologies

IS- Information Systems

IT-Information Technology

B2B- Business to Business ecommerce

C2C- Consumer to Consumer

C2B-Consumer-to-business

ECIS- E-commerce information system

ICT- Information and Communication Technology

EFT-Electronic Funds Transfer

EDI-Electronic Data Interchange

CC- Customer-Centricity

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ABSTRACT

Information systems play an important role in the collection and processing of information, making it possible to process large quantities of information, and synchronize and share it. Management information systems are used to process information both at strategic and operational level to monitor activities, assess and plan new services, and monitor trends which enable senior managers to effectively manage the strategic direction of an organization. Management information systems play an important role in measuring organizational performance. Many organizations have not survived their attempts to engage in e-Commerce and others have radically changed their approach. There were many reasons for the failure of these e-Commerce initiatives. They included poor business ideas, no control of expenditure, lack of general business experience and immaturity, as well as little understanding of the crucial importance of managing the technology through which the Internet and the Web delivers e-Commerce opportunities. Also explores the intricacies of IS within the ecommerce environment and argues that without a coherent understanding of the factors affecting IS success, the implementation of traditional IS evaluation mechanisms may be problematic. The main aim of the study was to get a better understanding in the field of IS evaluation. The empirical work reported in this thesis examines the role of information systems in facilitating the various components of e-Commerce. In the research a new name for this has been used, e-Commerce Information Systems (ECIS). The research involved analyzing evidence that was collected from interviews as well as from questionnaires, many websites and other documentation supplied by knowledgeable informants.

Key words: Information system, e-Commerce Information Systems, e-Commerce, Management information systems, organizational performance, effectively manage

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

An information system is an organized collection of people, information technology, information resources and all coordinated activities to achieve certain objective in the business organization. Conceptually an information system may or may not be concept computerized. Information systems are vital to business. There is a difference between information system and information technology. Information system describes all of the components and resources necessary to deliver its information and functions to the organization while information technology refers to the various hardware, software, networking, and data management components necessary for the system to operate.

Information systems and technologies are a vital component of successful businesses and organizations. An information system is an integral part of an organization. It contains information about the organization and its surrounding environment. There is interdependency between the organization and its environment.

Advances in Internet Technology in recent times have provided companies with new ways of doing their business activities. As a result, companies can now use electronic means to sell, distribute, market and buy products and services. Doing business transactions including business-to-business and business-to-consumer utilizing electronic means is known as Electronic Commerce, (e-Commerce) (Hartman, 2000). Such an e-Commerce environment provides enterprises with an opportunity to work together as a business value network. I.e. a group of enterprises that together fulfill customer needs, each excelling in its own specific specialty, products and services (Tapscott, 2000). These e-Commerce activities rely on information systems connected through the Internet and accessed by one or many actors. The e-Commerce information systems are a specific kind of information systems, interconnected through the Internet, and exploited by one or more actors, which support and enable the exchange of objects of economic value between various actors' (Gordijn, 2002).

Information system analysis refers to a number of activities in the early stages of information systems development. The main purpose of systems analysis is to identify and document the

requirements for an information system to support organizational activities. Information Systems studies intersection between organizations, technologies and people. It focuses on the use and application of information and communications technologies (ICTs) in government, business, society, and daily life, rather than the characteristics of computers themselves. This incorporates study of the role of the internet in business and public sector settings. This includes both improving business processes and personal productivity, and the creation of new business models and totally new ways of doing business. E-Commerce studies the application of information technologies (especially the internet) to improve business processes and to create totally new ways of doing business.

Nowadays information system can be used to achieve different objectives such as, to gain a competitive advantage, improvements in decision making, relation with customers and suppliers, operational excellence and efficiency and enables the organization to be able to make new product lines and services to the customer. The role of IS In an organization has been changing and growing in time like To process data electronically for record keeping, transaction processing and accounting, To provide managers with interactive and support to the decision making process, Strategic information system: Provides support to the organization in shaping its competitive strategy, To support the organizations objectives on the internet through e-business and e-commerce systems, to integrate the functional areas of the organization and to increase the understanding of organizational business.

The two words 'information system' are common currency in discussions and publications, but a common understanding does not even clearly exist. For some it is a unique subject for study, for others it is research into information technology, for others it is just another computer system, and for some it is the system that records stores and retrieves all the information that a host organization needs to survive. Such a variety of interpretations, at the same time as apparently never capable of becoming reduced to just one that is universally accepted means that our undecided ability to provide the system an organization needs is severely limited.

The Purpose of this study is to illustrate and analyze how the business applications of Information Systems (IS) can support a firm's business processes, managerial decision making, and strategies for competitive advantage. Information Systems (IS) departments face many

challenges in today's rapidly changing, highly competitive, global environment. One approach to understanding the challenges faced by IS departments is to survey IS executives and managers in order to stimulate their key issues.

There has been considerable research activity in this area. IS key issues studies have been conducted in many countries (Estonia, the Gulf Cooperative Council, Hong Kong, India, Slovenia, and Taiwan), while previously published key issues studies have been repeated (Australia, Europe, United Kingdom, and United States), and an international key issues study, based on the perceptions of IS managers of US-based multinationals, has been reported. This paper replicates and extends Watson and Brancheau's work by analyzing and integrating the most recently reported key issues research in the case of the Ethiopian context at an organization. We confine our attention to research that included a survey instrument similar to those used in the of information management study. There are two major motivations for this research. The motivation is to present the key concerns of IS executives and managers worldwide and determine which concerns are global and which are regional in nature. By assessing the similarities and differences of IS issues, IS executives should be better prepared to manage their increasingly global function. More importantly, however, there is a need to understand the forces that shape key issues so that managers can predict and plan rather than react. Thus, the second motivation is to present an explanation for differences in key issues based on variables that differ among IS implementation and analysis. While a regional study can attempt to explain the causes of key issues in terms of organizational factors a comparative international analysis can consider other variables (e.g., national culture, economic structure, political/legal environment, and technological status) as well.

1.2 Statement of the problem

Over the past few decades, companies all over the world started to notice a great need for information systems in the business field. It was hardy possible to ignore the significance of benefits and a possibility to increase business performance through such an investment. It was quickly observed that an IS can help a business to save money, increase the competitive advantage and improve performance, thus creating more profits.

Though information has become one of the most valuable assets of modern corporations, development of information systems faces many problems. Among the most important are low productivity, low productivity and inadequate alignment of information systems with business needs and requirements.

Many companies have been implementing IS in their respective organizations and re-organizing their business processes (Rajagopal, 2002). Computer-based IS mainly depend on IT; consequently, successful IS can be measured by the effectiveness of IT to support an organization's strategies (O'Brien, 2004). The demand for efficient and effective use of IT is also gradually increasing at the present time (Beaumaster, 2002). An organization that adopted an IT system to provide special attention to planning, acquisition, and implementation of these technologies gets an advantage. Those associates must be aware of the various number of issues which are a part of the ability of the organization to achieve effective IT implementation (Beaumaster, 2002).The literature highlights the relevance of two central issues to the research problem. Firstly, e-Commerce is considered to be an important business issue country around the worlds and secondly E-commerce Information System Success is central to the success of e-Commerce DeLone, W.H. & McLean, E.R. 2004). However, some authors argue that this technology is not yet applied in an optimal way. This calls for a better understanding of how E-commerce Information System Success can be effectively managed. In order to optimize E-commerce Information System Success managers of e-Commerce businesses are required to evaluate the success of these systems. They therefore require a comprehensive understanding of the factors that affect E-commerce Information System Success.

Understanding information systems are more complex and can be best by looking at them from both a technology and a business perspective. The discussion in the foregoing sections has highlighted several issues that contributed to my understanding of the research problem. The world of business has moved beyond the first wave of e-Commerce hype. In the current era, a more mature business approach has developed. E-Commerce managers now understand that an online presence in itself will not produce sustained growth and profitability. Rather managers are required to re-evaluate their current business strategies especially in relation to how E-Commerce information systems contribute to e-Commerce success. The evaluation of IS Success is a challenge for both the practitioner and IS research communities. A number of studies have

been conducted, with a variety of outcomes such as Davis, F. D. (1989) "Perceived Usefulness, Perceived Ease of Use and End-User Acceptance of Information technology" also Emeka, "concept of e-commerce: systems analysis and design". However, the questions concerning E-commerce Information System Success, Specifically, have not been thoroughly investigated. There is currently a lack of a coherent understanding of the connection between E-commerce Information System Success and e- Commerce as stated by Grover, V., Jeong, S.R. & Segars, A.H. (1996) to mention a few also O'Brien, J.A. (2002). Importantly, there is an absence of empirically grounded theories that offer insight into E-commerce Information System Success. Although at present there is a relatively low adoption of e- Commerce by consumers, current trends indicate that this is steadily increasing.

The specific challenges faced by BAE foreign trade and export plc. could be quite significant to the growth and efficiency of the company. Information system is the main backbone for the ecommerce to work properly. If the IS is not properly organized and implemented it would cause a significant loss to the company. Implementation of this IS to a new company environment as well as with the ecommerce is very tough. As this ecommerce is new to the company and the workers, having the main idea and purpose of the IS implementation at this environment could be questioned by the workers. The company currently uses both a system where every day activity is done randomly and timelines are set specifically when taking of projects. Ecommerce is a new name to the company and it is starting to implement such a cause to be a better competitor than is competition. As it is almost new to the system the company doesn't know what to avoid and what to conquer at this moment of time. Information systems are a vital tool in achieving competitive advantage for a business if properly managed and information is analyzed. Information systems require certain controls to be implemented for its smooth and effective functionality. Information security managers can put controls to ensure the system is secure against threats and functioning properly: some of the problem they would face could be security risks, increase costs of technological solutions, reliability of the system information, and high expectation from customers regarding the information system implementation, higher employee training required to effectively implementing the information system. These are a couple of the challenges faced at the case study company in the paper.

Thus, the aim is that, by understanding opportunities and problems associated with e-commerce, will contribute to filling the gap identified, and thereby lay the foundation for a coherent body of knowledge, in the field.

1.3 Research question

Research questions that will be involved in the research are

1. To what extent does information system be a useful competitive advantage tool to the organization?
2. How does business information system and ecommerce work in the organization?
3. What are the challenges faced in implementation of a business information system in an organization?
4. How does the management evaluate an organizations business information system performance?
5. What are the important management issues that affect the success of ECIS?

1.4 Objective of the study

1.4.1 General Objectives

The main objective of the study is analyzing information systems success in an organization and how the information system can ease the flow of e-commerce.

The objective of this research at BAE foreign trade and Export Company is that to analyze and get a better understanding of information system implementation and how this process is able to help ease the flow of E-business and Ecommerce. It would also be able to help us analyze the business benefits of such an information system implementation. The more knowledge a business has about its performance, the better its chances of success. By fully understanding the financial and corporate picture the senior management team is in a better position to make decisions that would benefit the company to higher degree.

1.4.2 Specific Objectives

The specific objective of the study in this research aims at retrieving the current status of Information Systems analysis in the Ethiopian context, in an organization located in Addis Ababa, in order to understand what the potential obstacles are in building a robust Information Systems benefits in the context of the organizations. The objective accomplished by a successful IS could be quite significant. The application of IS to a higher level of the organizational operations have expanded the objectives of the information system from efficiency to effectiveness.

The specific objectives of this research are:

1. IS success and their direct contribution to the flow of ecommerce and use as a competitive advantage tool

2. Investigate and capture the aspects connected to the issues, difficulties and challenges that are related to IS analysis and how ecommerce works.

3. To analyze suitable/appropriate action to be taken to promote e-commerce and identify the challenges that arise.

4. Identify the main opportunities available to adopt and implement e-commerce.

5. Identify the main challenges that hinder the development of e-commerce.

6. Identify important management issues that affect and contribute to the success of ECIS.

1.5 Significance of the Study

This research would be able to benefit the company in terms of analyzing its weaknesses and strengths while implementing information systems and how to go about integrating both IS and ecommerce efficiently. This research would benefit the company to get a better understanding of its environment i.e. the world of information systems and the challenges that are faced often.

The research would also benefit the stakeholders get an understanding of how the information system is evaluated based on different factors. Another beneficiary is the workers in different sectors of the company being able to see and process the different challenges faced also the benefits of such systems to the growth of the company.

There are two major inspirations for this research. The first inspirations is to present the key concerns of IS executives and managers worldwide and determine which concerns are global and which are regional in nature. By assessing the similarities and differences of regional issues, IS executives should be better prepared to manage their increasingly global function. More importantly, however, there is a need to understand the forces that shape key issues of IS so that managers can predict and plan rather than react. Thus, the second inspirations are to present an explanation for differences in key issues based on variables that differ among when analyzing the relation between ecommerce and IS.

1.6   Organization of the Study

The study is organized under the following. Chapter one tries to discuss on background of the study, statement of the problem, research questions, research hypothesis, objectives of the study, significance and scope of the study. Chapter two provides theoretical foundation of the study through exploring the arguments of different theoretical perspectives and empirical evidences. The third chapter shows the research design and methodology such as research design, data sources and collection, methods of data analysis, Chapter four focus on the results, interpretation and discussion of the findings. Finally, Chapter five describes the conclusions and recommendations.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

This chapter gives an overview of literatures that are related to the research problem. The chapter introduces literature concepts of information system success analysis and relation to ecommerce implementation and success. Alongside, it presents the evidences of different research works related to ECIS.

2.1   Literature review

The importance of information technologies and the information systems function is no longer of debate among business people. The question, rather, is how an organization can take best advantage of IT in order to support its operations, add value to its products and services, and gain a competitive edge in the marketplace. Organizations found it difficult to manage the information as a whole, before computer technology bloomed. Developments in computer technology made it possible for the managers to easily gather, integrate, store and manage the information in the form they require depending upon their needs and timing. Information is used simultaneously by many people. The information needs to be current, accurate, concise, timely, complete, well presented and storable. For organizational productivity, solely depending on personal computers is not reliable until it is used efficiently and effectively. Also, advanced technological systems for integrating and sorting the data can be costly unless the senior management provisions it to the staff. Thus, information systems came into picture.

According to Vladimir Zwass, Information system, an integrated set of components for collecting, storing, and processing data and for providing information, knowledge, and digital products. Business firms and other organizations rely on information systems to carry out and manage their operations, interact with their customers and suppliers, and compete in the marketplace. Information systems are used to run interorganizational supply chains and electronic markets. For instance, corporations use information systems to process financial accounts, to manage their human resources, and to reach their potential customers with online promotions and marketing. Many major companies are built entirely around information systems. These include eBay, a largely auction marketplace; Amazon, an expanding electronic mall and provider of cloud computing services; Alibaba, a business-to-business e-marketplace;

and Google, a search engine company that derives most of its revenue from keyword advertising on Internet searches. Governments deploy information systems to provide services cost-effectively to citizens. Digital goods—such as electronic books, video products, and software—and online services, such as gaming and social networking, are delivered with information systems. Individuals rely on information systems, generally Internet-based, for conducting much of their personal lives: for socializing, study, shopping, banking, and entertainment. As major new technologies for recording and processing information were invented over the millennia, new capabilities appeared, and people became empowered. The invention of the printing press by Johannes Gutenberg in the mid-15th century and the invention of a mechanical calculator by Blaise Pascal in the 17th century are but two examples. These inventions led to a profound revolution in the ability to record, process, disseminate, and reach for information and knowledge. This led, in turn, to even deeper changes in individual lives, business organization, and human governance.

According to Hakkarainen. (2015), The first large-scale mechanical information system was Herman Hollerith's census tabulator. Invented in time to process the 1890 U.S. census, Hollerith's machine represented a major step in automation, as well as an inspiration to develop computerized information systems. One of the first computers used for such information processing was the UNIVAC, installed at the U.S. Bureau of the Census in 1951 for administrative use and at General Electric in 1954 for commercial use. Beginning in the late 1970s, personal computers brought some of the advantages of information systems to small businesses and to individuals. Early in the same decade, the Internet began its expansion as the global network of networks. In 1991 the World Wide Web, invented by Tim Berners-Lee as a means to access the interlinked information stored in the globally dispersed computers connected by the Internet, began operation and became the principal service delivered on the network. The global penetration of the Internet and the Web has enabled access to information and other resources and facilitated the forming of relationships among people and organizations on an unprecedented scale. The progress of electronic commerce over the Internet has resulted in a dramatic growth in digital interpersonal communications (via e-mail and social networks), distribution of products (software, music, e-books, and movies), and business transactions (buying, selling, and advertising on the Web). With the worldwide spread of smart phones, tablets, laptops, and other computer-based mobile devices, all of which are connected by wireless

communication networks, information systems have been extended to support mobility as the natural human condition.

As information systems enabled more diverse human activities, they exerted a profound influence over society. These systems quickened the pace of daily activities, enabled people to develop and maintain new and often more-rewarding relationships, affected the structure and mix of organizations, changed the type of products bought, and influenced the nature of work. Information and knowledge became vital economic resources. Yet, along with new opportunities, the dependence on information systems brought new threats. Intensive industry innovation and academic research continually develop new opportunities while aiming to contain the threats.

Information system successfulness is the main objective in implementation and analysis. Success of an information system implementation should be measured by the extent of the actual benefits that it brings to the organization as a whole. In this specific case the expected benefits of the system include increased productivity, profitability, time saving and work safety. As a necessary prerequisite for successfulness, the system has to be well accepted by its users, and therefore it is important to find out how well they can utilize its functionalities, and how willing they are to use it in general.

2.2 Background of Information System and ecommerce Concepts

When setting up our framework of information system concepts, the researcher inevitably had to face the problem of identifying the various options concerning certain facets of our field, and to choose from these options according to certain guiding principles. Here are the most important guiding principles we applied whenever a necessity of choice arose:

(a) Information systems exist exclusively within organisations, to support their work, and to fulfil their information and communication requirements. To understand information systems, we therefore need to understand organisations, what they are, how they work, what their components are, and what their structure and behaviour is. Thus, we will borrow from organisation science. Organisations can be viewed as systems, organisational systems. In this view, information systems are specific sub-systems of organisational systems.

(b) To understand the information and communication requirements within organisations, we have to understand the notions of information and communication. These issues are closely related to cognitive science and to semiotics, from which we consequently will borrow.

(c) Information systems and organisational systems both are systems. To understand them, we have to understand systems in general. Thus, we will borrow from system science.

(d) Systems are specific conceptions (in the minds of people), and can be represented in some (modelling) languages. Thus, in order to understand systems, we have to investigate the issues of conceptions, models and languages. Again, these issues are closely related to cognitive science and to semiotics (b), from which we consequently will borrow again.

(e) To be able to investigate any of these issues on firm grounds we have to rely on some basic ontological view, as well as on some suitable philosophical position.

2.3 E-commerce

E Commerce stands for electronic commerce and caters to trading in goods and services through the electronic medium such as internet, mobile or any other computer network. It involves the use of Information and Communication Technology (ICT) and Electronic Funds Transfer (EFT) in making commerce between consumers and organizations, organization and organization or consumer and consumer. With the growing use of internet worldwide, Electronic Data Interchange (EDI) has also increased in humungous amounts and so has flourished e-commerce with the prolific virtual internet bazaar inside the digital world which is righty termed as e-malls. Major types of ecommerce:

The several types of e-commerce in use today are classified based on the nature of the transactions: business-to-consumer (B2C), business-to-business (B2B), consumer-to-consumer (C2C), consumer-to-business (C2B), and non-business and government, and organizational (intra-business).

1) Business-to-consumer e-commerce

In B2C e-commerce, businesses sell directly a diverse group of products and services to customers. In addition to pure B2C e-commerce players such as Amazon.com, and hepsiburada.com other traditional businesses have entered the virtual marketplace by

establishing comprehensive web sites and virtual storefronts. In these cases, e-commerce supplements the traditional commerce by offering products and services through electronic channels. Wal-Mart Stores, and the Gap are examples of companies that are very active in B2C e-commerce. Some of the advantages of these e-commerce sites and companies include availability of physical space (customers can physically visit the store), availability of returns (customers can return a purchased item to the physical store), and availability of customer service in these physical stores.

2) Business to Business ecommerce

Business-to-Business e-commerce holds electronic transactions among and between businesses. The Internet and reliance of all businesses upon other companies for supplies, utilities, and services has enhanced the popularity of B2B e-commerce and made B2B the fastest growing segment within the e-commerce environment. In recent years extranets (more than one intranet) have been effectively used for B2Boperations. B2B e-commerce creates dynamic interaction among the business partners; this represents a fundamental shift in how business will be conducted in the 21st century.

3) Consumer to Consumer:

Using C2C e-commerce, consumers sell directly to other consumers using the Internet and web technologies. Individuals sell a wide variety of services/products on the Web or through auction sites such as eBay.com, and gittigidiyor.com through classified ads or by advertising. Consumers are also able to advertise their products and services in organizational intranets and sell them to other employees.

4) Consumer-to-business e-commerce

Consumer-to-business (C2B) e-commerce that involves individuals selling to businesses may include a service/product that a consumer is willing to sell. Individuals offer certain prices for specific products/services. Companies such aspazaryerim.com and mobshop.com are examples of C2B.

Meaning of B2B Ecommerce:

Companies doing business with each other such as manufacturers selling to distributors and wholesalers selling to retailers. Pricing is based on quantity of order and is often negotiable. Companies using B2B e-commerce relationship observe cost savings by increasing the speed, reducing errors, and eliminating many manual activities. Wal-Mart Stores is an example for B2B e-commerce. Wal-Mart's major suppliers sell to Wal-Mart Stores electronically; all the paperwork is handled electronically. These suppliers can access online the inventory status in each store and refill needed products in a timely manner. In aB2B environment, purchase orders, invoices, inventory status, shipping logistics, and business contracts handled directly through the network result in increased speed, reduced errors, and cost savings. B2B e-commerce reduces cycle time, inventory, and prices and enables business partners to share relevant, accurate, and timely information. The end result is improved supply-chain management among business partners.

The immense popularity of the internet in recent years has been fuelled largely by the prospect of performing business online. With the rapid global growth in electronic commerce, businesses are attempting to gain a competitive advantage by using e-commerce to interact with customers (Lee and Lin, 2005). E-commerce refers primarily to the buying and selling activities over the Internet, which includes transactions such as placing orders, making payments, and tracking delivery of orders on the Internet (Rodgers, 2002). The e-commerce is defined as buying and selling of product service or information through computer networks mainly the internet (Wen et al., 2001) and people immediately think of consumer retail purchases from companies such as Amazon (Chaffey et al, 2006). However, e-commerce refers to both financial and informational electronically mediated transactions between an organization and any third party it deals with (Chaffey, 2006). Further, Singh (2001) supported the definition by referring e-commerce to an online service offered to customer to support their shopping experience over the internet. E-commerce is exponentially increasing the availability of information, giving customers access to more knowledge, of better quality and faster than before. Technological advancement led an explosive development in electronic commerce, the causes of that are the internet end the World Wide Web (WWW), which are making electronic commerce much more accessible. Internet e-commerce includes electronic trading of physical goods and of intangibles such as information. This encompasses all the trading steps such as online marketing, ordering, payment and support for delivery (Trimmers, 2000).

E-commerce is used everywhere in everyday life. Now a days it is utilized for everything from credit card authorization, travel reservation over a network, wire fund transfers across the world, point of sale (POS) transactions in retailing, electronic banking. It helps in generate demand for the products and services and improves order management, payment and other support functions (Awad, 2004). Similarly, e-commerce decreases the cost of creating, processing, distributing and retrieving paper-based information. Further facilitates the benefits which include improved image, improved customer service, simplified processes, compressed cycle and delivery time, eliminating paper work and increased flexibility (Turban et al, 1999).

Moreover, e-commerce is not just about buying and selling as it is also about electronically communicating, collaborating and discovering information (Turban et al, 2004). It can involve the Internet, groupware programs, public e-mail networks (Adms,1994), technologies such as electronic data interchange (EDI) and electronic funds transfer (EFT) and more recently, services associated with mobile telephones and digital television (Voss, 1999). E –commerce has become very popular because of the benefits and convenience it brings along as it is no longer an alternative, it is an imperative (Wen et al, 2001). E-commerce is generally based on monetary transaction and e-services are the part of electronic commerce.

E-business and e-commerce are two separate concepts such as e-commerce uses the web to connect customers with firms whereas e-business includes the web as well as other means necessary to interconnect information systems and data streams, both internal and external further e-commerce requires human interaction for form filling during purchasing process however, e-business allows many processes to be fully automated thus improving the efficiency of business processes and removing the error of human interfaces (Chou et al, 2002). There are some similarities between the two. As e-business and e-commerce solutions include newly developed web technology into organizational and business processes. The use of web technology results in improved efficiency. Moreover, e-commerce is generally less complex than any e-business solution as firm must start with e-commerce initiatives before creating e-business tasks. Once a firm has successfully implemented its e-commerce functions, then it may begin to work on e-business with the e-commerce infrastructure, without e-commerce infrastructure first, it will be difficult for firms to integrate all the e-business functions. (Rodgers et al, 2002). Moreover, if a firm decide to skip the e-commerce part and jump directly to e-business, the

project or work would be much more costly and time consuming. Therefore, it is necessary for a firm to create an e-commerce capability before it pursues e-business solutions

2.4 E-Business

As a phenomenon of the 1990s, e-Commerce is relatively new. Its advent offered the promise of new opportunities to businesses and entrepreneurs around the world. The hyperbole associated with the Internet and the Web resulted in a mindset that e-Commerce was an easy road to success. It was believed that this new technology-based approach would revolutionize business in a number of ways, including changing the relationships between the stakeholders and allowing small organizations to play on the global stage. However, the road to business enhancement through e-Commerce has not been easy. Many organizations have not survived their attempts to engage in e-Commerce and others have radically changed their approach since the e-Bubble burst. There were many reasons for the failure of these e-Commerce initiatives. They included poor business ideas, no control of expenditure, lack of general business experience and immaturity, as well as little understanding of the crucial importance of managing the technology through which the Internet and the Web delivers e-Commerce opportunities.

In the 1990s, the commercialization of the Internet transformed the use of Information and Communication Technologies3 (ICTs) in the business world. Over this period of time it has been estimated that hundreds of billions of dollars have been spent on e-Commerce or e-Business (Sarner,2004). Today organizations understand the potential of e-Commerce. Many organizations are now in a position to focus on how they can effectively use the Internet and the Web, together with sound management practices to achieve business success. Consequently, questions concerning how to ensure the successful use of ICT have come to the fore in the e-Commerce business world. Without a coherent understanding of the factors affecting IS success, the implementation of traditional IS evaluation mechanisms may be problematic. A comparative analysis of studies in this field between the pre- and post- e-Commerce eras, ascertained a paucity of theoretical frameworks and a fragmented body of knowledge in the extant literature, with a narrow focus on web-interface issues. Consequently, the main aim of the study was to advance theory in the field of IS evaluation. Today organizations understand the potential of e-Commerce. Many organizations are now in a position to focus on how they can effectively use

the Internet and the Web, together with sound management practices to achieve business success. Consequently, questions concerning how to ensure the successful use of ICT have come to the fore in the e-Commerce business world.

According to Shawn Pather, 2006, E-Commerce information systems success is underpinned by a mindset, which sees Customer-Centricity as one of the primary drivers of e-Commerce. Customer-Centricity pervades the key e-Commerce processes. However, Customer-Centricity alone is unlikely to lead to an optimal e-Commerce solution. For sustained success, business and IS mindsets need to be harmonized.

In the 1990s, the commercialization of the Internet transformed the use of Information and Communication Technologies (ICTs) in the business world. Over this period, it has been estimated that hundreds of billions of dollars have been spent on e-Commerce or e-Business (Sarner, 2004). Additionally, as customers' tastes and preferences change, so too should the ability of the business to be responsive to these changes. Responsiveness is realized through the design of agile processes and systems. Implicit in the understanding of these three critical success factors, viz., Customer-Centricity, harmonization, and agility, is that e-Commerce processes are supported by high quality e-Commerce information systems that are reliable and easy to maintain. To ensure success, all four of these factors need to be integrated into a competent business model. E-Commerce information systems success will be sustainable by the continuous assessment of Customer-Centricity, harmonization, agility, changing environmental factors, and the quality of e-Commerce information systems.

The use of the Web as a platform to conduct business gave birth to the practice of electronic commerce, or more commonly, e-Commerce. According to Delone and McLean (2004), e-Commerce can be defined as the use of the Internet to facilitate, execute, and process business transactions. Thus. at the core of all e-Commerce activities is the application of Information and Communications Technology (ICT). However, unlike many traditional organizations, where ICT services may only be supportive and not mission critical, those organizations which are pursuing e-Commerce are much more reliant on this technology. If the computers or the telecommunications falter the e-Commerce organization may come to a halt. It is therefore clear

that ICT in an e-Commerce environment is central and that it needs to be understood, managed and its operation evaluated or assessed in a different way.

2.5 The information systems planning development

Information Systems planning is the process of determining and analyzing information requirements and integrating those requirements with overall organizational objectives. McFarlan(1971), McLean and Soden(1977), Ward, et al. (1990), and others have identified not only the need but also the necessity for an effective IS plan. An IS plan provides an opportunity for an organization to exploit rapidly advancing information technology. An IS plan must take into account both the short and the long-term views in order to properly allocate resources as well as support the information needs of an organization (Emery, (1987).

Organizations are often pressured into IS planning. The critical pressures that force an organization to plan ahead remain valid and are increasingly important today (McFarlan and McKenney, 1983). These include:

1. Rapid changes in information technology.
2. Scarcity of experienced information systems professionals.
3. Scarcity of organizational resources.
4. Organizational dependence on information systems support.

Hierarchal application portfolio model for IS planning in organizations was defined by Anthony (1965). This model described an information planning and control structure with three levels:

1. Strategic planning
2. Management control
3. Operational control

Bowman, et.al. (1983) determined three basic generic planning activities based on Anthony's (1965) model: strategic planning, organizational information requirements analysis (tactical planning), and resource allocation (operational planning). They gave the following definitions of the IS planning activities

1. Strategic IS planning: establishing the relationship between the overall organizational plan and the IS plan.

2. Organizational information requirements analysis: identifying broad, organizational information requirements to establish a strategic information architecture that can be used to direct specific application system development project.

2.6 Essentials for Research on Information Systems

While information systems exist in the absence of computers, the presence of the computer has made possible the notion that a system could be developed which provides an all-inclusive network for collecting, storing, and processing company-wide data. For example, the popular phrase "total information system" refers to a system whose basic characteristics include: a very large data base, such as 1010 characters providing millions oi records; multiple user access and information requirements; parallel and multi-programmed data processing; and centralized organization. Because of the multiplicity of users and large volumes of data handled within these systems, complex problems in systems design arise in areas, such as data coding, file organization and maintenance, planning equipment and programming requirements, and the like (Churchill and Kriebel,1965).Stylianou and Kumar (2000) sum up the strategic importance of IS in business in arguing that: The importance of information technologies and the information systems function is no longer of debate among business people. The question, rather, is how an organization can take best advantage of IT in order to support its operations, add value to its products and services, and gain a competitive edge in the marketplace". DeLone and McLean (2003) have also contributed to this discussion by stating that: "the measurement of IS success or effectiveness is critical to understanding of the value and efficacy of IS management actions and IS investments"

The role of technological advance in creating research problems is not, however, limited to total information system operations. The problems of decision-making and control in response to new information inputs also have become increasingly complicated. This is particularly evident in the "latest generation" of computers which possess the additional capability of the collection and processing of data in "real time." By "real time" data collection we refer to the instantaneous recording of events as they occur.

The simple statement that it is the use to which these immense capabilities are put rather than their existence which determines value, seems frequently ignored. For example, a survey recently conducted among its executives by a large progressive and computer sophisticated

company as part of the planning for installation of a real-time total information system, indicated that the executives wanted the same information they had been previously receiving but wanted it more promptly. In other words, the system was perceived as a device to be used primarily for obtaining data and reports previously provided but in a more timely fashion. Until such data are translated into management decisions, of course, it is impossible to determine whether or not the existence of more data has actually improved the decision process.

The acceptance of information technology is mainly influenced by two factors: perceived usefulness and perceived ease of use. Citing the research done by Fred Davis, Abdekhoda et al. define these two in the following way: perceived usefulness is considered to be the degree to which an individual believes that using a particular system will enhance his or her job performance, while perceived ease of use is the degree to which an individual believes that using a particular system is free of effort, which includes mental and physical efforts as well as ease of learning (Abdekhoda et al., 2013). External variables such as the user's level of education, gender and organizational features such as on the job training may also have an influence on perceived usefulness and perceived ease of use. Ensuring the compatibility of an information system with current work practices of an organization could also be considered as a necessary component for the acceptance of information technology. If the technology in use is perceived to, for example slow down procedures or increase workloads of the employees, then patterns of resistance that lead to a poor user acceptance may emerge (Moores, 2012).

2.7   Representations for successful systems

Multiple studies have been conducted and models created in order to find out an easily generalizable set of factors to explain what makes a great information system. Specifically, two of the more well-known models for this purpose are the Technology Acceptance Model (TAM) by Fred Davis, and the DeLone& McLean information system success model. Fred Davis developed the technology acceptance model in order to explain the reasons behind user acceptance of information systems, and according to his theory the two main factors that determine user acceptance are perceived ease of use and perceived usefulness of the system. End user's attitude towards the use of a specific information system consists of at least these two factors, and this attitude in turn affects behavioral intentions, however, according to the model

there is also a direct link between perceived usefulness and intentions of use, which suggests that perceived usefulness has a bigger impact on a person's use patterns than perceived ease of use. Actual system usage behavior is ultimately defined by the intentions of the user. ("Technology Acceptance Models", 2012.).DeLone& McLean (1992) based their initial information system success model on six variables that they were able to identify by reviewing a number of preceding studies on the topic. These interdependent variables were system quality, information quality, system use, user satisfaction, individual impact and organizational impact. Following the publication of their model other researchers started to make suggestions on how to improve it, and recognizing some of these proposed modifications, D&M reviewed empirical studies that had been performed during the years after publication and revised the original model accordingly in a follow-up work. In their reviewed model the variables were updated to be system quality, information quality, service quality, system use, user satisfaction and net benefits. Service quality was added to the list based on propositions made by other researchers, and organizational impact and individual impact have been condensed into one unit as net benefits. (DeLone& McLean, 2002, 2003). IS service quality is one of the most influential variables and that the link between information system quality and information quality is legitimate in information system success models, additionally, the validity of these success models in various business and government contexts through empirical studies shows that information system success models are well accepted by scholars and are useful for practitioners. (Gorla& Somers, 2014).

2.8   Role of IS

Decision - making is the process by which organizational members choose specific course of action out of several alternatives in response to opportunities and threats. The outcome of the decision-making process either results in a good or a bad decision. A Good decision results in successful productivity of the organization and in the courses of actions that help an individual, group or organization to be effective, while a bad decision results in ineffective and inefficient choice of course of action thereby leading to poor or no productivity and overall loss of time, effort, finance and labor. Every organization grows, prospers or fails because of decisions made by its members. The success of decision-making is highly dependent partly on available information, and partly on the components of the process, which are known as functions. For

example, if managerial objectives are absent or unclear, probably due to inadequate information, there is no basis for a search. Without the information, the search has no meaning because there will be no alternatives to compare search results, which will thereby yield an undesired result due to random choice of a particular course of action.

According to Haynes and Massie, a decision is a course of action which is consciously chosen for achieving a desired result. According to Trewatha and Newport, Decision making involves the selection of course of action from among two of more possible alternatives in order to arrive at a solution for a given problem. Considering the classification of decisions, there are classification based on the situation and their nature. The types of decision on the basis of situation are based on the knowledge about the outcomes that are yet to take place. For a successful decision, the decision maker should be aware of the outcome that will take place once that decision is taken. In addition to that, if the decision maker has the full knowledge of the system then it is a situation of certainty. Contrastingly, if the decision maker has partial or incomplete knowledge of the system, then it's a risk situation. Lastly, if the decision maker has no knowledge of the system then it is a situation under uncertainty.

On the basis of nature, decisions can be classified as programmed decisions and non-programmed decisions.

1) Programmed decision: - If a decision is based on rules, methods or some guidelines then it is called as programmed decision. The programmed decision-making can be delegated to a lower level in the management.

2) Non- programmed decision: - A decision that cannot be made using a rule or method is called as non-programmed decisions. This decision-making is non-deterministic and is handled by top management.

The success of decision-making is highly dependent partly on available information, and partly on the components of the process, which are known as functions. For example, if managerial objectives are absent or unclear, probably due to inadequate information, there is no basis for a search. Without the information, the search has no meaning because there will be no alternatives to compare search results, which will thereby yield an undesired result due to random choice of a particular course of action. For improvement in decision making using MIS, a relevant MIS strategy should be chosen and it should be ensured that the choice made is fully compatible with the system. Thus, time and money will be saved and the probability of selecting a wrong choice

will decrease. Also, the selected management's information system strategy should be compatible with the decisions made. That means there should be a common point between the decisions and the MIS strategy to be used by the organization.

According to Obi (2003), IS can monitor any disturbances in the system and hence it is useful for decision making. MIS gets the system in control by taking a particular course of action. It is also relevant in nonprogrammer decisions as it provides support by supplying information for the search, the analysis, the evaluation and the choice and implementation process of decision making.

Considering the various aspects of how MIS helps in decision making, another key factor here is selecting the individuals for decision making. MIS is a highly complex process which requires lot of caution. Thus, organizations should carefully select the individuals who will be controlling the systems. The more professional a person, the better it can handle decision making which thereby increases the probability of correct decisions and positive outcomes for the organization.

2.9   The information systems planning process

Information Systems planning is the process of determining and analyzing information requirements and integrating those requirements with overall organizational objectives. McFarlan(1971), McLean and Soden(1977), Ward, et al. (1990), and others have identified not only the need but also the necessity for an effective IS plan. An IS plan provides an opportunity for an organization to exploit rapidly advancing information technology. An IS plan must take into account both the short and the long-term views in order to properly allocate resources as well as support the information needs of an organization (Emery, (1987).

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3. Strategic IS planning: establishing the relationship between the overall organizational plan and the IS plan.

4. Organizational information requirements analysis: identifying broad, organizational information requirements to establish a strategic information architecture that can be used to direct specific application system development project.

2.10 Quality dimension of IS Success

The systems quality dimension of success is concerned with performance characteristics of the IS being studied (Grover et al., 2005). Sabherwal et al. (2004) define this dimension as the quality of the system and the information it provides, in terms of the system's reliability, ease of use, response time, as well as the relevance, timeliness and accuracy of the information. Another definition of systems quality refers to the performance of the system in delivering information (DeLone & McLean, 1992). In general, the systems quality dimension of IS Success tends to focus on the technical nature of the system as opposed to the impact the system has on its users (user satisfaction) or the business (net benefits). From the IS Success Model perspective, systems quality is considered as one of the antecedents of IS Success.

Delone and McLean (2004) have attempted to demonstrate that the IS Success Model can be applied in the e-Commerce environment. By using two case studies, these authors suggest that dimensions of systems quality that could be applied in the e-Commerce environment are usability (website should be easy to use), availability (of the website), and download time. A number of other e-Commerce studies also focused on the system quality dimension of web sites. For example, McKinney et al. (2002) identified a number of constructs for measuring e-Commerce Success. These were access (responsiveness, quick loads), usability (or ease of use

of the website), and navigation (easy to go back and forth, number of clicks). Lee and Kozar (2006:6), also focused on the website, by using the following constructs for evaluation:

1. Navigability: the website's capability to provide alternative interaction and navigating techniques;
2. Response time: the time taken to respond to page and information requests;
3. Personalisation: provision of an individualised interface, effective one-to-one information and customised service;
4. Telepresence: the sense of reality created in the virtual environment; and
5. Security: encryption, third-party affiliations, etc

2.11 Organizational Informational Requirements Analysis

The organizational informational requirements analysis level is generally divided into two phases: the Long-range plans: which assesses current and projected information needs to support decision making and operations of organizations and medium-range plans: from which master development plans are assembled. (Ahituv and Neumann, 1990).

The overall information systems architecture, consisting of a description of general courses of action and broad resources required to execute the strategies, is developed through a long-range plan. Collecting background information: strategic organizational objectives for IS; characteristics of future hardware and software technology; characteristics of future use of human resources; potential external pressures for change; portfolio of information services foreseen by users for the next five to ten years; current major problem areas from the IS management point of view and from the user management point of view. Analyzing overall resource needs: demand for resources can be established in terms of type, capability, quantity, and timing. This demand is then compared with currently available resources in order to determine whether these resources together will be capable of meeting demands. Developing the long-range document: Specify objectives, and project future trends; resource plans, organizational effects, scope and structure of the IS function and potential risks and opportunities. (IBM, 1976).

The master plan, often referred to as the medium-range plan, is the detailed plan for developing an information system necessary to meet the present information needs of an organization. The

focus of a master plan is managerial; it contains a portfolio of prioritized projects to be implemented. The projects will provide for hardware and software procurement, budgeting and staffing of multi-year projects, and development activities. Every organization involved in development and maintenance of IS must have a master plan. Ahituv and Neumann (1990) contend that an IS master planning document should include: Objectives and general strategy: a restatement of organizational long-range and medium-range objectives, strategies, and priorities, combined with a statement of the overall objectives for the information system and the IS unit, Current IS situation: current systems in operation and in development, and level of resources used by each, hardware and software, including levels and costs; organization and staffing, including skill level and type and costs; and facilities utilization, expenditure plan projected IS expenditures, annually for the next five years, in absolute terms by resource group, and in relative terms as a percentage of an organization's total sales, support plan: hardware and software requirements for the chosen planning period and the personnel needed to meet these requirements, operations plan: major characteristics of IS operations projected over the chosen planning period and the resources needed for production and support of development projects, staffing and organization plan: total personnel requirements for a planning period by major type of activity. Application development plan: new or revised application that will be developed or acquired over the next five years, including time schedules and expenditures for each application. This should as a minimum include: project priority ranking; development timetable for project portfolio; specific project descriptions; specific development cost estimates; specific operating cost estimates; specific project benefits estimates; and specific project risk evaluations.

2.12 Difficulties with the evaluation of the business benefits of information systems

Due to a fundamentally changing external environment, several organizations have decided to change their IS strategies by adopting application software packages rather than in-house development (Hong & Kim, 2002). According to Davenport (1998), the most significant development in the corporate use of IS is the establishment of enterprise resource planning (ERP) systems. ERP systems are an information technology (IT) infrastructure that facilitates the flow of information between all supply chain processes in an organization (Al-Mashari&Zairi, 2000). ERP systems, moreover, provide the means for management to respond to increased business needs in more effective and

efficient ways (Spathis and Constantinides, 2003). Nonetheless, a concern regarding ERP systems regards their flexibility and ability to meet specific organization and industry requirements. As a result, some organizations still integrate their systems using conventional best of breed (BoB) or stand-alone system components of standard package and/or custom software without ERP systems (Davenport, 2000). In addition, some organizations have developed their own customized suites of enterprise applications, known as a best of breed (BoB) IT strategy, which offers greater flexibility and closer alignment of software with the business process of the organization (Light, Holland & Wills, 2001). Therefore adoption and utilization of ERP and BoB systems should be considered as an important factor which should be suitable for the organizations and the current business processes.

According to Bakis, One reason why it is not always possible to produce a definite statement of the business benefits of an information system expressed in clear, e.g. Financial, terms and without any degree of subjectivity, is the fact that the assessment of the business benefits of information systems is impeded by several difficulties, as any treatment on the subject would probably tell. First, some of the business benefits of an information system might be intangible in the sense that they do not directly lead to identifiable performance improvements. For instance, an information system might improve customer satisfaction. But how could one measure customer satisfaction in financial or any other terms? As they do not directly lead to identifiable performance improvements, intangible benefits are difficult to quantify. In some cases, it may be possible to assign a subjective value to them. But in some other cases, such assignment may not be possible or make any sense at all. Nevertheless, assigned with a value or not, intangible benefits do not stop being very important as they could make a critical contribution to the success of an organization (Remenyi, 2000). Second, the introduction of any substantial information system could bring significant changes in organizational terms (e.g. changes in organizational structure or procedures), social terms (e.g. social interaction, quality of working life, organizational culture) and management terms (e.g. information access and decision making) (Walsham, 1993). These changes might happen gradually and take long time to materialize, and might affect the organization's performance in a positive or negative way. Trying to envisage those changes and the benefits they might bring is a difficult task. But even if those benefits could be identified, it is rather difficult, as Farbeyet al. (1993) note, to isolate the factors that contribute to them and establish whether they should be attributed to the system or not. Third, as Remenyi (2000) points out, the business benefits of an information system do not

usually stay static but rather evolve over the system's lifecycle. An information system may provide the basis for additional functionality or be used in ways that have not been previously thought of. For example, the World Wide Web was originally developed as a system for disseminating information within the academic community and has now found application in many different areas. In short, as the role of the system within the organization is gradually understood, refinements could be made and new benefits may arise.

However, trying to forecast those benefits is almost impossible, especially in today's dynamic economic environment where businesses rapidly change. Fourth, different stakeholders see the system from different perspectives and may have conflicting objectives. These conflicting objectives as well as the lack of a common baseline of definitions make the assessment of the business benefits problematic. For instance, in a case study reported by Smithson and Hirschheim (1998), the managers of an organization wanted to outsource the IT function in order to reduce costs. The end users on the other hand wanted to maintain the existing IT department, which was providing high quality of service. At the end, the decision to outsource the IT function was taken, and while the managers saw this decision as successful, the users were highly disappointed by the quality of service getting from the outsourcing organization. Fifth, there is a danger of the evaluation becoming a political activity (Ledereret al., 1990). The users might feel threatened by the introduction of the system, as they might see their jobs being at risk, and when asked to participate in the evaluation they may underrate the system in order to oppose its introduction. Or, as a classical case study by Markus (1983) has shown, an information system might be used to shift power between different groups and the evaluation of the system might become subject to external pressures in order to produce results in favor of the various political ambitions. Finally, in addition to the above problems, there are a number of practical difficulties. Brynjolfsson (1993) points out that an information system might not materialize all of its benefits simply because it is not used properly. For instance, learning difficulties may cause a lag in delivering the benefits. Smithson and Hirschheim (1998) note that modern information systems have become too complex and sophisticated, and their functionality and scope has increased dramatically. They also note that today's systems are much more frequently interlinked and it is rather difficult to disentangle a single system for the purpose of evaluation. Finally, Renkema

(2000) stresses the difficulty of assessing the business benefits of infrastructure investments which do not deliver any benefits directly but provide the basis for other applications to operate. The above difficulties make the assessment of the business benefits of information systems problematic. However, as Bannister &Remenyi (1999) point out, there is not any reason for those benefits to be glaringly obvious. There are many types of investment where the benefits are really rather subtle, but are no less real for that. For instance, corporate head offices and prestige motorcars for executives could be mentioned as two of them. And as Powell (1992) points out, one should not forget that similar difficulties are encountered in many other areas of evaluation. For instance, the evaluation of other economic and social investments, such as education and training or research and development, faces similar problems.

According to Ein-Dor and Segev (1978), and IS becomes a management information system (MIS) when it is applied to improve management by directors of the organization. This system can increase the performance of the management. MIS is a collection of manpower's, tools, procedures and software to perform various business tasks at various levels in the organization (Tripathi, 2011). This system has three basic levels: operational, middle management and top management where the information is passed from bottom to top (Tripathi, 2011). Moreover, MIS is one of the important functions of management which plays an important role in providing information that is required for crucial decision making which directly affects the performance of the organization.

2.13 Research Gap

In Ethiopian universities or colleges, I wasn't able to find any research papers done on this specific topic. This came to my knowledge and made me choose such a subject to close the gap and have a better understanding of the subject in our country.
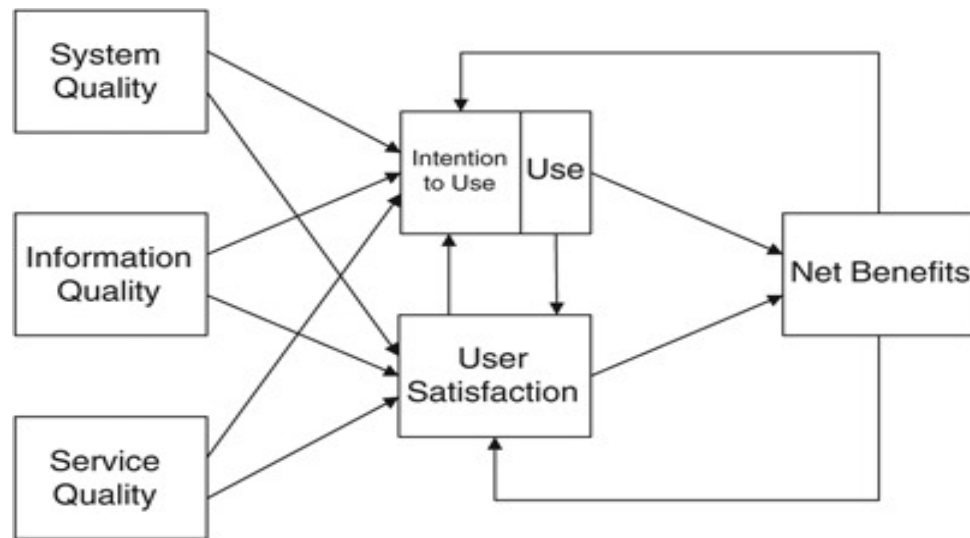
2.14 Conceptual Framework

Figure 2.1 Information system success measurements

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This is a descriptive study which delineates management information systems in the department and their ability to enhance organizational performance. An empirical study approach was used to collect primary data from the officials of the department. Secondary data were collected from documents such as reports and plans of the department.

Descriptive statistics analysis is used in the interpretation and discussion. Descriptive research is a type of research that is mainly concerned with describing the nature or condition and the degree in detail of the present situation. Creswell (1994) stated that the descriptive method of research is used to gather information about the present or existing condition.

3.2 Research Approach

The essentials of the critical realist tradition suggest that qualitative research methods would be a more suitable approach to select for this study. Case study is a form of qualitative, descriptive research that could be defined as follows: "A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." (Yin 2009). O'Leary (2014) suggests some obvious strength for this research method, as administering a questionnaire allows the researcher to generate data specific to their own research and offers insights that might otherwise be unavailable.

Semi-structured questionnaires involve prepared sheets that allow the interviewee to choose from existing responses, resulting in a set of responses that are easy to analyze. Semi-structured questionnaires were used to collect data because for the researcher's case open sided questions were found to be accurate and more responsive according to O'Leary (2014). Face-to-face interviews were conducted where feasible; however telephonic interviews were used for interviews with officials not geographically located in the same town as the researcher. Interviews are preferable to self-administered questionnaires to minimize a low response rate.

The researcher performed content analysis by studying reports and planning documents submitted by various sub-programs of the department. The content analysis data analysis method was used to analyze data. The research also used the questionnaire method to obtain secondary data to support the primary initiative.

Questionnaires are appropriate for gathering the views of a large number of people about a Particular phenomenon (Stroh, 2000). Questionnaires were used to gain general picture of ecommerce practices, opportunities and challenges. In order to gather pertinent information with respect e-commerce opportunities and challenges that face general importers and exporters, the questionnaires were distributed to 258 top level management of respective organizations which are included in the sample. To achieve the aim of this research, twenty-two questions were designed and administered to managers of the company in two parts. The first part of questionnaire was used to collect demographic data such as gender, age, level of education and experience. The second part of the questionnaire was designed with the purpose of collecting data about e-commerce practices, opportunities and challenges. In order to ensure the comprehensiveness of data, these questionnaires consist of open ended and close ended statements, some of which are statements evaluated on a 1-5 scale. Closed questions obtain responses by selecting from a given set of options such as yes or no, agree or disagree, or by checking preferred answers . Open ended part of the questionnaire consists of questions where the respondents were asked to describe the answers on the space provided for additional explanation and comments.

3.3 Data Measurement

In addition to other close ended and open-ended questions, the questionnaires also included likert scaled questions. So, the data measurement for the questions used likert method, a self-report technique for attitude measurement in which respondents were asked to indicate there degree of agreement or disagreement with each of a number of statements (churchil, 1989). In relation to the number of scale points, there is no clear rule indicating an ideal number. However, researchers acknowledge that opinions can be captured best with five to seven point scales (Aaker et al., 2000; Malhotra ,1999). In fact, researchers indicate that a five-point scale is just as good as any other (Malhotra, 1999; Parasuraman, 1991). That is, an increase in scale does not

improve the reliability of the ratings (Elmore & Beggs 1975) and may cause confusion to the respondents (Aaker et al., 2000; Hair et al., 2003). Thus, a five-point Likert scale was used in this research, specifically the Response Options are:

1=strongly disagree, 2=disagree, 3= Neutral,4=agree, 5=strongly agree(Level of agreement)
1= Very low, 2=Low, 3= Medium/average, 4= High, 5= Very high 1=Very Poor, 2= Poor 3= Fair, 4= Good, 5= very good (Level of Quality)

3.4. Target population and sampling technique

To undertake this research the sampling process included several activities: define the population, establish the sampling frame, specify the sampling method, determine the sample size and select the sample.

Population: The population for this study was defined as companies who involve on importing general imports in Ethiopia at the time of the survey was conducted. Therefore, target populations of this research were all 748 general importers and exporters that are found in all sub cities, Addis Ababa. For this study, lists of general importer and exporters in each sub cities were acquired from ministry of trade and industry data base as a readily available list of population elements (ministry of trade and industry data base, 2012).

Sampling frame: To establish the sample frame, a list of general imports were obtained from ministry of trade and industry of the ten sub cities, from Akaki Kality sub city, Kolfe, Gulele, Lideta, Nefas Silik , Arada, Yeka, Adis, and Bole ,Kirkos sub city.

3.4.1 Sample Size Determination

Two stage sampling was used to undertake this research. In the first stage the researcher selected three sub cities, which were chosen based on performance and number of companies within the sub cities, in which samples were taken and then select the required sample size from each sub cities in stage two. This method of sampling often is more convenient when the population is much dispersed. It is more manageable because of time, expense, and convenience. First, sampling is used to select the three sub cities that are considered for the study based on

performance in the market. Accordingly, those sub cities which has the highest number of general importer exporters were first considered and selected.

Thereby kirkos (has total of 131 general importers), Bole (has total of 126 general importers, exporters Addis sub city (94 general importers and exporters) were selected during first stage for further investigation. This three sub city account 46% (ministry of trade and industry data base, 2011) of total general importers and exporters found in Addis Ababa(ministry of trade and industry data base, 2011) As the research aim was to understand successful implementation of ECIS the research sought out specific instances of business excellence in the field and also took into account the size of the business. target populations of this research were all 748 general importers and exporters that are found in all sub cities, Addis Ababa.

Then for purposes of administering questionnaires, the researcher specifically selects sufficient number of sample general importers and exporters from these sub cities by using the formula provided by Yamane (1967) which was cited in Obasi and Ekwueme (2011). To do this the researcher went to the above sub cities major trading centers and distributed the questionnaires to the general importers and exporters who are available and meet at the time when the researcher went to their business area during work hour . In order to get this areal much dispersed sample and in order to save time and cost, those respondents (managers) who are not available when researcher distributed the questionnaires were not considered.

Finally, E-commerce is a strategic issue which should be handled by top management of an organization, thus the questionnaire purposely administered to the top managers of the organization.

The research population constitutes knowledgeable Interviewees in an e- Commerce businesses who have an in-depth understanding of the management of business operations. These Interviewees would usually be assigned with the responsibility for the successful outcome of the e- Commerce initiatives.   Based on the above, the following categories of Interviewees were identified: Managers of e-Commerce businesses who oversee operations and have either direct or indirect responsibility for the online products and services, IS or IT managers involved in the development, maintenance and support of IS and a third category of Interviewees was identified during interviews, managers who had experience as both IT and business managers.

The researcher also extended this primary group of Interviewees to include a few consultants who had experience of e-Commerce businesses. Although they were not based in any single business operation, they were identified as a rich source of evidence. Consultants presented a broader range of e-Commerce experiences, as compared with the average manager who was associated with just one business.

For the secondary data which the researcher used a questioner sample size is a process of selecting a sufficient   portion of the population for the purposes of generalizing the findings. The aim of using sampling method according to is to adequately manipulate the large number and reduce the cost of producing the questionnaire to the entire population. This research use the formula for estimating the sample size provided by Yamane (1967) which was cited in Obasi and Ekwueme (2011).

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

$$n = \frac{748}{1 + (748)0.05^2}$$

$$n = \frac{748}{2.9}$$

$$n = 258$$

Where n = sample size N= population 1 = constant e = error estimate (0.05%) at 95% confidence interval. Out of 748 importers and exporters the researcher had selected total of 258 general importers and exporters from the above chosen sub cities to be included as a sample.

3.5 Data sources

Data collection was done through both secondary and primary sources. Primary data sources will be key Interviewees for each case study. Secondary data sources was mainly by questionnaires also covered government publications, technical document, and reports of the companies. Valuable insight was also gained from the analysis of research studies conducted by the different IS projects in the country. Secondary data covered different sources and provided an essential preparation for the interviews. Secondary data will help to cross-check official information; learn about major events, technical details, historical decisions and main organizational players and roles. This also support the exploring of particular responses during interviews.

This entails a detailed study of the wider and local context factors influencing such IS, the processes of implementation at the local level and ensuing change resulting from the implementation process. Such a focus led to the adoption of an interpretive stance, which seeks to uncover truth by understanding the phenomena in their real-life context (Walsham, 1995b). A case study approach is, therefore, used to describe the implementation of IS analysis and ecommerce relations in organizations (an Ethiopian based leather producing company called B.A.E foreign trade and export, Arada coffee exports, Anbessa Enterprise PLC, Batu tannery, KROTAJ,a sesame company) and IS-based implementation. In the semi-structured interview, a structured questionnaire is not used, as is the case in traditional surveys, but rather the Interviewee is allowed to speak more freely on the subject matter of interest to the researcher, with an interview protocol being used to guide the discussion (Denscombe, 2003).Interviewees therefore are able to speak for themselves, rather than respond to a battery of the researcher's own pre-determined hypothesis-based questions (Babbie & Mouton, 2001). Rubin and Rubin (1995) advise that qualitative interview design is characterized by being flexible, iterative and continuous, rather than prepared in advance and locked in stone. This technique for evidence collection thus served this research well.

3.9. Data collection and analysis

The main data techniques used in this research study were semi-structured interviews, participant observation, and secondary source analysis. Personal interviews constituted one of the most important and valuable sources of information.

There is a multitude of different data collection techniques and these vary according to the extent of interaction (the 'distance') between the researcher and the phenomena under research. Until quite recently, much of the reported interpretive IS research (Walsham, 1995) only involved relatively distant data collection methods such as analysis of published data, textual analysis or surveys. Document analysis was used in the fieldwork conducted for this study, together with less distant methods such as interviews, meetings and participation observation, which provided face-to-face contact with the social actors in order to explore and probe responses. The case study method necessitates the collection of a large amount of lot of qualitative information from a number of sources in order to address the complexity of the organizational processes and of the context studied.

Data collected under the above stated methods have been used for analysis and further interpretation of the survey. It has considered verification (for completeness), editing, grouping and classification of raw data. Selecting the appropriate statistical analysis technique is very important to achieve the intended objectives of this research. To do this, research elements, namely the research problem, objectives, characteristics of data and the underlying properties of the statistical techniques are considered (Malhotra,1999). After completion of data collection, in order to meet the objectives stated in the above section, descriptive method of data analysis used by the researchers. Descriptive analysis refers to the transformation of raw data into a form that would provide information to describe a set of factors in a situation that will make them easy to understand and interpret (Sekaran 2000). Some of the techniques used are case study method for this particular issue because it was found to be reliable and covers a broad sector.

Detailed Explanation and interpretation of the collected data was made by presenting the data in the form of tables, frequency distribution, percentage and other suitable Forms of data presentation with the help of Microsoft Excel software packages. A scale of 5 has been used where 1 is used as a lowest value and is assigned to the lowest or worst option were as 5 is the highest value, assigned to highest or the best option . To make easy the interpretation, the following values are assigned to each scale, which was used to interpret the total responses of all the respondents for likert scaled survey question by computing the weighted mean

Table 3.1 interpretation and range of survey question

Range	Interpretation	Range	Interpretation	Range	Interpretation
1. 49 or less	strongly disagree	1. 49 or less	Very low	1. 49 or Less	Very Poor
1.50-2. 49	disagree	1.50-2. 49	Low	1.50-2. 49	Poor
2.5 – 3.49	Neutral	2.5 – 3.49	average	2.5 – 3.49	Fair
3.50– 4.49	agree	3.50– 4.49	High	3.50– 4.49	Good
4.5 or greater	Strongly agree	4.5 or greater	Very high	4.5 or greater	very good

Response rate: two hundred fifty eight (258) questionnaires were distributed and two hundred three (203) questionnaires were returned with full information. These two hundred three respondents constituted the units used for analysis. The response rate was approximately 79 % of the total questionnaires distributed.

3.10 Reliability

"The extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable." (Joppe 2000).

The researcher analyzed statistically the data collected from participants to draw conclusions about the consistency of the survey before collecting the data. Finally, internal consistence of the reliability of the instrument is determined by Cronbach's alpha. As Zikmund et al. (2010) explained scales with Cronbach's alpha greater than 0.7 considered as adequate to determine reliability of the instruments.

Table 3.2: Cronbach's Alpha Reliability Statistics

No.	Items	No of Items	Cronbach's alpha
1.	Information system implementation	4	0.882
2.	Advantages of ECIS	6	0.912
3.	Challenges of E-commerce	6	0.905
4.	Ease to use of IS	5	0.761
5.	E-commerce risk	4	0.902

Overall items	25	0.956

Source : Survey data,2019

3.11. Validity

Nahid Golafshani on the other hand, citing previous research on the matter, defines reliability in qualitative research as either an irrelevant factor, or a consequence of the validity of the study. It also explains validity of qualitative research as "truthfulness" of the research results, which is also largely irrelevant in the case of qualitative studies, however, generalizability of the research results could be considered to increase its validity. (Golafshani 2003)

3.12 Ethical Consideration

Participation of respondents was on voluntary basis. Participants are informed as to about the purpose of the study and consent verbally. Measures are taken to ensure dignity and freedom of each individual participates in the study. In addition, participants are notified that the information they provide kept confidential and not be disclosed to anyone else.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

This chapter focuses on the results of analysis and findings both using descriptive and inferential statistics based on the responses that were received from the interviews and distributed questionnaires.

4.1 Characteristics of Respondents

General characteristics of the respondents include both personal and professional characteristics. This section describes the respondents' general characteristics about sex, age, educational qualification and work experience.

Table 4.7: respondents' sex and age

Sex	Number	Percentage
M	177	87%
F	26	13%
Total	203	100%
Age group		
18-25	13	6.4%
26-30	69	34.0%
31-35	74	36.5%
36-40	31	15.3%
Greater than 40	16	7.9%
Total	203	100%

Source: Survey data,2019

As depicted item one above, sex wise, 87% of the respondents were male and the remaining 13% were females. The second item of the same table shows the age of the respondents. As shown in the table 4.7, 36.5% of the respondents were between 31 to 35 years old, 34.0% of them were between 26- 30 years old. And 15.3% of the respondents were found between36-40 years old. Lastly, 7.9 % and 6.4% of the respondents are above age of 40 and 18-25 respectively. It can be understood that majority of the respondents are adults which is between ages 26-40 years old. In

most situation adults are very eager and have a good tendency to interact new technology and change.

4.2 Introduction to E-commerce practice and application by the companies

Table 4.8. Company homepage and IT department

No	Item	Respondents in no and percentage		
		Yes	No	Total
1	Does the business have its Own Web site/homepage for ecommerce platform?	11(5.5%)	189(94.5%)	200(100%)
2	Does the organization have an IT department to deal with ecommerce transactions?	13(6.4%)	190(93.6 %)	203(100%)

Source : Survey data,2019

Item 1 of table 4.8 show that majority of company 189(94.5%) have no their own website /home page, the remaining 11(5.5%) have their own website. A website is information resource that is suitable for any party who wants to get information about the company, accessed through World Wide Web. So it is very difficult to display about company related information like, price, market information, availability of products to business partners. It gives the business an opportunity to create a greater awareness of its product to its customer. Thus; it necessitated the development of website /home page and online linkages with business partners to facilitate the efficient flow of, order, payments, and information.

Item 2 of table 4.8 also show that majority of company 190(93.6%) do not have an IT department, the remaining 13(6.4%) have an IT department. It is known that information technology department plays great role in providing Information and Communication Technology (ICT) services and support other functional area in order to enable the company to achieve its goals and objectives. It might also develop policies and procedures to ensure safe, secure, and efficient data retrieval. It is somewhat difficult to think about full scale adoption of e-commerce without involvement of IT department. In this unsecured e-commerce world it is important to have IT department in order to take proactive measures before security breach, risk and other vulnerabilities are occurred.

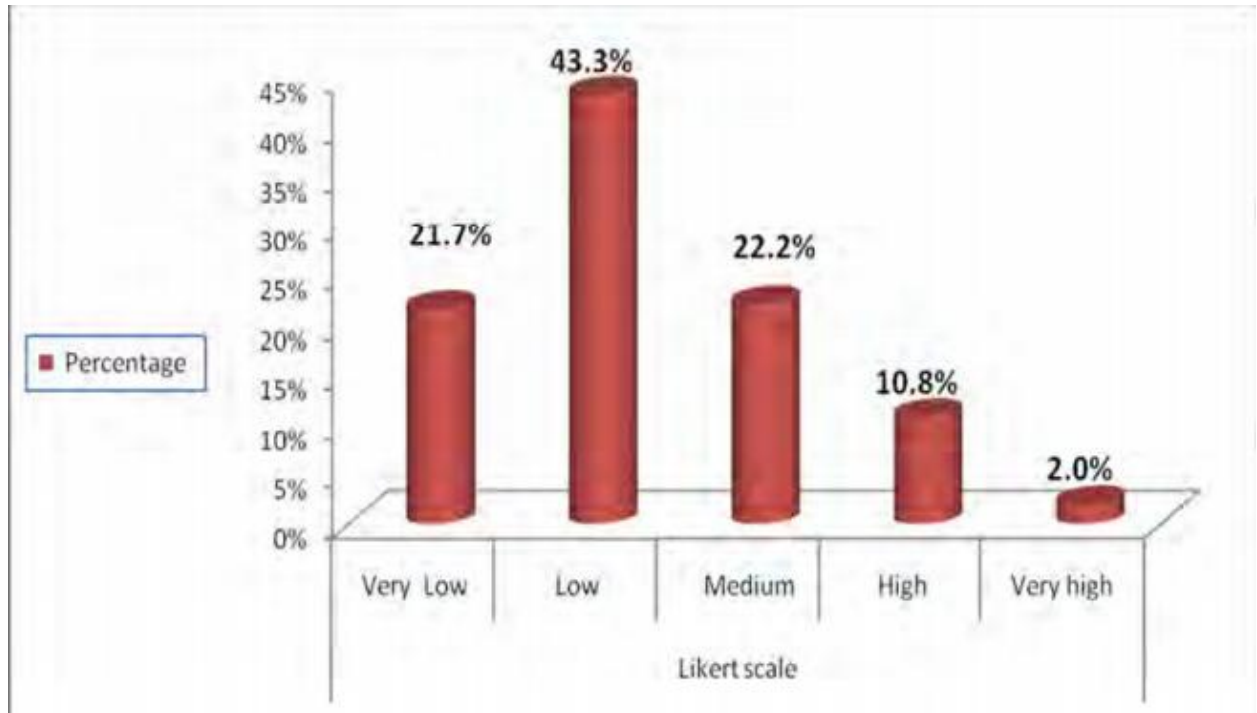### Figure . 4.1 Awareness and knowledge on ecommerce

Figure 4.1 Show that 43.3 % of respondents have low level of awareness and 22.2% of respondents have medium knowledge and awareness, 21.7% of respondents have low level of awareness, where as 10.8 % and 2 % of respondent have high and very high level of awareness about concepts of e-commerce respectively. This indicates that more than half of the respondents are not familiar with the e-commerce and how it works. This may lead to a higher inclination amongst them to purchase products using conventional basis. Thus, it is important to prepare e-commerce awareness program and facilitate training programs.

Table 4.9: E-commerce usage and degree of utilization

1. Does the organization use ecommerce?	Yes	Not at all	We plan to use it	Total
Number of respondents	203	0	0	203
Percentage of respondents	100	0	0	100%
Degree of utilizing E-Commerce application to undertake trading activity.	**Likert scale**		**Response**	
	Scale		Frequency	Percent-%
	1	**Very poor**	33	16.3%
	2	**Poor**	123	60.6%

3	Fair	39	19.2%
4	Good	8	3.9%
5	Very good	0	0%
	Total (n)	203	100%
	Weight total	428	
	Median	2	
	Weighted mean	2.1	
	SD	0.5	
	Cv	0.24	

Source : Survey data,2019

Respondents were asked whether the company is using internet and other ICT tools to simplify business operation from simple information searching, comparing price of product, information exchange with customer and supplier, electronic ordering and payment even more. To this end, Table 4.9 clearly shows that all company uses the application of ICT and e-commerce technology, but their extent is different; this can be explained by their response on item two of the same table. Item 2 of table 4.9 shows likert scale measurement of respondents' response in terms of: percentage, weighted mean, median, standard deviation, and coefficient of variation. In terms of percentage majority, 60.6% of companies apply ecommerce poorly, 19.2% and 16.3 % of them use fairly and very poorly respectively. It also shown that very small percentage, 3.9% of the company apply it well. On the other hand the mean scaled score (2.1) is also show that the application of e-commerce by different company on average is poor. This result agrees with the percentage results shown above. Standard deviation is a measure of how much the data is distributed around both sides of the mean and it is one measure of spread for data. The standard deviation of 0.5 shows that it lies on middle value (median value is 2) of half of the normal curve. These three measures indicate the degree of utilization by companies is poor. Lastly, CV shows the extent of variability in relation to mean of the population is 0.24.it indicate the variability of respondents' response from the mean value is by 24%. Since the above statistical measure shows the application of e-commerce is poor, it can be said that companies use traditional methods to undertake trading activities in great extent than e-commerce.

Table 4.10: Company e-commerce experience

For how many years are you using ecommerce?	<than year	1year but<5year	>5year	Do not know	Total
Percentage of respondents %	0%	43.8%	54.2%	2%	100%

Source : Survey data,2019

Table 4.10 shows that 54% of the companies use different applications of e-commerce for more than five years, 44% companies use it for more than one year and less than five year. The remaining 2% of respondents did not know for how many years company is using e-commerce. Nearly above 50% 0f companies, such that they have a good exposure (use their experience as the source of knowledge) to the existing ecommerce environments.

Table 4.11: Company IS strategies to use e-commerce

Item	Respondents Response		
1. Do the company have information systems strategies, long term strategic, and short term tactical plans been formulated to support the overall E-Commerce adoption and information systems requirements	Yes	No	Total
	23(11.3%)	180(88.7%)	203(100%)

Source : Survey data,2019

As shown in table 4.11 Almost all company, 180(88.7%) have no information systems strategies, long term strategic, and short-term tactical plans been formulated to support the overall e-Commerce adoption and information systems requirements. the remaining very small percentage (11.3%) of them have information systems strategies, long term strategic, and short-term tactical plans been formulated to support the overall E-Commerce adoption and information systems requirement. It is a clear indication that the rise of the information economy and the challenges of the global market have created opportunities and challenges to all organizations for e-commerce. New market conditions have created a fluid environment, which require organizations to embrace flexible information systems strategies, long and short term plans in order to respond to such opportunities and challenges. Working in such system is unlikely to succeed. Therefore, information system strategy and plan has to be viewed as the normal way of doing business.

Table 4.12: Trust and commerce advantages

Item	Weight total	Mean	SD	CV	Interpretation
1. Participant of e-commerce lacks trust and confidence on	894	4.4	0.68	0.2	Agree

e-commerce transaction					
2. Electronic commerce has substantial advantages over traditional d commerce	840	4.1	0.69	0.2	Agree

Source : Survey data,2019

n=203, 1=strongly disagree, 2= disagree, 3=neutral, 4= agree 5=strongly agree

Weighted mean of respondents (4.4) show that an average the respondents were agreed on a statement participant of e-commerce lacks trust and confidence on the transaction and seller whom they have never met before.

The transition from paper-based transactions to electronic communications has therefore generated doubts and concerns regarding the trust. Of course, in paper-based transactions, there are collateral assurances of genuineness: the letterhead, the hand written signature, the company name and logo on the invoice or purchase order. Electronic communications do not have these assurances. It is known that trust is an important element within organizations and in business transactions. So Trust level is an important factor that inclined the company to adopt of e-commerce. This idea is consistent with Parkhe (1998), who pointed out that lack of trust and consequently barriers to participation in e-commerce activities arise due to uncertainties inherent in the current e-commerce environment. These, uncertainties, in turn, create a perception of increased risk, thereby inhibiting the tendency to participate in e-commerce.

Item 2 of table 4.12 also shows that, average respondents are agreed on substantial advantages of Electronic commerce has over traditional commerce. Clearly, it can be deduced that electronic commerce has substantial advantages over traditional face-to-face, paper-based commerce. This is a good tendency to introduce e-commerce among companies, of course without forgetting potential challenges it impose.

4.3 Perceived Benefit of e-commerce technologies

Perceived benefits are the gains or improvements derived from existing ways of operating business transactions using e-commerce applications. The following section summarizes respondents' views of expectations and perceived benefits for e-commerce deployment. For

analysis purpose perceived Benefits are classified in to operational efficiency and service benefits (futcher , 2003).
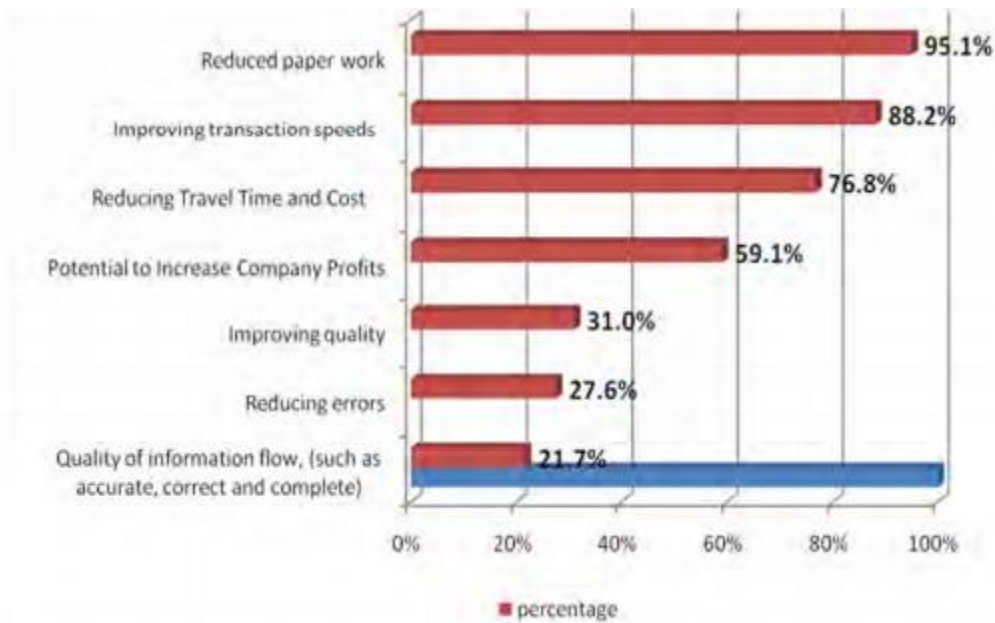
Figure 4.2 operational efficiency benefits

Figure 4.2 shows the potential operational efficiency benefits of e-commerce as perceived by the imports sector. Based on the frequency of respondents response the top four ranked operational efficiency benefits (sorted in descending order) are as follows.

Reduced paper work (95.1% of respondents), Improving transaction speeds (88.2%) Reducing Travel Time and Cost (76.8%), Potential to Increase Company Profits (59.1%). Very small numbers of respondents are appeal to some of operational efficiency benefits like, reducing errors (27.6%), quality of information flow (21.7%). It can be inferred that the knowledge and awareness about e-commerce may prone them to make error, and making transaction with unknown business partner make them to hesitate on quality of information flow
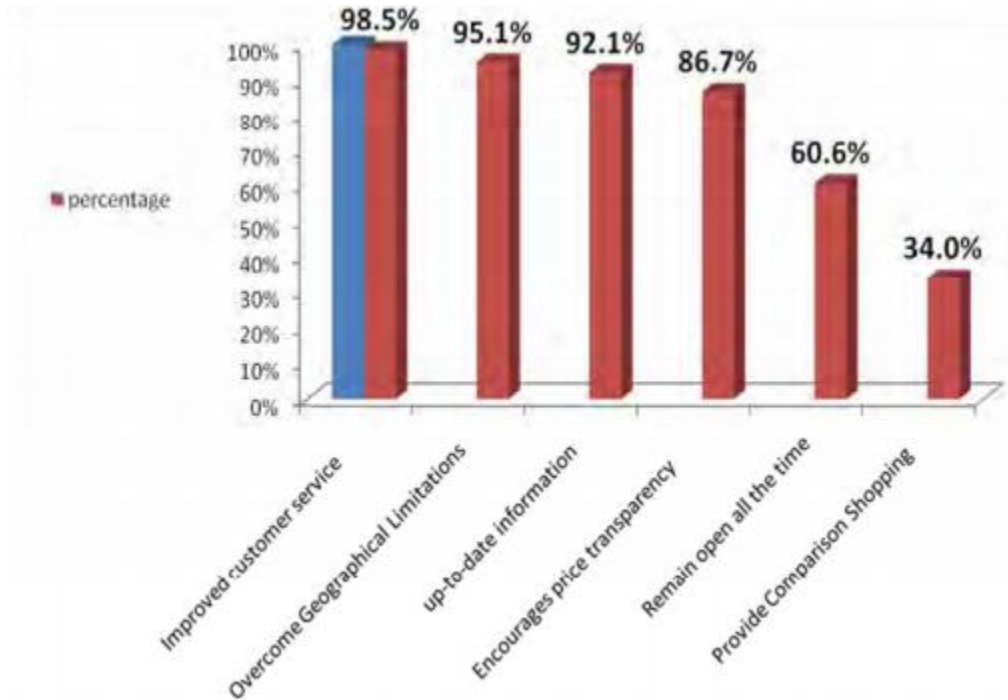
Figure 4.3 service benefits

Figure 4.3 shows the majority of respondent (more than 75%) perceived the following service benefits: Improved customer service (98.5%), overcome geographical limitations(95.1%), provide up to date information (92.1%), encourages price transparency(886.7%),main open all the time(60.6%) , provide comparison shopping(34%).Perceiving such benefit have positive tendency to adopt e-commerce among the companies. By comparing Figure 4.2 and Figure 4.3 it can be concluded that companies have better perception of service benefit relative to operational efficiency benefits of e-commerce.

4.4 Barriers of using e-commerce technologies

Despite the above perceived benefits, e-commerce adoption was hindered by a number of constraints or barriers. Such barriers in the adoption of e-commerce have been identified as internal barriers to using or extending use of e-commerce technologies and external barriers to using or extending use of e-commerce technologies. Internal factors are factors that are found within the organization while external factors are influence that are exerted from external environment. The proceeding section presents the results in accordance to the likert technique. The respondents of the study were presented a set of attitude statements so they can express their agreement or disagreement with the use of a five-point scale, where in 5 is equivalent to strong agreement and 1 as showing a strong disagreement. This provides a greater understanding about

the conceptual view of the following respondents towards the general import trade on the issue of barriers of using e-commerce technologies.

Table 4.13: Internal Barriers to using or extending use of e-commerce technologies

Internal Barriers to using or extending use of e-commerce technologies	Weight total	Mean	SD	CV
1. Lack of skilled workers to handle/ maintain E-commerce system	832	4.1	0.94	0.2
2. Fear of risk security and privacy	827	4.07	1.10	0.3
3. Fear of risk product delivery	618	3.01	1.54	0.5
4. Lack of confidence in after sale service (guarantee, returns, remedies)	515	2.54	1.46	0.6
	n=203			

Source : Survey data,2019

As shown in the table 4.13 the first two major internal barriers in which on average respondents express their agreement (mean greater than 4) are , lack of skilled workers to handle/ maintain e-commerce system with mean score(4.1) put in the first rank using the mean score. Fear of risk security and privacy put at the second rank with mean score of 4.07. Again consider table 4.13 the other two internal barriers in which on average respondents express their neutrality are fear of risk about product delivery, ranked third with mean score of 3.01 and lack of confidence in after sale service (guarantee, returns, remedies) which ranked fourth with mean score of 2.54.

On the other hand, it is known that the variable with the smaller CV is less dispersed than the variable with the larger CV and the factor with the smaller CV has predicted values that are closer to the actual values. Using coefficient of variation, this four factor can be ranked from, less variable (i.e predicted values that are closer to the actual value) to highly variable (predicted values that are closer to the actual value): Lack of skilled workers(1st), Fear of risk security and privacy(2nd), Fear of risk product delivery(3th), Lack of confidence in after sale service(4th).on the base of this analysis the first two are less variable relative to mean and the predicted value s closer to actual value. So it can be inferred that, they hinder e-commerce adoption.

Generally, e-commerce requires high level of understanding and knowledge on ICT and e-commerce on one hand and Limited knowledge of about e-commerce and how they operate by the company worker on the other hand create a great obstacle on e-commerce adoption. Thus skills and knowledge required to ensure efficient and effective use of the system. The second barrier is Fear of risk security and privacy .this may come from inefficient secure infrastructure,

which is exacerbated by the companies' attitude towards to this risk. This poses a great threat to e-commerce adoption. Fear of risk of Security and privacy makes the companies more inclined to trust and to use a traditional commerce system.

Table 4.14: consider shopping online and effort of government

	No of respondents			
	Yes	**No**	**Don't know**	**Total**
1. **Ecommerce transactions, if Potential Barriers are minimized and privacy and security of data put in place?**	192(94.3%)	0(0%	11(3.4%)	203(100%)
2. **Is ecommerce being promoted widely in Ethiopia?**	8(3.9%)	178(87.7%)	17(8.4%)	203(100%)

Source : Survey data,2019

As one can observe from table 4.14 majority of respondents, 192(94.6%) responded that, they will consider if security and other barriers of e-commerce are minimized the remaining 11(3.4%) answered that, we don't know. Item 2 of the same table, shows that, majority of respondents, 178(87.7%) answered government of Ethiopia was not doing enough to promote e-commerce in Ethiopia, 17(8.4%) respondents don't know government's effort to promote e-commerce. Very small percentage, 8(3.9%) of respondents responded that government of Ethiopia was doing enough effort to promote e-commerce. This high percentage of responses is a clear indication government should exert at most effort to promote e-commerce in the country.

It is known that e-commerce lies at the heart of the government's vision for building a modern, knowledge driven economy. The government aims to achieve sustained improvements in the productivity through creating information based economy, so that could narrow the gap of digital divide. The government could promote e-commerce by providing a number of things such as developing infrastructures that are cost effective to the users, launching several e-commerce initiatives, trying to develop public awareness towards e-commerce since lack of public awareness are the constraints on the sector's growth. The government should also cooperatively work with the private sector and foreign partners, to address e-commerce adoption hurdles in an effort to stimulate rapid development of the sector. Generally, government shall provide and facilitate the necessary enabling political, economic, regulatory, legal and institutional environment to support the process of moving the country from a predominately agricultural economy to an information-rich and knowledge-based economy.

Even though a website serve as information source and opportunity to create a greater awareness of its product to its customer and information technology department plays great role in providing different services and supporting other functional areas, majority of company have no their own website /home page and IT department. So far this necessitated the development of website and establishing IT department. Nearly, majority of companies are not familiar with e-commerce and how it works. This low level of awareness about concepts of e-commerce leads to a higher inclination amongst them to purchase products using conventional basis.

Even though application of ICT and e-commerce is poor, all companies use the application of ICT and e-commerce technology with different extent and application. It also indicated that the top three applications with the largest usage frequency by the company are: email with the major stake, looking actual prices and compare it to other products' price and identifying the sellers and its product. But it is uncommon among general importers and exporters using it for a medium of payment, electronic ordering, and internal business operation management. Mostly they inclined to external communication and information gathering than facilitating transaction.

Potential operational efficiency benefits of e-commerce as perceived by the imports sector, top four operational efficiency benefits are: Reduced paper work, Improving transaction speeds, reducing travel time and cost and potential to increase company profits. But companies hesitate benefits of, reducing errors, quality of information flow. Moreover, the companies conceptualize service benefits like, Improved customer service overcome geographical limitations , provide up to date information , encourages price transparency, mainly open all the time , provide comparison shopping much more than operational efficiency benefits. Perceiving both benefit have positive tendency to adopt e-commerce among the companies

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter consists of three sections which include summary of the findings, conclusion and recommendations.

5.1 Summary of Research

The findings in the previous chapter, which have provided insights into the factors affecting ECIS success, collectively serve as a set of management guidelines for the e-Commerce environment. While the bedrock for this work was the extant literature, it was these findings that provided the foundation upon which the final outcome of this study is derived. Using the adopted framework for theory development as a guide, and through further reflection, this chapter integrates these research conclusions, into a theoretical contribution.

The main purpose of this study was to provide some concrete insight to any other organization should take into account when implementing information systems, as well as how to better manage the continuous use of such systems so that their users are satisfied. These improvements and better management methods are based on the deficiencies in the current practices that were discovered as a result of this study.

The point of this finding articulates that successful ECIS is associated first and foremost with the operationalization of a well-planned e-Commerce business model. Business entrepreneurs now realize that creating a web-based sales medium in itself is not sufficient to realize profits. Indeed, many of the Interviewee s confessed to having subscribed to various elements of the hyperbole when they started out their businesses.

The final stage of the findings entailed establishing relationships between the conclusions. The five results that were derived were:

1. Customer-Centricity.
2. Coordination of Business and IS mindsets.
3. Swiftness of the IS function.

4. A new focus on ICT as a direct facilitator of business success
5. Managing ECIS quality: key aspects of functionality

Through a combination of reflection and creative thought, the researcher made the following observations:

1. The first conclusion, which dealt with the importance of CC, is a focal point, enabling all other results to flow from it. Have a strong customer-based mindset also with a proper implementation of IF and ecommerce this give a much need competitive advantage also this is directly related to decision making which has been made easier by the CC mindset,

2. Business information system and ecommerce work hand on hand as the findings have mentioned. That is in order tom have a successful ecommerce in the market proper implementation of IS should be implemented which directly relation the success of the ecommerce. Customer-centric ECIS are managed with an emphasis on agility, and the implementation of decision-making mechanisms and organizational structures that promote a harmonization of business and IS mindsets. These are important ECIS management considerations that support the deployment of customer-centric ECIS. CC is sustained through the development and management of reliable ECIS. Several key areas of ECIS functionality were identified in this respect.

3. The challenges faced while implementing a business information system are different in nature meaning the employees knowledge directly affects the swiftness of the IS, lack of understanding of the benefits, not giving the requires attention to the system and taking a leap from the everyday common work environment to this newly introduced ,to Ethiopians that is, ecommerce and Busines information system which would make a company competitive in the market.

4. CC is embedded in the e-Commerce business model, which incorporates both business and ECIS strategy. This model is the foundation that provides the e-Commerce organization with a sense of clear purpose and direction in selecting, developing and managing ECIS. Even though it seems a long shot to evaluate the performance of IS its by having the following findings which are customer centricity by looking at the feedback of customers and employees, analyzing the efficiency since the system has been introduced and also the efficiency and effectiveness of the

system in relation to suppliers which can be evaluated by having feedbacks and analysis performance of the output of the IS.

5. The factors that affect the success of IS are having a weak mindset in regards to the benefits and advantages it would bring, not focusing g on customer centricity would also affect the success of IS. Also not have a properly coordinated ecommerce and information system because some may think that can be done separately which is a big misunderstanding, CC is sustained by the implementation of a coherent strategy which enables the e-Commerce business to continually evaluate the drivers of ECIS success.

5.2. Conclusion

ECIS success is underpinned by a mindset, which sees Customer- Centricity (CC) as one of the primary drivers of e-Commerce. CC pervades the key e-Commerce processes. However, CC alone is unlikely to lead to an optimal e-Commerce solution. For sustained success, business and IS mindsets need to be harmonized. Additionally, as customers' tastes and preferences change, so too should the ability of the business to be responsive to these changes. Responsiveness is realized through the design of agile processes and systems. Implicit in the understanding of these three critical success factors, viz., CC, coordination, and swiftness, is that e-Commerce processes are supported by high quality ECIS that are reliable and easy to maintain. To ensure success, all four of these factors need to be integrated into a competent business model. ECIS success will be sustainable by the continuous assessment of CC, coordination, agility, changing environmental factors, and the quality of ECIS.

Three vital roles that information systems can perform for a business enterprise could be support of its business processes and operations, Support of decision making by its employees and managers and support of its strategies for competitive advantage. information system can be used to achieve different objectives such as, to gain a competitive advantage, improvements in decision making, relation with customers and suppliers, operational excellence and efficiency and enables the organization to be able to make new product lines and services to the customer.

Without a coherent understanding of the factors affecting IS success, the implementation of traditional IS evaluation mechanisms may be problematic. ECIS success is underpinned by a mindset, which sees Customer Centricity (CC) as one of the primary drivers of e-Commerce. CC pervades the key e-Commerce processes. However, CC alone is unlikely to lead to an optimal e-Commerce solution. For sustained success, business and IS mindsets need to be

coordinated. Additionally, as customers' tastes and preferences change, so too should the ability of the business to be responsive to these changes. Responsiveness is realized through the design of agile processes and systems. Implicit in the understanding of these three critical success factors, CC, coordination, and agility, is that e-Commerce processes are supported by high quality ECIS that are reliable and easy to maintain. To ensure success, all four of these factors need to be integrated into a competent business model. ECIS success will be sustainable by the continuous assessment of CC, coordination, agility, and the quality of ECIS.

General importers and exporters believe that government of Ethiopia was not doing enough to promote e-commerce more than it expected as policy makers and regulators. Such belief results fearing of risk and security. The government could promote e-commerce by providing a number of things such as developing infrastructures that are cost effective to the users, launching several e-commerce initiatives, trying to develop public awareness. Generally, government shall provide and facilitate the necessary enabling political, economic, regulatory, legal and institutional environment to support.

5.3. Recommendation

The phenomenon which we call e-Commerce is no more than a decade and a half old. During this period, it appeared to rocket to success, and then plummeted as the e-Bubble burst. The current renewed wave of e- Commerce initiatives is more sober. As a result, the business community is looking to academe for a new understanding of how e-Commerce investments should be managed and evaluated. The researchers work comprises one of many small steps which have been taken in this regard over recent years, and its outcomes could provide the basis for future work in several areas of IS research.

It is standard practice in the scientific community to subject research findings to further exploration, testing and verification. The ECIS Success Theory presented in this chapter was verified through a small sample of informants through in-depth interviews. An immediate avenue for future research could therefore entail conducting further interviews with a larger sample of informants so as to affirm or extend the theoretical speculation.

The next avenue for future research arises from the key finding dealing with CC. This finding has highlighted the importance of back-end ECIS in supporting the attainment of customer-

centric e-Commerce. This implies attaining a high level of customer satisfaction and e-service quality.   The finding provides an appropriate framework to investigate, in further depth, specific criteria by which customer-centric ECIS should be evaluated.   In so doing current research into service quality conducted within the marketing literature could be extended to take into account the impact of all elements of ECIS infrastructure.

The second finding concerning coordination of business and IS mindsets also poses avenues for further research. The current literature has established that the relationship between IS providers and their business clients is an important indicator of IS success. This finding offers a basis to extend research in this area by specifically investigating coordination. To date researchers have focused only on the clients' perceptions of the service provided by the IS function (Pitt, 1997 and Watson, 1998) without regard to the impacts of coordination on these perceptions. Thus, there is potential to merge existing research in IS-Business alignment. with that of the evaluation of IS success. Furthermore, in South Africa, a number of e-Commerce businesses that participated in this study used outsourced IS providers.   This outsourced relationship, in particular, also requires investigation, as the dynamics involved in this situation are different from those of the in-house IS business relationship.   This finding therefore presents an opportunity to identify ways to improve relations.

The findings as a whole challenge the application of the IS Success Model (DeLone & McLean, 1992). Although the authors claim that their updated model is "a useful model for developing comprehensive e-Commerce success measures", in their attempt to demonstrate this (DeLone & McLean, 1992), only website-aligned success metrics are identified. The model therefore does not take into account (i) the impact of particular IS management practices on IS Success; and (ii) metrics to evaluate IS.   Thus, a further path for future research would entail extending and possibly re-specifying the IS Success Model for the ecommerce environment through further exploration of the findings of this study.

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